

Philips Lighting

Lamp Specification and Application Guide



Philips Lighting



PHILIPS

Philips Lighting *Lighting North America*

Philips Lighting Company provides products for every lighting application.

We are devoted to a comprehensive understanding of the challenges and opportunities facing those who specify, purchase and, ultimately, use Philips lamps. This understanding is evident in our strong commitment to research and development, and our company-wide dedication to market leadership through on-going quality improvement.

This guide is designed to assist distributors, specifiers and end users in making well-informed judgments when they select lamps for any application. The mission of Philips Lighting Company is to deliver added value to our customers, specifically with superior quality lamps featuring high energy efficiency and high color rendering.

Philips provides outstanding quality lighting solutions for every business, industrial and consumer lighting situation.



Philips Lighting Center

Philips Lighting Center in Somerset, New Jersey is the largest and most technologically advanced facility of its kind in the world. Education programs and full-scale demonstrations are offered in 24 application areas, including office, retail, hotel, industrial and residential environments. For further information and program schedules, please phone 1-800-631-1259.

On the Cover:

Over 10,000 Philips lamps were used to create the 12-foot wide model of North America shown on the cover of this Guide.

Table of Contents

	Page		Page
General Lamp Information		Fluorescent Lamps (cont.)	
How to Use This Book	2	Ultralume Slimline (Instant Start)	75-77
Explanation of Symbols and Highlighting	2	Ultralume Econ-o-watt Slimline (Instant Start)	76
Color Temperature	3	Circline	77
Color Rendering	4-5	Ultralume Circline	77
Energy Efficiency	5	Econ-o-watt U-Bent	77
Fluorescent Lighting Applications	6-11	U-Bent	77
High Intensity Discharge Lighting Applications	12-17	Ultralume U-Bent	78
Incandescent Lighting Applications	18-23	Appliance Fluorescent	78
Technical Descriptions	24	Footnotes — Fluorescent Lamps	78
Inches to Metric Conversion	24	Base Types and Bulb Shapes	79
Glossary of Terms	24	Cross Reference Guide (Fluorescent)	80
		Color Cross Reference Guides (Fluorescent)	80
Incandescent Lamps		High Intensity Discharge Lamps	
Incandescent Lamps by Wattage	25-48	Ceramalux High Pressure Sodium	81-82
Philinea Lamps	48	Ceramalux Comfort High Pressure Sodium	82
High Intensity Lamps	48	WHITE SON High Pressure Sodium	82
Decorative	48-51	Instant Restrike High Pressure Sodium	82
Street Lighting (Multiple)	51-52	SON AGRO High Pressure Sodium	82
Street Lighting (Series)	52	Econolux High Pressure Sodium	82
Lamps Listed by Amps. & Volts, or Lumens	52	Ceramalux RETRO LUX High Pressure Sodium	83
Special Lighting (Night Light Plug-In, Portable Flashlight)	52	Low Pressure Sodium Lamps — SOX — Standard Efficacy	83
Tungsten Halogen	53-54	Metal Halide Lamps	83-85
Accent 1200 Halogen Display Lamps (Standard MR-16)	54	MHN-TD Double-Ended Metal Halide	85
Square MR-16 MasterLine Halogen Display Lamps	55	Safety Lifeguard Metal Halide	85
Round MR-16 MasterLine Halogen Display Lamps	55	Mercury Vapor Lamps	86-87
MasterLine PAR-20 Long Neck Halogen	55	Safety Lifeguard Mercury Vapor	87
MasterLine PAR-30 Long Neck Halogen	55	Self-Ballasted Mercury Vapor	88
MRC-16/MRC-11 Display Lamps (Closed MR-16/MR-11)	56	Footnotes — High Intensity Discharge Lamps	89
Halogen Aluminum Reflector	56	High Intensity Discharge Lamp Information	89
HalogenA Lamps	56	Base Types and Bulb Shapes	90
Halogen Capsules (Burners)	57	Cross Reference Guides (H.I.D.)	91-95
Cross Reference Guides (Halogen)	57		
Tubular Quartz Infrared	58-59	Miniature/Sealed Beam Lamps	
Filament Designations	60	Miniature Lamps Numerical Listing	96-101
Base Types and Bulb Shapes	60	Miniature Blister Carded (MBC)	101-102
Footnotes — Incandescent Lamps	61	Sealed Beam Lamps Numerical Listing	103-105
Cross Reference Guides (Incandescent)	61-63	Philips European Halogen Miniature Lamp Types	106
		Philips European Miniature Lamp Types	107
Compact Fluorescent Lamps		Fleet Service Lamps	108
SL* Lamps	64	Miniature/Sealed Beam Terminology	109
PL Adapter System	64	Miniature/Sealed Beam Filament Designations	109
PL Short Fluorescent	64	Miniature Bulb Designations	110
PL Cluster Fluorescent (10mm Tube Dia.)	64	Auto Replacement Halogen Headlamp Bulbs	110
PL Cluster Fluorescent (10mm Tube Dia. — USA Base)	64	Sealed Beam Bulb Designations	110
PL Cluster Fluorescent (15mm Tube Dia.)	64	Miniature/Sealed Beam Base Designations	111
PL Long Fluorescent	65	Bulb Dimensions	111
Cross Reference Guide (Compact Fluorescent)	65		
Fluorescent Lamps		Photo, Projection, Sound Reproducer and Film Viewer Lamps	
Preheat	66-68	Lamps Listed by ANSI Code	112-116
Ultralume Preheat	66-68	Cross Reference List of IEC and ANSI Base Designations	116
Econ-o-watt Preheat	68,70	Bulb Shapes	117
Econ-o-watt Rapid Start	68,70	Base Types	118
Rapid Start	68		
Ultralume Rapid Start	68	Stage/Studio/TV Lamps	
TL 70 Fluorescent	69	Lamps Listed by ANSI Code	119-120
TL 80 Fluorescent	69	SureSpot Lamps	120
Ultralume Econ-o-watt Rapid Start	70	MSR Lamps Single Ended Gas Discharge	120
Preheat-Rapid Start	70-71	MSI Lamps (HMI Types) Gas Discharge	120
Ultralume Preheat-Rapid Start	71	Base Types and Bulb Shapes	121
Advantage X Preheat — Rapid Start Extended Service	71		
Preheat-Rapid Start Extended Service	71	Specialty Lamps	
Instant Start	71	Compact Source	122
High Output (800 ma)	72-73	Short Arc	122
Ultralume High Output	72	Special Mercury	122
Econ-o-watt High Output (800 ma)	73	Medium Pressure Metal Halide	122
Ultralume Econ-o-watt High Output (800 ma)	73	Low Pressure Pulsed Xenon Discharge Lamps	122
Ultralume High Output (800 ma)	73	Spectral Lamps	123
Very-Hi Output (1500 ma)	73-74	Fluorescent Lamps with Super Actinic Radiation	123
Econ-o-watt Very Hi Output (1500 ma)	74	Fluorescent Lamps with Actinic Radiation	123
Outdoor (1500 ma) T-12	74	Germicidal Sterilamp Tubes (Hot Cathode, Cold Cathode, Slimline)	123
Low Temperature Jacketed (1500 ma)	74	Footnotes — Specialty Lamps	124
Econ-o-watt Slimline (Instant Start)	74-76	Bulb Shapes	124
Slimline Fluorescent (Instant Start)	74-76	Lamp Substitution guide	125-127
Ultralume Slimline	74-75	Sales Offices and Lamp Ordering Information	128
		Philips Lighting Company Trademarks	Inside Back Cover

How to get the best lighting quality

How to get the best lighting quality

How to use this book to your best advantage.

The full-color sections at the beginning of this guide were created to help you evaluate the many lighting options available for fluorescent, incandescent and high intensity discharge (HID) applications. Each section ends with a table that lists common lighting applications and recommends some of the Philips lamps particularly well-suited to those uses.

The remainder of this guide is a comprehensive listing of the specifications for over 3,000 Philips Lighting products.

• **Green highlighting** and the symbol \$\$\$ indicates lamps with high energy-efficiency, which will reduce electricity expenses.

• **Light red highlighting** indicates lamps with high color rendering, which makes people and objects appear more true to life.

• **The Philips Shield** [□] indicates proprietary products exclusive to Philips Lighting Company.

• **The dagger symbol** [†] indicates new products from Philips.

The illustration below shows you the meanings of the various specifications used to describe each lamp listed.

Bulb: Bulb designations indicate approximate shape and size.*

Base: Full base names and configuration drawings are shown in the back of each lamp section.

Ordering code: Must be used when placing orders.

Volts: For lamps listed with voltage ranges, see page 24 for corresponding voltage designs.

Package Qty.: Number of lamps packaged in a shipping container.

• Quantity shown is minimum shipping container.

L.C.L.: Light Center Length in inches.*

Incandescent Lamps

Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens
30 70 100	T-19	3Ct. Med.▲	20451-1	30/100T/WL	120	12	Longer Life Soft White Three-Way(8)	C, 2CC-6		5 ⁷ / ₁₆	1600	300 940 1240
34	A-19	Med.▲ • SSS	29117-9	40A-34A/EW	120	120	Econ-o-watt, I.F.	C, CC-6		4 ⁷ / ₁₆	1500	410
		SSS	29175-7	40A-34A/EW	130	120	Econ-o-watt, I.F.	C, CC-6		4 ⁷ / ₁₆	1500	410
		• SSS	29232-6	40A-34A/99/EW	120	120	Econ-o-watt, Ext. Sv., I.F.	C, CC-6		4 ⁷ / ₁₆	2500	365
		SSS	29235-9	40A-34A/99/EW	125-130	120	Econ-o-watt, Ext. Sv., I.F.	C, CC-6		4 ⁷ / ₁₆	2500	365

Pyramid symbol: Footnote, explanation is listed at the back of each lamp type section.

SSS: High energy-efficiency lamp.

Shield symbol: Lamps manufactured exclusively by Philips.

NAED Number: Both NAED Number and complete ordering code should be used when placing orders.

Numerical footnote in description: Footnote number, listed in the back of each lamp type section.

M.O.L.: Maximum Overall Length in inches.*

Approximate Hours Life/Initial Lumens: Approximate hours life and approximate initial lumens ratings represent average performance.

Bulb: Bulb designations indicate approximate shape and size.*

Base: Full base names and configuration drawings are shown in the back of each lamp section.

Ordering code: Must be used when placing orders.

Volts: For lamps listed with voltage ranges, see page 24 for corresponding voltage designs.

Package Qty.: Number of lamps packaged in a shipping container.

• Quantity shown is minimum shipping container.

L.C.L.: Light Center Length in inches.*

Pyramid symbol: Footnote, explanation is listed at the back of each lamp type section.

\$\$\$: High energy-efficiency lamp.

Shield symbol: Lamps manufactured exclusively by Philips.

NAED Number: Both NAED Number and complete ordering code should be used when placing orders.

Numerical footnote in description: Footnote number, listed in the back of each lamp type section.

M.O.L.: Maximum Overall Length in inches.*

Approximate Hours Life/Initial Lumens: Approximate hours life and approximate initial lumens ratings represent average performance.

*For more complete definitions, see page 24.

*and value.
and value.*

Color Temperature

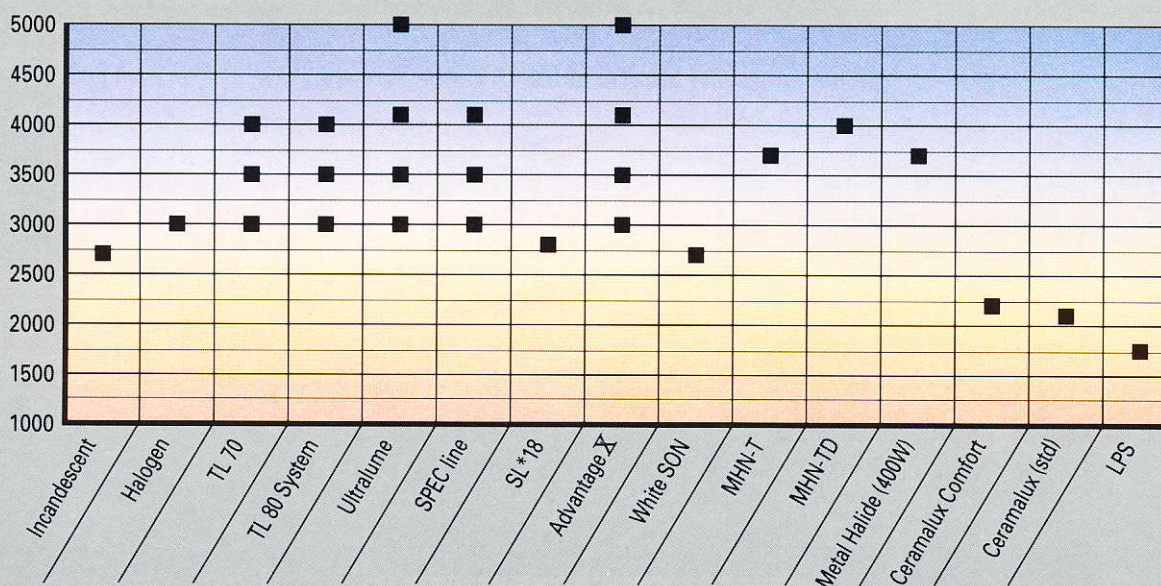
Color temperature is a measure of the color appearance of light, not actual temperature. It can have a dramatic effect on an individual's response to an environment, and is crucial in establishing an atmosphere or evoking a mood.

Light sources that appear bright white to blue-white have a high color temperature (3600K and above) and are described as "cool." These are often used in industrial applications and some office environments and hospitals. Sources that appear yellow-white to red-white have a low color temperature (3400K and below) and are described as "warm." These are often used in applications where people socialize, including retail, hospitality, and residential settings. Sources measuring 3500K are considered "neutral." These are commonly used in work settings including offices, conference rooms, lobbies, factories, etc.

The Influence of Color Temperature on Mood and Lighting Applications

Color Temperature	Warm	Neutral	Cool	Daylight
Kelvin Range	2600-3400K	3500K	3600-4900K	5000K+
Associated Effects and Moods	Friendly Intimate Personal Exclusive	Friendly Inviting Non-threatening	Neat Clean Efficient	Bright Alert Exact coloration
Appropriate Applications	Restaurants Hotel lobbies Boutiques Libraries Office areas Retail stores	Public reception areas Showrooms Bookstores Office areas	Office areas Conference rooms Classrooms Mass merchandisers Hospitals	Galleries Museums Jewelry stores Medical examination areas Printing companies

COLOR TEMPERATURES OF SOME PHILIPS LAMPS



Color temperatures below 3400K are considered **warm**; 3500K is considered **neutral**; 3600 - 4900K and above is considered **cool**. Different color temperatures can be used to evoke different responses in your lighting applications.

Color Rendering

Color rendering is a crucial measure of lighting quality which must be considered in every lighting application. Color rendering is measured on an index from 0-100, with natural daylight and incandescent lighting both equal to 100. Objects and people viewed under lamps with a high color rendering index (CRI) appear more true to life. In addition, high CRI light sources tend to produce a higher perceived level of light, which helps make them more energy effective.

Philips Lighting is a pioneer in the development and improvement of high color rendering products, which are strongly recommended for applications where it is important that the people and objects viewed must appear as realistic and natural as possible.

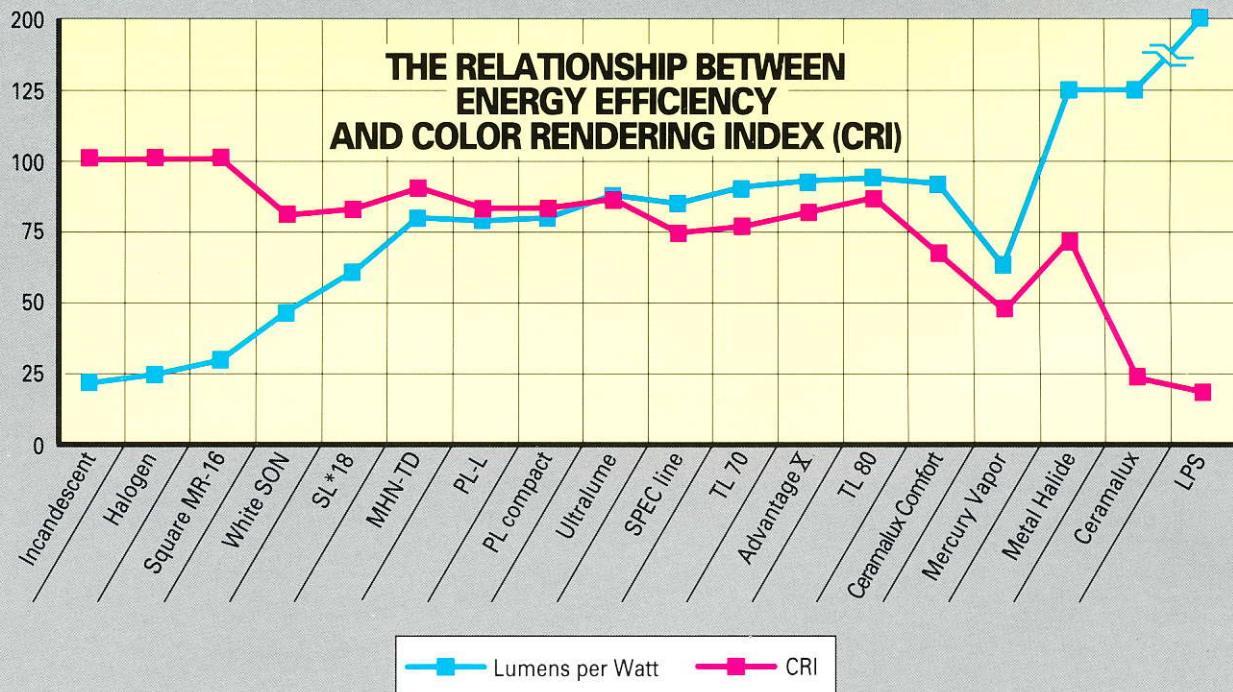
In practical terms, for example, Philips high color rendering lamps make merchandise more appealing in retail settings,



Objects and people appear more true-to-life when viewed under lamps with high color rendering indexes (CRI). The CRIs of natural daylight and incandescent lighting both measure 100.

food more appetizing in restaurants, and people in general look better, healthier and more natural. In office lighting applications, high color rendering lamps have been tied to increased worker productivity, and reduced absenteeism and error rates.

High color rendering makes people and objects appear more true-to-life. Philips offers many lamps that combine high color rendering with high energy efficiency and a choice of color temperatures.



Energy Efficiency

The worldwide leadership of Philips Lighting in energy-saving technology means you can meet every lighting need with the most energy efficient lamps available, anywhere – without sacrificing your need for high quality and performance.

Lamps that use less energy generally save many times their cost in lower electricity bills. In addition, because energy efficient lamps often give off less heat, you save through lower air conditioning expenses, as well. Beyond that, the environmental rewards of energy efficient lamps pay long-term benefits for everyone – every single kilowatt-hour of electricity spared saves nearly three pounds of coal-fueled emissions.

Higher energy efficiency can be gained through changing the type of lamp used in your application. Quality of light is also affected, in terms of color rendering and/or color temperature; it is important to balance energy efficiency with the overall lighting requirements of your particular application.

The trend in lighting.

For most common lighting applications, the preferred solution is a lighting system that combines high energy efficiency with high color rendering using sources with a complementary color temperature.

Philips Lighting experts are available to help you choose the lamps that best meet your specific application. For product literature and further assistance, call your local Philips representative, or the Philips Lighting Information Center at 1-800-631-1259.

Color Rendering Indexes of Some Philips Lamps

Fluorescent	
Colortone 75	95
Colortone 50	92
TL 80	85
Ultralume	85
Earth Light (SL*18)	82
Compact PL	82
Natural	81
Advantage X	80
TL 70	75
SPEC Line	73
Cool White	62
Warm White	53
High Intensity Discharge	
White SON	80
MHN-TD	80
"3K" Metal Halide	70
Ceramalux Comfort	65
Metal Halide Reflector	65
Metal Halide (MH 70, 100)	62
Mercury Vapor (standard)	50
Ceramalux (standard HPS)	21
SON Agro	18
Incandescent/Halogen	
Spotline	100
Director	100
175W PAR Infrared	100
MasterLine Square MR-16	100
MasterLine Round MR-16	100
MasterLine PAR	100
HalogenA	100
Philinea	100
Low Volt PAR	100

Fluorescent Lighting Applications Fluorescent Lighting Applications

Setting new standards for quality and efficiency.

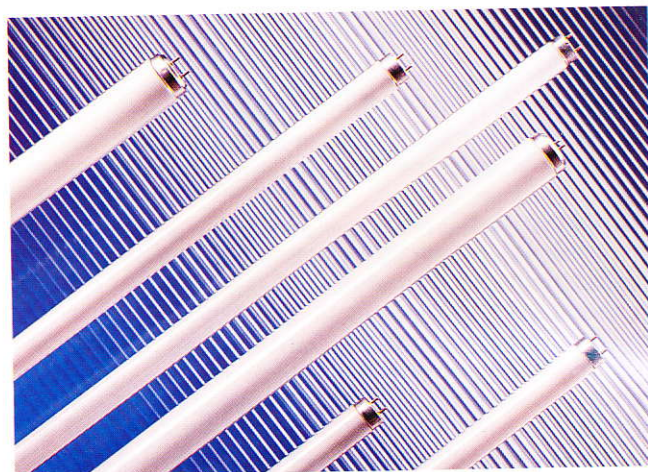
There is a great economic motivation to use energy-efficient fluorescent lighting systems that offer reduced energy costs, lower maintenance and improved productivity.

The pronounced trend in fluorescent lighting is away from inefficient, low color rendering lamps, and toward lighting systems that deliver **comfortable, high color rendering light** with high energy efficiency. The reasons for this are clear:

- Advanced fluorescent lighting systems deliver **substantially more light per watt** than standard cool white lamps.
- Use of high color rendering lamps **increases visual clarity** of people and objects, and helps to create a more **pleasant working atmosphere**.
- A variety of color temperatures offers the option of creating **different moods and effects**.

Philips Lighting offers nearly 500 different fluorescent lamps for virtually every application, including offices, commercial and industrial settings; retail and residential surroundings; schools, professional, health care, institutional and government applications; and outdoor lighting.

The charts in this section are provided as references to help you determine the lighting best suited for your application and to identify the products that best meet your needs.



Philips TL 80, Advantage X, and Ultralume fluorescent lamps.

The TL 80 System: the peak performer in fluorescent lighting for office, retail, and more.

Philips TL 80 fluorescent lamps represent a major innovation in lighting quality and efficiency. When powered by electronic ballasts, TL 80 lamps deliver energy-thrifty light output up to 104 lumens per watt, with an outstanding high color rendering index of 85.

For offices, retail settings, and other situations where it's important to **minimize overhead expenses** while maximizing the quality of light offered, the TL 80 System represents the future of fluorescent lighting.

Trim, 1-inch diameter Philips **TL 80 Series Lamps** installed with electronic ballasts result in a **43% savings** in energy costs compared to standard 1-1/4-inch fluorescents with magnetic ballasts. **Return on the investment** to retrofit an office with the TL 80 System is typically **under three years**, including labor.

Of all the fluorescent lighting systems available, the TL 80 System stands alone in providing virtually the same light output as standard fluorescent lamps with the lowest energy consumption.



Other superior fluorescent lighting solutions.

Philips prime color fluorescent light sources are designed to produce brighter illumination and higher color rendering than standard fluorescent lamps. Like the Philips TL 80 Series lamp, these fluorescent lamps are energy efficient, and produce tri-chromatic light in colors that correspond closely to the responses of the human visual system, for **more true-to-life appearance**.

Philips **Ultralume™** and **Advantage X™** lamps are an excellent choice for **office, retail, and industrial** applications, as well as residential applications that call for high energy efficiency and high color rendering. Philips **SPEC** line of lamps are an economical way to achieve higher light output and better color rendering than standard cool white fluorescents without a great initial investment. Ultralume, Advantage X and SPEC lamps are available in a **variety of color temperatures** to suit the particular lighting subjects and effects desired.

Fluorescent Lamp Performance Comparisons

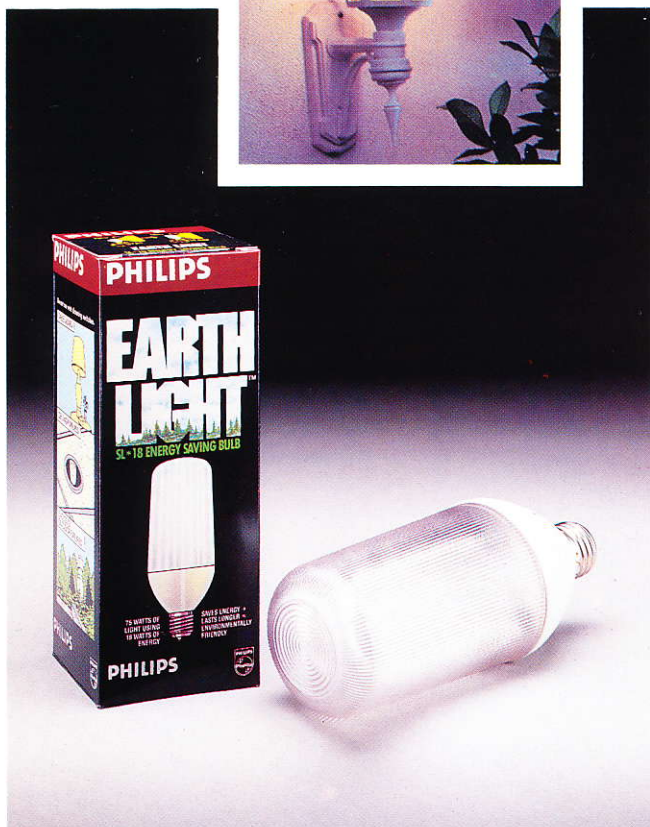
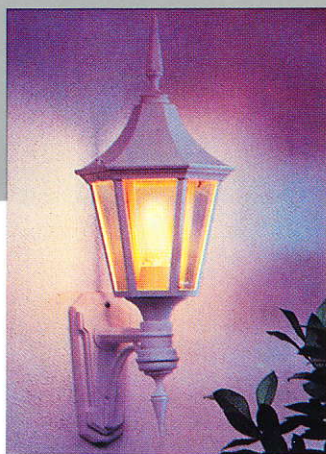
	TL 80	Advantage X	Ultralume	SPEC Line	TL 70
Lumens per Watt	95**	93	83	80	89
Energy Efficiency*	25%	21%	8%	5%	17%
CRI	85	80	85	70-73	75
Color Temp. Range Available	3000K - 4100K	3000K - 5000K	2700K - 5000K	3000K - 4100K	3000K - 4100K
Lumens Output	3050	3700	3300	3200	2850
Life Expectancy (hours)	20,000	24,000	20,000	20,000	20,000
Key End Use Needs	Achieve highest energy savings with highest color rendering	Achieve highest light output; reduce lamp units needed; Achieve high energy savings	Achieve high color rendering with good light output	Achieve good light output and quality	Achieve good energy savings with good light output and quality
Recommended Applications	General office Private office Showrooms Department stores Classrooms Museums Boutiques	General office Department stores Jewelry stores Classrooms Corridors Libraries Patient rooms	Hotel rooms Boutiques Jewelry stores Museums Galleries Emergency rooms Examining rooms Nurseries	General office Hardware stores Pharmacies Corridors Libraries	General office Pharmacies Corridors Libraries Low-end retail



Fluorescent Lighting Applications



Fluorescent Lighting Applications



The Earth Light (SL*) compact fluorescent lamp.

Compact fluorescents: the alternative to incandescents.

Compact fluorescent lamps are an **outstanding way to save** on energy consumption and maintenance in commercial, industrial, government, educational and residential lighting applications.

Philips **Earth Light (SL*)** compact fluorescent lamps **directly replace incandescent lamps**. They combine high color rendering (82), outstanding energy efficiency (using 75% less electricity than comparable incandescents) and long life (10-13 times longer than incandescents). In color appearance and temperature, Philips SL* lamps match incandescent lamps and eliminate the "cold, impersonal" feeling previously associated with fluorescent lamps.

Philips **PL-S** and **PL-C** compact fluorescent lamps are ideal for use in applications as diverse as **high hats, wall sconces, ceilings, task lighting, exit signs and outdoor lighting**. Philips PL-C lamps are clustered compact fluorescents which provide a substantial increase in light output compared to standard PL-S lamps, with all the other benefits of compact size.

Philips **PL-L** compact fluorescents provide outstanding flexibility in commercial interior lighting applications, with high light output and excellent color rendering performance in a versatile compact size well-suited to two-foot-long fixtures. Philips PL-L lamps can be operated in vertical and horizontal positions with rapid-start, electronic and dimmable circuits.

Philips PL-S, PL-C and PL-L lamps are available in a variety of lengths, wattages, and color temperatures for your specific application needs.

Some recommended Philips Compact Fluorescent lamps for Hotel, Restaurant, Retail and Office Applications

Lighting Application	Needs	Product	Recommended Color Temps ⁽¹⁾			Features	Benefits ⁽²⁾
Replacing Incandescent Wall, Ceiling Fixtures and Table Lamps	<ul style="list-style-type: none"> High energy savings Warm, high quality light 	Earth Light (SL*18) Compact Fluorescent	W			61 LPW 82 CRI	Energy savings up to 76% versus comparable incandescents
High Hats Task Lighting Exit Signs Ceilings Sconces Outdoor	<ul style="list-style-type: none"> High energy savings High quality light 	PL-S, PL-C and PL-L Compact Fluorescent Lamps	W			50-83 LPW 82 CRI	Energy savings up to 75% versus comparable incandescents

1. Warm = 2600-3400K; Neutral = 3500K; Cool = 3600K-4900K and above.

2. Comparisons are against 75-watt incandescent lamp.

Philips compact fluorescent lamps: PL-C, PL-L, PL-S.



Some Recommended Philips Fluorescent lamps for Commercial Applications.

Lighting Application	Needs	Product	Recommended Color Temps ⁽¹⁾			Features	Benefits ⁽²⁾
General Office Conference Rooms	<ul style="list-style-type: none"> • Highest energy savings • Excellent color rendering • Create a pleasant work environment to aid productivity 	TL 80 Series	W	N	C	104 LPW 85 CRI	<ul style="list-style-type: none"> • Energy savings up to 43% • Excellent color rendering
General Office	<ul style="list-style-type: none"> • Very high light output • Energy savings 	Advantage X	W	N	C	93 LPW 24,000 hrs. rated life	<ul style="list-style-type: none"> • 21% more light output • 20% longer life
Executive/ Private Office	<ul style="list-style-type: none"> • High color rendering to create comfortable working atmosphere • Minimize maintenance costs/time • Save energy 	Ultralume	W	N		85 CRI	<ul style="list-style-type: none"> • High color rendering makes people and objects appear natural
Hospital Examining and Emergency Rooms	<ul style="list-style-type: none"> • High visual clarity • Energy savings 	Advantage X		N	C	80 CRI 93 LPW	<ul style="list-style-type: none"> • Bright, white light • 21% more light output
Institutions Classrooms Libraries	<ul style="list-style-type: none"> • Highest energy savings • Excellent color rendering • Create comfortable and stimulating work atmosphere 	TL 80 Series		N	C	104 LPW 85 CRI	<ul style="list-style-type: none"> • Energy savings up to 43% • Excellent color rendering

1. Warm = 2600-3400K; Neutral = 3500K; Cool = 3600K-4900K and above.

2. Comparisons are against standard 40-watt, cool white fluorescent lamp with standard magnetic ballast.

Some Recommended Philips Fluorescent lamps for Retail Applications.

Lighting Application	Needs	Product	Recommended Color Temps ⁽¹⁾			Features	Benefits ⁽²⁾
Department Stores	<ul style="list-style-type: none"> • Increased merchandise appeal • Energy savings 	TL 80 Series	W	N		104 LPW 85 CRI	<ul style="list-style-type: none"> • Highest fluorescent color rendering • Energy savings up to 43%
Discount Stores and Super Markets	<ul style="list-style-type: none"> • Bright, efficient atmosphere • Energy savings 	Advantage X		N	C	93 LPW	<ul style="list-style-type: none"> • Bright, white light • 21% more light output
Boutiques	<ul style="list-style-type: none"> • Warm, personal environment • Increased merchandise appeal 	Ultralume	W			85 CRI	<ul style="list-style-type: none"> • Warm, inviting light • Highest fluorescent color rendering
Jewelry Stores	<ul style="list-style-type: none"> • Cool, bright atmosphere • Increased merchandise appeal 	Advantage X			C	80 CRI	<ul style="list-style-type: none"> • Bright, colorful environment • High color rendering

1. Warm = 2600-3400K; Neutral = 3500K; Cool = 3600K-4900K and above.

2. Comparisons are against standard 40-watt, cool white fluorescent lamp with standard magnetic ballast.

High Intensity Discharge Lighting Applications Lighting Applications

Productivity boosters for business and industry.

The use of High Intensity Discharge (HID) lighting has moved indoors, bringing with it the features – **high light output and long life** – that have established HID as the preferred lighting solution for most outdoor lighting applications. And Philips leadership in the field has resulted in the **broadest selection of HID lamps** available.

In both indoor and outdoor uses, Philips Lighting has achieved significant advances in the quality of light available from the HID group of lamps: high pressure sodium (HPS), metal halide and mercury vapor.

Indoor applications for HID lighting.

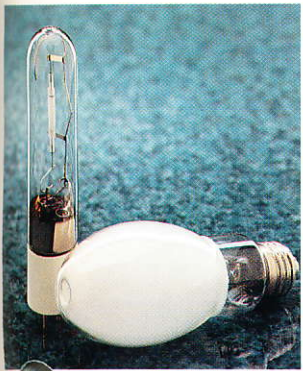
Dramatic increases in the color rendering of HPS lamps, and improvements in the color temperature of metal halide lamps, have made these light sources **a worthy, new alternative to fluorescents and incandescents** for interior lighting by industrial and commercial users. Since better lighting means products and people appear more attractive to customers, the results generated with Philips HID lamps can be dramatic.

In **retail stores and decorative** applications, Philips **White SON™** high pressure sodium lamps represent a breakthrough compared to incandescents. They feature **brilliant white** (CRI greater than 80) color that is more energy efficient than incandescents, and with a warm color temperature that closely resembles incandescent light. The result is a superior light source, available in a clear, tubular bulb for **accent and display lighting**, and in a white, elliptical bulb for use in **down-lighting, decorative, hallway, foyer and office lighting**.

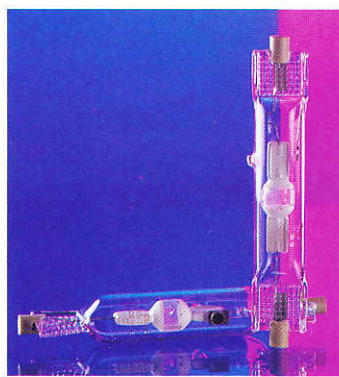
Lighting designers also have a highly efficient **metal halide option**, when highlighting areas that have cooler colors or products in retail, office and other indoor applications. Philips **MHN-TD** double-ended lamps for both display and area lighting are available in a 4100K color temperature design.

Both White SON and MHN-TD lamps deliver long life, high energy efficiency and minimal heat dissipation, making them a new favorite of lighting designers, retailers and other users who desire **dramatic lighting effects**.

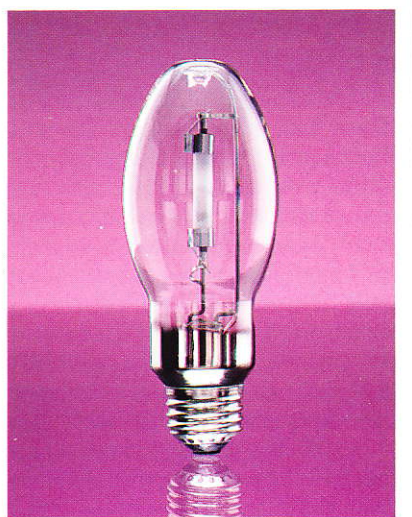




Philips White SON high pressure sodium lamp.



Philips MHN-TD metal halide lamp.



Philips Ceramalux Comfort
high pressure sodium lamp.

Industrial lighting users can enjoy new levels of lighting quality with **excellent energy efficiency by relamping** with Philips Ceramalux™ Comfort HPS lamps, and other HID light sources.

Ceramalux Comfort lamps offer the long life, low maintenance and high energy efficiency of standard HPS lamps, with the important added benefit of greatly improved color rendering (CRI 65, compared to CRI 21 for standard HPS) and better color temperature. The resulting light output can yield **improved safety and productivity** in manufacturing

plants, warehouses and other similar applications.

Philips comprehensive selection of **metal halide** and **mercury vapor** lamps also offer high color temperatures for a broad range of **industrial** applications.

Greenhouse growers can enjoy improved plant quality and productivity with horticultural lighting using Philips **SON AGRO** lamps, the only HPS source offering 30% more light in the critical blue spectrum which is crucial to natural, healthy plant growth.

High Intensity Discharge Lighting Applications



Philips SON AGRO high
pressure sodium lamp.



Philips Ceramalux high
pressure sodium lamp.

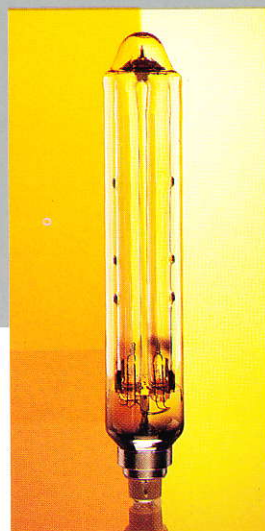


High Intensity Discharge Lighting Applications

Outdoor applications for HID lighting.

Exterior lighting demands the highest levels of light output, reliability and energy efficiency, with long life and low maintenance. Philips HID light sources deliver these qualities with the most comprehensive selection of lamps available anywhere.

For street lighting, garages, landscape lighting and general exterior area lighting, **high color rendering lamps can yield improved safety and comfort**, since better identification of colors helps us more readily identify and respond to our surroundings. Philips **Comfort HPS** lamps, along with the full range of **metal halide** light sources, are the preferred source for lighting public areas of all types. Philips **Ceramalux HPS** lamps, with their patented anti-vibration design, offer longer



Philips Low Pressure Sodium lamp.



Philips high wattage Metal Halide (BT-56) lamp.

life by virtue of their ability to withstand the rigors of street and bridge lighting applications.

For **signage**, Philips **metal halide reflector flood** lamps and horizontally-mounted lamps offer very bright, high color temperature light that makes road and location signs easy to read and identify, while offering long life and low energy consumption.

Sports lighting is another area where Philips Lighting leadership is well established. Lighting designers and fixture manufacturers specializing in arenas, stadiums, and other lighted fields of activity – for **municipalities, school districts, universities and other applications** – depend on Philips high output 1000W - 1500W metal halide lights for **low maintenance** and superior lighting quality.

For **security lighting**, Philips **low pressure sodium (LPS)** lamps offer the highest lumen efficacy (LPW) along with a unique color that provides the sharpest image on surveillance TV and good penetration in fog. In applications where light pollution interferes with astronomical observations, LPS is the preferred light source.



Some Recommended Philips HID lamps for your lighting needs.

Lighting Application	Needs	Philips Products	Features	Benefits
Retail	<ul style="list-style-type: none"> • Make products more attractive • Reduce energy costs 	<ul style="list-style-type: none"> • White SON high pressure sodium lamps • MHN-TD metal halide lamps • "3K" metal halide lamps 	<ul style="list-style-type: none"> • High lumen output • High color rendering • Energy efficient 	<ul style="list-style-type: none"> • Makes merchandise more attractive • Brilliant white light • True-to-life appearances • Lower energy costs
Industrial	<ul style="list-style-type: none"> • Bright, uniform area lighting • Reduce energy costs • Reduce maintenance costs 	<ul style="list-style-type: none"> • Ceramalux Comfort high pressure sodium lamps • Metal halide lamps 	<ul style="list-style-type: none"> • Higher color rendering than standard HPS • Long life construction • Energy efficient 	<ul style="list-style-type: none"> • High light output • Improved safety & productivity • Lower maintenance costs • Lower energy costs
Outdoor area and street lighting	<ul style="list-style-type: none"> • Improved safety • Easier identification of people, objects, surroundings • Reduced energy costs • Reduced maintenance costs 	<ul style="list-style-type: none"> • Ceramalux Comfort high pressure sodium lamps • Metal halide lamps 	<ul style="list-style-type: none"> • Higher color rendering than standard HPS • Long life construction • Energy efficient 	<ul style="list-style-type: none"> • High light output • Improved safety • Lower maintenance costs • Lower energy costs
Horticulture	<ul style="list-style-type: none"> • Increased greenhouse output • Better plant grading • Reduce energy costs 	<ul style="list-style-type: none"> • SON AGRO high pressure sodium lamps 	<ul style="list-style-type: none"> • 30% more light in the critical blue spectrum • 8% more lumen output • Retrofits in standard 400W HPS fixtures 	<ul style="list-style-type: none"> • Faster plant growth • Better plant quality • Easy retrofit • Lower energy costs
Flood and backlit Signs and billboards	<ul style="list-style-type: none"> • Improved readability of signs • Reduced energy and maintenance costs 	<ul style="list-style-type: none"> • Metal halide reflector lamps • Ceramalux Comfort high pressure sodium lamps 	<ul style="list-style-type: none"> • High color rendering • High lumen output • Long life construction • Energy efficient 	<ul style="list-style-type: none"> • Very bright light output • Improved safety • Lower maintenance costs • Lower energy costs
Sports lighting	<ul style="list-style-type: none"> • Bright lighting of playing fields • Reduced energy and maintenance costs • Broadcast illumination levels 	<ul style="list-style-type: none"> • 400W - 1000W metal halide lamps • 1500W metal halide lamps 	<ul style="list-style-type: none"> • High color rendering • High lumen output • Long life construction • Energy efficient 	<ul style="list-style-type: none"> • Very bright light output • Improved safety • Lower maintenance costs • Lower energy costs
Outdoor security Lighting	<ul style="list-style-type: none"> • Safety and comfort • Increase nighttime business • Reduce energy and maintenance costs 	<ul style="list-style-type: none"> • Low Pressure Sodium (LPS) lamps • Ceramalux HPS lamps • Metal halide lamps 	<ul style="list-style-type: none"> • Long life • Durability • Energy efficient • Compact • High lumen output • Versatile 	<ul style="list-style-type: none"> • Maximum light output for minimal energy use • Low cost operation over long service life

Incandescent Incandescent Lighting Applications Lighting Applications

Innovation for specific applications and general lighting.

Incandescent lamps continue to set the standards against which other lamps are measured. The color rendering index for incandescents is 100 – the closest to natural light; their color temperature is warm, giving them a cozy, friendly feeling. However, their energy efficiency is low when compared to fluorescent and HID light sources.

Innovations by Philips Lighting have led to increased energy savings opportunities from many incandescent lamps. Since **retrofitting** with energy saving incandescent lamps involves the **least initial cost** compared to installing new fixtures and ballasts, **significant savings** can be enjoyed by using new Philips incandescent lamps.

Philips high performance halogen lamps provide additional alternatives for increased light output and reduced energy costs compared to standard incandescents.

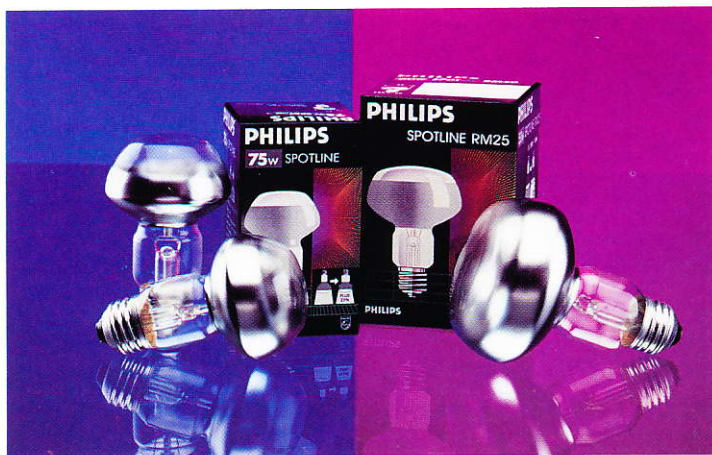
Special incandescents for special applications.

Philips Lighting is committed to an ongoing program to develop new and improved lamps for incandescent and other lighting applications. New and innovative additions to the incandescent products group include:

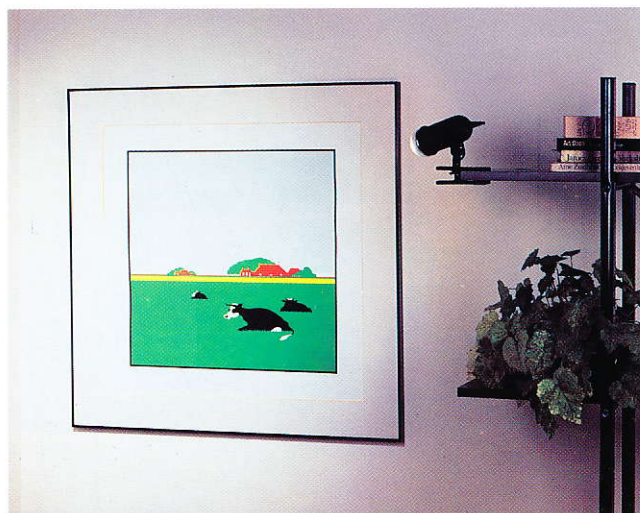
For **high intensity directional lighting**, **Spotline RM** reflector lamps were created with a computer designed double reflector system to concentrate 25% more light in the center than existing R lamps of a similar size. Excellent for use in **retail, hotel, restaurant and home** applications as accent and display lighting, or general lighting in downlights and spot tracks.

Where **high levels of local lighting** are required, Philips soft white **Director®** bulbs combine a partial soft white finish with a satin frosted window to provide 35% more light on the working surface compared to standard incandescents, providing a cleaner, crisper light that is more efficient and easier on the eyes. Well suited for track and recessed lighting, as well as desktop applications.

For **food service, space heating, agricultural, and industrial** applications, the Philips **175-watt PAR infrared heat lamp**, in clear or red, provides excellent heat generating capability, along with long life and energy saving features compared to popular reflector "R" bulbs. The 175-watt PAR heat lamp directly replaces 250-watt R40 lamps using 30% of the energy while delivering the same results.



Philips Spotline reflector lamps (RM-19 and RM-25).





Philips Softone Pastels Collection
soft white bulbs with a hint of color.

Philips **Softone Pastels™** soft white bulbs add a hint of color to create a subtle mood, accentuate color schemes and textures, and make furnishings look richer and more attractive. Available in six subtle, pastel shades of peach, pink, blue, yellow, green and ivory for retail, residential, hotel and restaurant **accent lighting**.

For decorative lighting in **hotels, restaurants, showcases** and other applications, the **Philinea™** lamp features a **slender**

shape, small diameter and high luminous intensity, with linear, uniform end-to-end lighting that is flattering to the human eye.

The **physically demanding conditions** at repair shops, construction sites and other similar areas, demand Philips **rough service and silicone coated lamps** for added safety and durability.

Incandescent Lighting Applications

Halogen lamps for crisp, white light where you need it.

If your lighting applications call for incandescent lighting with bright white light output, long lamp life and high energy efficiency, you can depend on Philips high performance halogen lamps. **Halogen light output is whiter** than standard incandescent light, with a warm color temperature of 3000K, and offers the added benefits of **longer lamp life, low maintenance, high energy efficiency, and near perfect lumen maintenance** (low loss of light output) over the life of the lamp.

For **accent and display lighting** applications in jewelry stores, restaurants, shop windows, showcases, hotels, exhibitions and boutiques, museums and galleries, Philips offers the **MasterLine Collection**, an exclusive line of high-performance halogen lamps, which offer added lighting value by delivering high energy savings, increased light output, and greater efficiencies from existing lighting fixtures. MasterLine lamps are available in compact, 12-volt MR-16 and medium base, standard voltage PAR lamps.

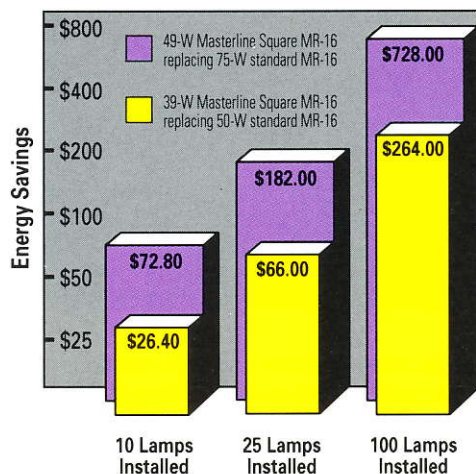


Philips MasterLine Collection of high performance halogen lamps (l to r): PAR-38, Round MR-16, PAR-20, Square MR-16, PAR-30.

MasterLine **Square MR-16** lamps offer outstanding energy savings, as demonstrated below (left), while providing the same lighting effect as the standard 50-watt and 75-watt MR-16s they replace. MasterLine **Round MR-16** lamps offer higher light output than standard MR-16 lamps, as indicated below (right), delivering more light with the same wattage.

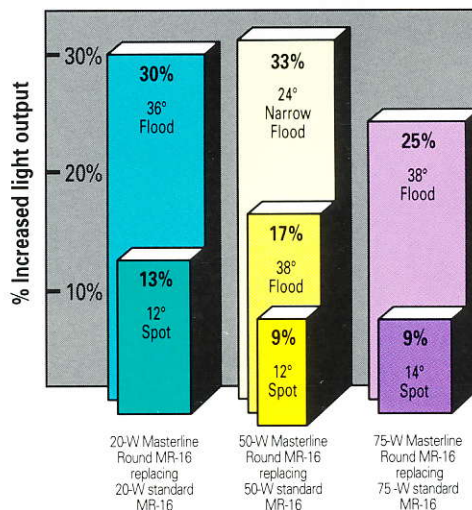
MasterLine PAR lamps offer all the superior lighting qualities of halogen with special reflectors for better light control in **spot and flood lighting** applications. Available in PAR-20, PAR-30 and PAR-38 sizes, they retrofit into standard lighting fixtures. The MasterLine PAR-20 and PAR-30 lamps deliver more light out of recessed fixtures than ordinary PAR-20 and PAR-30 halogen lamps, thanks to their exclusive long neck design which allows retrofit into existing fixtures without the need for adapters.

Square MR-16 Retrofit Energy Savings*



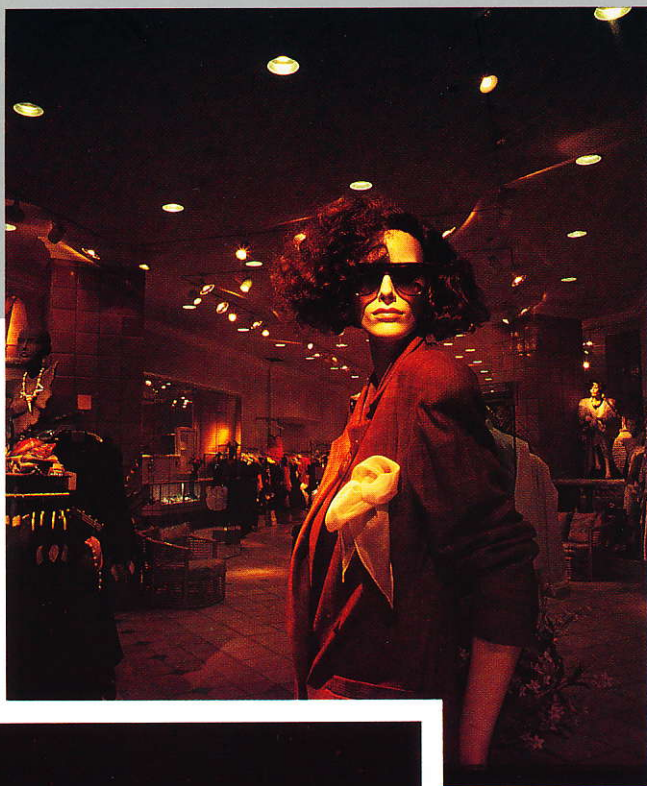
*Based on national average rate of 8¢/Kwh

Round MR-16 Retrofit Light Output





Incandescent Lighting Applications



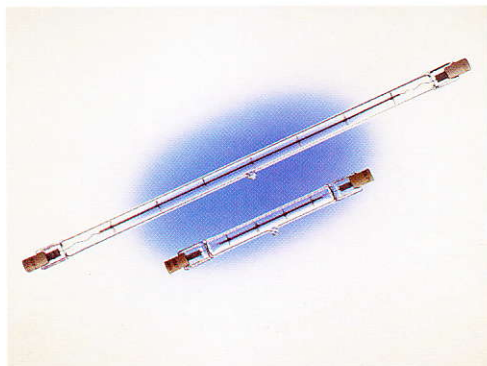
General and task lighting can be improved with Philips **HalogènA™** lamps, which bring the many benefits of halogen lighting to standard, medium base applications – including improved efficiency, long life, crisp white light output and high lumen maintenance.

For **low voltage task and accent lighting**, Philips offers a comprehensive line of **halogen capsules** suitable for a great variety of interior decorating applications.

For **floodlighting** of large areas, Philips offers a broad selection of **double-ended linear halogen lamps** that can be used as an inexpensive lighting source for security lighting, sports fields, and other commercial, industrial and residential applications.



Philips HalogènA BT-15
medium base halogen lamps.



Philips double-ended linear tungsten halogen lamps.

Some Recommended Philips incandescent and halogen lamps for your lighting needs.

Lighting Application	Needs	Philips Products	Features	Benefits
Display, accent, downlighting	<ul style="list-style-type: none"> Bright, directional lighting Concentrated light area High energy savings Low maintenance 	<ul style="list-style-type: none"> MasterLine Square MR-16 halogen lamps MasterLine Round MR-16 halogen lamps 	<ul style="list-style-type: none"> High efficiency design provides more light than comparable halogen lights, with less energy consumption 	<ul style="list-style-type: none"> Increased merchandise appeal Lower energy costs Low maintenance; longer lamp life
	<ul style="list-style-type: none"> High intensity directional lighting Concentrated light area 	<ul style="list-style-type: none"> Spotline RM-19 reflector lamps 	<ul style="list-style-type: none"> Double reflector system 	<ul style="list-style-type: none"> Concentrates 25% more light in center than existing R-20 reflector lamps
Accent Lighting	<ul style="list-style-type: none"> Attractive, soft, colored lighting Enhance room appearances 	<ul style="list-style-type: none"> Softone Pastels 	<ul style="list-style-type: none"> Available in peach, pink, blue, yellow, green and ivory 	<ul style="list-style-type: none"> Attractive lighting accentuates color schemes and textures
	<ul style="list-style-type: none"> Attractive, bright white interior light 	<ul style="list-style-type: none"> Halogen capsules 	<ul style="list-style-type: none"> High efficiency, long life, crisp white light output, high lumen maintenance 	<ul style="list-style-type: none"> Bright white light Lower energy costs Low maintenance; long lamp life
General & Task lighting, Track & Recessed Lighting	<ul style="list-style-type: none"> High levels of local lighting High efficiency Minimize eye strain 	<ul style="list-style-type: none"> Director lamps 	<ul style="list-style-type: none"> Soft white finish Satin frosted bulb "window" Diffused beam 	<ul style="list-style-type: none"> 35% more light on working surface Energy efficient Easy on the eyes
	<ul style="list-style-type: none"> High intensity general lighting Energy savings Low maintenance 	<ul style="list-style-type: none"> HalogenA lamps 	<ul style="list-style-type: none"> High efficiency, long life, crisp white light output, high lumen maintenance 	<ul style="list-style-type: none"> Bright white light Lower energy costs Low maintenance; long lamp life
Decorative Lighting in Narrow Spaces	<ul style="list-style-type: none"> Attractive, uniform lighting to fit in show cases, displays, etc. 	<ul style="list-style-type: none"> Philinea lamps 	<ul style="list-style-type: none"> Slender shape Small diameter High luminous intensity 	<ul style="list-style-type: none"> Permits bright, attractive lighting in narrow spaces Uniform linear lighting; flattering to the eye.
Floodlighting for Security, Sports Fields, Industry	<ul style="list-style-type: none"> Bright light Long life Energy efficiency 	<ul style="list-style-type: none"> Double ended linear halogen lamps 	<ul style="list-style-type: none"> High efficiency, long life, crisp white light output, high lumen maintenance 	<ul style="list-style-type: none"> Bright white light Lower energy costs Low maintenance; long lamp life
Infrared Heating & Drying	<ul style="list-style-type: none"> Generate focused heat Energy savings Long life 	<ul style="list-style-type: none"> 175-Watt PAR Infrared heat lamp (clear or red) 	<ul style="list-style-type: none"> PAR bulb for higher efficiency No warm-up required 95% reduction in light (red lamp) 	<ul style="list-style-type: none"> Energy savings (30%) Long life: 5000+ hours High heat generating efficiency

Technical Descriptions

Lamp Listing Sequence

Lamps are listed in wattage sequence except for special groupings such as Street Lighting, Quartz Infrared, Tungsten Halogen, High Intensity and Silicone Coated lamps.

Ordering Code

The complete information shown in the ordering code column together with the voltage, if applicable, should be used when placing orders.

In a number of instances a lamp type may be available in different kinds of packaging such as 2 or 4 lamp wrappers. Some small lamp types which are generally multiple packed on a platform with an overwrap are also packaged as a blister carded item for the retail market. Each of these items is shown as a separate listing. To identify them, additional information is included with the ordering code. The following examples illustrate this:

Ordering Code	Pkg. Qty.*	Explanation
BC-7T7/W 12/2	12cbs	Carded pack-2 lps per card. The number shown in the "Pkg. Qty." column is the number of cards per minimum shipping case.
60T/SW 12/4	48	12-4 lp wrappers = 48 lps per minimum shipping case.
50/150T/WL /TP 96/1	96	96-1 lp wrappers = 96 lps per minimum shipping case.

* Quantity shown is minimum shipping container. Refer to Net Price Schedules for number of lamps required for qualification as a standard case.

Voltage

Lamps listed are available only in the voltages shown.

Lamps listed in range voltages such as 115-125 or 230-250 are intended for use on circuits normally varying within these voltage limits and are designed for an average voltage suitable for operation on such circuits. Lamps intended for operation in range voltages have a design volt center as follows, unless otherwise noted by a footnote:

Range Voltage	Design Voltage
115-125	120
120-125	120
120-130	125
125-130	130
230-250	240

Class of Lamp

Incandescent lamps are classified as type B or type C. The type B lamp is one in which the filament operates in a vacuum. The type C lamp is one in which the filament operates in an atmosphere of inert gas. For gas-filled lamps which can be operated in any position the lumen maintenance is best when lamps are operated base up. For the vacuum type lamps which have no restrictions on operating position the lumen maintenance is the same in all operating positions.

Lamp Dimensions

Bulb Designations consist of a letter or letters to indicate shape and a number to indicate the approximate diameter in eighths of an inch.

Maximum Overall Length is measured from the top of the bulb to bottom of the base.

Nominal Length

A measurement of fluorescent lamp length based on the length of the lamp plus the proper allowance for standard lamp holders.

Light Center Length is the distance from a reference point on a lamp base (usually the eyelet) to the center of the light source. For high intensity discharge lamps, it is the distance from the center of the filament or center of the arc to the point shown below for the base indicated.

All Screw Bases — Bottom base contact
Medium and Mogul Prefocus — Top of base fin
Medium Bipost — Bottom of bulb
Bayonet Candelabra and Medium Bayonet — Top of base pins
SC or DC Prefocus — Plane of locating bosses of prefocusing collar
Mini-Can — Intersection of 45° taper with maximum diameter of base

Inches to Metric Conversion

To calculate the metric equivalent of inches in millimeters (mm) use the following formula: inches x 25.4001 = millimeters.

Operating Position

Lamps may be operated in any position unless otherwise noted.

Base Pin Position for Bayonet Candelabra Based Lamps

When lamps are based with a bayonet candelabra base, the plane of the base pins will be approximately at right angles to the plane of the filament, unless otherwise indicated.

SC or DC Prefocus Based Lamps

The plane containing the base axis and the major locking eyelet which is the eyelet equidistant from the two other eyelets, will be at right angles to the plane of the filament or lead wires unless otherwise indicated.

The letter (A) shown in the Base column after SC or DC Pref. based lamps indicates that the distance from the bottom of base contact or contacts to the bottom of the collar is .406". In the case of DC Pref. based lamps, the letter (A) also indicates that the plane containing the base axis and contacts is at right angles to the plane containing the base axis and the major locking eyelet.

Glossary of Terms

Candlepower — A term used for the luminous intensity of a light source. The intensity in any one direction from the standard candle is called one candela (formerly one candlepower; cp).

Color Rendering Index (CRI) — A measurement of the color shift an object undergoes when illuminated by the light source, as compared to a reference source at the same color temperature. Color rendering is measured on an index from 0-100, with natural daylight and incandescent lighting both equal to 100. Objects and people viewed under lamps with a high color rendering index (CRI) appear more true to life.

Color Temperature — The chromaticity of an ideal "black body" when it is heated to a specific temperature in Kelvin (K). It is the measure of the color of light, not actual temperature.

Design Lumens — Lumen value at half the rated lifetime.

Footcandle — A unit used in measuring direct illumination. It is defined as the illumination produced from a source of one candela at a point on a surface of one foot away and perpendicular to the source of light. A lumen per square foot.

Illumination — The result of the use of light. Illuminance, the density of luminous flux on a surface, is usually measured in footcandles.

Instant Start — A circuit used to start specially-designed fluorescent lamps without the aid of a starter. The circuit utilizes higher open circuit voltage than is required for the same length preheat lamp, to strike the arc instantly. This circuit is used today on slimline and cold cathode lamps. Instant start 40-watt bipin lamps are made with a short circuiting device built into the base.

Kilowatt (KW) — A larger unit of power, a thousand watts (watts x 1000 = kilowatts).

Kilowatt Hour (KWH) — The measure of electrical usage from which electricity billing is determined. For example, a 100-watt bulb operated for 1000 hours would consume 100 kilowatt hours, (100 watts x 1000 hours = 100 KWH). At a billing rate of \$0.10/kwh, this bulb would cost \$10.00 (100 kwh x \$0.10/kwh) to operate.

Light — The term generally applied to the visible energy from a source. Light is usually measured in lumens or candlepower. When light strikes a surface it is either absorbed, reflected or transmitted. Light is said to travel in straight lines.

Lumen — The unit that expresses the total quantity of light given off by a source, regardless of direction. A lumen is defined as the amount of light falling on a surface of one square foot, every point of which is one foot away from a source of one candlepower. A uniform source of one candlepower placed in a sphere emits 12.57 lumens or mean spherical candela equal to 12.57 lumens.

Lumens Per Watt (LPW) — A measure of the efficacy of a light source in terms of the light produced for the power consumed. For example, a 100-watt lamp producing 1750 lumens gives 17.5 lumens per watt.

Luminance or Brightness — The light emitted, transmitted or reflected from a unit area of the source of surface is its brightness. It is usually expressed in candles per square inch or Lamberts or foot Lamberts.

Preheat — A circuit used on fluorescent lamps wherein the electrodes are heated or warmed to a glow stage, by an auxiliary switch or starter (can be a glow switch, thermal type or a mechanical device like a push button) before the lamps are lighted. This system was used on the original fluorescent lamps and is still in use today.

Rapid Start — A circuit designed to start lamps by continuously heating or preheating the electrodes. This circuit is a modern version of the trigger start system and requires lamps designed for this circuit. In the rapid start two-lamp circuit, one end of each lamp is connected to a separate starting winding. The other end of each lamp is connected to a common winding. Except for slimline lamps, all modern fixtures using 40-watt and higher lamps are equipped with rapid start ballasts.

Rated Average Life — The operating life (hours) at which 50% of the lamps are still operating. Where a plus (+) is used in stating the life, survival rate is 67% at the stated time.

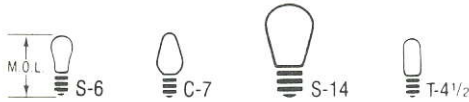
Trigger Start — A circuit used to eliminate the starter and start the preheat lamp almost instantly. In this circuit each electrode is connected to a separate winding in the ballast so that the electrode is continuously heated. This circuit is primarily used on 20-watt and lower wattage fluorescent lamps today.

Voltage (V or E) — A measurement of electromotive force or the pressure of electricity. This is analogous to the pressure in a water line; i.e. pounds per square inch. The voltage of a circuit is the electrical pressure it gives. In an incandescent lamp, "voltage" designates the supply voltage to which the lamp should be connected. In other lamp types, it may refer to "operating voltage" of a lighted arc discharge lamp.

Watt (W) — Unit used to measure power consumption of lamp.

Incandescent Lamps

INCANDESCENT



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate		
												Hours Life	Initial Lumens	
3	S-6	Cand.▲		21002-1	3S6/5	120	120	Clear	B, C-7A		1⅞	3000	12	
				21009-6	3S6/5	125-130	120	Clear	B, C-7A		1⅞	3000	12	
4	C-7	Cand.▲ † \$ \$ \$		25706-3	BC-4C7	12/2	115-125	120	Clear, Night Light	B, C-7A		2⅞	3000	16
				24741-1	BC-4C7/4	12/4	120	48	Clear, Night Light	B, C-7A		2⅞	3000	16
				25708-9	BC-4C7/W	12/2	115-125	120	Soft White, Night Light	B, C-7A		2⅞	3000	14
5	S-14	Med.▲		24006-9	5S14	12	120	Clear	B, C-6	2½	3½	1500	45	
			X	24013-5	5S14	34	120	Clear	B, C-6		3½	1000	40	
			X	32221-4	5S14/G	60	120	Green	B, C-6		3½	1500		
			X	30027-7	5S14/R	60	120	Red	B, C-6		3½	1500		
6	S-6	Cand.▲	X	24021-8	6S6	6	120	Clear	B, C-2R		1⅞	1500	54	
				24023-4	6S6	12	120	Clear	B, C-2V		1⅞	1500	54	
			X	24030-9	6S6	18	120	Clear	B, C-2V		1⅞	1500	54	
				24034-1	6S6	24	120	Clear	B, C-2V		1⅞	1500	54	
				24038-2	6S6	30	120	Train, Clear	B, C-2V		1⅞	1500	50	
				26283-2	6S6/BR	32	120	Clear	B, C-2V		1⅞	1500	50	
				24059-8	6S6	60	120	Clear	B, C-9		1⅞	1500	46	
				21020-3	6S6	120	120	Clear	B, C-9		1⅞	1500	40	
				21045-0	6S6	125-130	120	Clear	B, C-9		1⅞	1500	40	
				21051-8	6S6	135	120	Clear	B, C-7A		1⅞	1500	38	
				21055-9	6S6	145	120	Clear	B, C-7A		1⅞	1500	38	
				21059-1	6S6	155	120	Clear	B, C-7A		1⅞	1500	38	
				21033-6	6S6/R	115-125	120	Red	B, C-9		1⅞	1500		
				21024-5	6S6/3	120	120	Vibration, Clear	B, C-17		1⅞	1500	20	
			21048-4	6S6/3	125-130	120	Vibration, Clear	B, C-17		1⅞	1500	20		
		Inter.		21106-0	6S6/7	120	120	Clear	B, C-9		1⅜⅙	1500	44	
			X	21110-2	6S6/7	130	120	Clear	B, C-9		1⅜⅙	1500	44	
			D.C. Bay	X	24068-9	6S6DC	6	120	Clear	B, C-2R	1⅜⅙	1⅜⅙	1500	54
				X	24069-7	6S6DC	12	120	Clear	B, C-2V	1⅜⅙	1⅜⅙	1500	54
				24071-3	6S6DC	24	120	Clear	B, C-2V	1⅜⅙	1⅜⅙	1500	54	
			X	24075-4	6S6DC	30	120	Clear	B, C-2V	1⅜⅙	1⅜⅙	1500	50	
				24087-9	6S6DC	75	120	Clear	B, C-9		1⅜⅙	1500	46	
				21066-6	6S6DC	120	120	Clear	B, C-7A	1⅜⅙	1⅜⅙	1500	40	
				21085-6	6S6DC	125-130	120	Clear	B, C-7A	1⅜⅙	1⅜⅙	1500	40	
				21098-9	6S6DC	145	120	Clear	B, C-7A	1⅜⅙	1⅜⅙	1500	38	
		X	21104-5	6S6DC	155	120	Clear	B, C-7A	1⅜⅙	1⅜⅙	1500	38		
		X	21068-2	6S6/1DC	120	120	Vibration, Clear	B, C-17	1⅜⅙	1⅜⅙	1500	20		
		S.C. Bay		24095-2	6S6SC	40	120	Clear	B, C-9		1⅜⅙	1500	46	
			X	21113-6	6S6SC	120	120	Clear	B, C-7A	1⅜⅙	1⅜⅙	1500	44	
				32908-6	6S6SC	155	120	Clear	B, C-7A	1⅜⅙	1⅜⅙	1500		
		S-14	Med.		21127-6	6S14/IF	115-125	120	Inside Frosted	B, C-9		3½	1500	42
				X	21126-8	6S14	115-125	120	Clear	B, C-9	2½	3½	1500	43
		T-4½	Cand.▲		21139-1	6T4½/1	115-125	60	Indicator, Clear	B, C-9		1⅞	1500	40
					21143-3	6T4½/1	130	60	Indicator, Clear	B, C-9		1⅞	1500	40
7	C-7	Cand.▲		23503-6	7C7	115-125	240	Clear	B, C-9		2⅞	3000	45	
				23617-4	7C7	24 Pk. 130	24	Clear	B, C-9		2⅞	3000	45	
				23512-7	7C7/W	115-125	240	Night Light White	B, C-9		2⅞	3000	35	
				25714-7	BC-7C7/W	12/2	115-125	120	Soft White, Night Light	B, C-9		2⅞	3000	35
			\$\$\$ — CONSIDER BC-4C7/W 115-125 VOLT FOR ENERGY SAVINGS											
				23621-6	7C7/W	24 Pk. 130	24	Night Light White	B, C-9		2⅞	3000	35	
			X	23516-8	7C7/B	24 Pk. 115-125	24	Blue	B, C-9		2⅞	3000		
				23522-6	7C7/G	24 Pk. 115-125	24	Green	B, C-9		2⅞	3000		
				23549-9	7C7/O	24 Pk. 115-125	24	Orange	B, C-9		2⅞	3000		
				23912-9	7C7/R	24 Pk. 115-125	24	Red	B, C-9		2⅞	3000		

Exclusive Product

\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

For pricing information refer to PS-101-U

Incandescent Lamps



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens
7	C-7	Cand. ▲	29365-4	7C7/Y 24 Pk.	115-125	24	Yellow	B, C-9		2 1/8	3000	
			X 29910-7	BC-7C7/TB 12/2	115-125	120*	Transparent Blue	B, C-9		2 1/8	3000	
			X 29912-3	BC-7C7/TG 12/2	115-125	120*	Transparent Green	B, C-9		2 1/8	3000	
			X 29920-6	BC-7C7/TR 12/2	115-125	120*	Transparent Red	B, C-9		2 1/8	3000	
			29924-8	BC-7C7/TY 12/2	115-125	120*	Transparent Yellow	B, C-9		2 1/8	3000	
		D.C. Bay.	25096-9	7C7/DC 24 Pk.	115-125	24	Clear	B, C-9		2 3/16	3000	45
7 1/2	S-11	Med. ▲	23622-4	7 1/2 S	120	240	Clear	B, C-9		2 1/4	1400	50
			23506-9	7 1/2 S	130	240	Clear	B, C-9		2 1/4	1400	50
			23626-5	7 1/2 S/W	115-125	240	Night Light White	B, C-9		2 1/4	1400	42
			29889-3	BC-7 1/2 S/W 12/1	120	12	Night Light White	B, C-9		2 1/4	1400	42
			23661-2	7 1/2 S/W	130	240	Night Light White	B, C-9		2 1/4	1400	42
			23665-3	7 1/2 S/B 24 Pk.	115-125	24	Blue	B, C-9		2 1/4	1400	
			23675-2	7 1/2 S/G 24 Pk.	115-125	24	Green	B, C-9		2 1/4	1400	
			23677-8	7 1/2 S/O 24 Pk.	115-125	24	Orange	B, C-9		2 1/4	1400	
			X 23681-0	7 1/2 S/O 24 Pk.	130	24	Orange	B, C-9		2 1/4	1400	
			30329-7	7 1/2 S/R 24 Pk.	115-125	24	Red	B, C-9		2 1/4	1400	
			30331-3	7 1/2 S/R 24 Pk.	130	24	Red	B, C-9		2 1/4	1400	
			23692-7	7 1/2 S/Y 24 Pk.	115-125	24	Yellow	B, C-9		2 1/4	1400	
			X 29927-1	BC-7 1/2 S/TB 12/1	120	12	Transparent Blue	B, C-9		2 1/4	1400	
			X 29929-7	BC-7 1/2 S/TG 12/1	120	12	Transparent Green	B, C-9		2 1/4	1400	
			X 29932-1	BC-7 1/2 S/TR 12/1	120	12	Transparent Red	B, C-9		2 1/4	1400	
			X 29997-4	BC-7 1/2 S/TY 12/1	120	12	Transparent Yellow	B, C-9		2 1/4	1400	
9	S-11	S.C. Bay. X	29447-0	9S11/SC	12	120	Rwy. Lt. Signal(72)	C, C-2V	1 1/4	2 3/16	1500	
10	C-7	Cand. ▲	21209-2	10C7	115-125	120	Clear	B, C-9		2 1/8	(3)	56
			X 36519-7	10C7	130	120	Clear	B, C-9		2 1/8	(3)	56
		D.C. Bay.	21220-9	10C7DC	115-125	120	Clear	B, C-7A		2 3/16	(3)	56
	S-11	Cand. ▲	21232-4	10S11/79	120	120	Clear	B, C-9	1 5/8	2 1/4	1500	80
		Inter. ▲	25094-4	10S11N/IF 24 Pk.	120	24	Frosted	B, C-9		2 3/16	1500	80
		Inter.	23707-3	10S11N	120	240	Clear	B, C-9	1 5/8	2 3/16	1500	80
			23709-9	10S11N	130	240	Clear	B, C-9	1 5/8	2 3/16	1500	80
		X	23765-1	10S11N/B 24 Pk.	120	24	Blue	B, C-9		2 3/16	1500	
			X 23805-5	10S11N/G 24 Pk.	120	24	Green	B, C-9		2 3/16	1500	
			X 23852-7	10S11N/O 24 Pk.	120	24	Orange	B, C-9		2 3/16	1500	
			23833-7	10S11N/R 24 Pk.	120	24	Red	B, C-9		2 3/16	1500	
			23726-3	10S11N/W 24 Pk.	120	24	White	B, C-9		2 3/16	1500	62
			X 23854-3	10S11N/Y 24 Pk.	120	24	Yellow	B, C-9		2 3/16	1500	
			X 23855-0	10S11N/Y 24 Pk.	130	24	Yellow	B, C-9		2 3/16	1500	
		X	23857-6	10S11N/TB	130	24	Transparent Blue	B, C-9		2 3/16	1500	
		X	23865-9	10S11N/TG	130	24	Transparent Green	B, C-9		2 3/16	1500	
		X	23866-7	10S11N/TR	130	24	Transparent Red	B, C-9		2 3/16	1500	
		X	23897-2	10S11N/TY	130	24	Transparent Yellow	B, C-9		2 3/16	1500	
	S-14	Med.	X 21294-4	10S14/IF	120	120	Inside Frosted	B, C-9		3 1/2	1500	82
			21308-2	10S14/IF	130	120	Inside Frosted	B, C-9		3 1/2	1500	82
			21291-0	10S14	120	120	Clear	B, C-9	2 1/2	3 1/2	1500	82
			21304-1	10S14	130	120	Clear	B, C-9	2 1/2	3 1/2	1500	82
			X 24460-8	10S14	230-250	120	Clear	B, C-9		3 1/2	1000	60
			21267-0	10S14/B	115-125	60	Blue	B, C-9		3 1/2	1500	
			21272-0	10S14/G	115-125	60	Green	B, C-9		3 1/2	1500	
			21265-4	10S14/O	115-125	60	Orange	B, C-9		3 1/2	1500	
			21276-1	10S14/R	115-125	60	Red	B, C-9		3 1/2	1500	
			X 24464-0	10S14/R	230-250	120	Red	B, C-9		3 1/2	1000	
			X 21278-7	10S14/R2	115-125	60	Rose	B, C-9		3 1/2	1500	

□ Exclusive Product

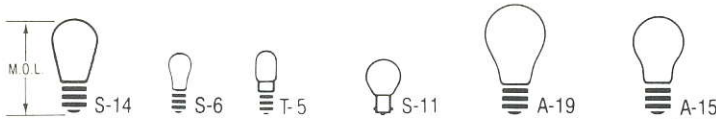
\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps

INCANDESCENT



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens
10	S-14	Med.	21279-5	10S14/W	115-125	60	White	B, C-9		3 1/2	1500	64
			21282-9	10S14/Y	115-125	60	Yellow	B, C-9		3 1/2	1500	
	S-6	Cand.▲	24429-3	10S6/10	230	120	Clear	B, CC-9		1 7/8	1500	69
			24436-8	10S6/10	250	120	Clear	B, CC-9		1 7/8	1500	69
		Inter.	24456-6	10S6/13	250	120	Clear	B, CC-9		1 13/16	1500	69
	D.C. Bay.	X	24444-2	10S6/15	230	120	Clear	B, C-7A		1 13/16	1500	60
			24450-9	10S6/15	250	120	Clear	B, C-7A		1 13/16	1500	60
	T-5	E-14 Screw†	29561-8	10T5	120	500	Carnival, Clear	B, C-7A		2 1/8	2000	40
11	S-11	S.C. Bay.	24138-0	11S11SC	11	120	Rwy. Lt. Signal(72)	C, C-2V	1 1/4	2 3/8	2500	
	S-14	Med.	X 21340-5	11S14/IF	115-125	120	Inside Frosted	B, C-9		3 1/2	3000	82
			X 21349-6	11S14/IF	130	120	Inside Frosted	B, C-9		3 1/2	3000	82
			X 37551-9	11S14/IF Handy Pack	130	120	I.F., Handy Pack	B, C-9		3 1/2	3000	82
			21339-7	11S14	115-125	120	Clear	B, C-9	2 1/2	3 1/2	3000	82
			21347-0	11S14	130	120	Clear	B, C-9	2 1/2	3 1/2	3000	82
			X 37550-1	11S14 Handy Pack	130	120	Clear, Handy Pack	B, C-9	2 1/2	3 1/2	3000	82
			21351-2	11S14/B	130	120	Blue	B, C-9		3 1/2	3000	
			21352-0	11S14/G	130	120	Green	B, C-9		3 1/2	3000	
			21350-4	11S14/O	130	120	Orange	B, C-9		3 1/2	3000	
			X 21344-7	11S14/R	115-125	120	Red	B, C-9		3 1/2	3000	
			21353-8	11S14/R	130	120	Red	B, C-9		3 1/2	3000	
			21354-6	11S14/W	130	120	White	B, C-9		3 1/2	3000	64
			X 21346-2	11S14/Y	115-125	120	Yellow	B, C-9		3 1/2	3000	
			21355-3	11S14/Y	130	120	Yellow	B, C-9		3 1/2	3000	
			X 39089-8	11S14/TB	115-125	120	Transparent Blue	B, C-9		3 1/2	3000	
			39007-0	11S14/TB	130	120	Transparent Blue	B, C-9		3 1/2	3000	
			X 39090-6	11S14/TG	115-125	120	Transparent Green	B, C-9		3 1/2	3000	
			39093-0	11S14/TG	130	120	Transparent Green	B, C-9		3 1/2	3000	
			X 38842-1	11S14/TO	115-125	120	Transparent Orange	B, C-9		3 1/2	3000	
			X 39091-4	11S14/TR	115-125	120	Transparent Red	B, C-9		3 1/2	3000	
			39006-2	11S14/TR	130	120	Transparent Red	B, C-9		3 1/2	3000	
			X 39092-2	11S14/TY	115-125	120	Transparent Yellow	B, C-9		3 1/2	3000	
			39095-5	11S14/TY	130	120	Transparent Yellow	B, C-9		3 1/2	3000	
13	S-11	S.C. Bay.	24140-6	13/3 1/2 S11/95	10	120	Rwy. Lt. Signal(72)(73)	C, C-2V C-12	1 1/4	2 3/8	1000	
15	A-19	Med.▲	X 32743-7	15A	6	120	Inside Frosted	C, C-6		4 1/4	1000	190
			32740-3	15A	12	120	Inside Frosted	C, C-6		4 1/4	1000	187
			32708-0	15A	34	120	Inside Frosted	C, C-6		4 1/4	1000	179
	A-15	Med.▲	X 33367-4	15A	75	120	Inside Frosted	B, C-9	2 3/8	3 1/2	1000	147
			X 33375-7	15A	230-250	120	Inside Frosted	B, C-9		3 1/2	1000	120
			□ 35337-5	15A15	12	120	Inside Frosted	C, C-6		3 1/2	1000	187
			39869-3	15A15	120	120	Inside Frosted	B, C-9		3 1/2	2500	126
			39887-5	15A15	130	120	Inside Frosted	B, C-9		3 1/2	2500	126
			† 30256-2	15A/WL	12/2	120	Long Life, Soft White	B, C-9		3 1/2	3000	114
			21385-0	15A15/CL	120	120	Clear	B, C-9	2 3/8	3 1/2	2500	126
			21402-3	15A15/CL	130	120	Clear	B, C-9	2 3/8	3 1/2	2500	126
	Med.	X □	25850-9	15A15/35	120	60	Industrial Service, I.F.	B, C-9		3 1/2	3500	123
			□ 25849-1	15A15/35	125-130	60	Industrial Service, I.F.	B, C-9		3 1/2	3500	123
	Med.▲	X	21368-6	15A/B	115-125	60	Blue	B, C-9		3 1/2	2500	
			X 21372-8	15A/G	115-125	60	Green	B, C-9		3 1/2	2500	
			X 21366-0	15A/O	115-125	60	Orange	B, C-9		3 1/2	2500	
			21376-9	15A/R	115-125	60	Red	B, C-9		3 1/2	2500	
			X 21379-3	15A/R2	115-125	60	Rose	B, C-9		3 1/2	2500	
			X 21381-9	15A/WH	115-125	60	White	B, C-9		3 1/2	2500	
			21383-5	15A/Y	115-125	60	Yellow	B, C-9		3 1/2	2500	

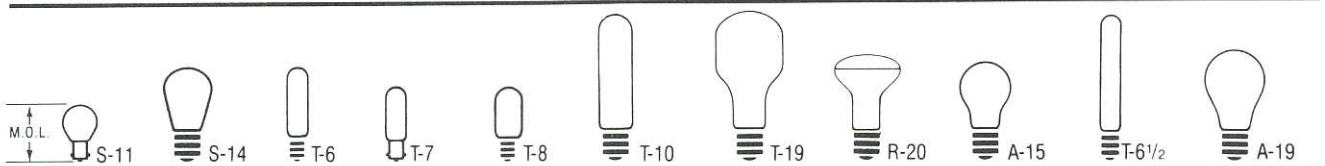
□ Exclusive Product

SSS — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps

														
Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L. C. L. (In.)	M. O. L. (In.)	Approximate Hours Life	Initial Lumens		
15	S-11	D.C. Bay	24169-5	15S11/3DC	75	120	Clear	B, C-7A	1¼	2¾	1000	140		
		Cand.▲	21464-3	15S11/IF	120	120	Indicator, Frosted	B, C-7A		2¼	750	135		
			21460-1	15S11/14	120	60	Spotlight	B, C-7A	1⅝	2¼	200	160		
		Med.▲	24480-6	15S11/102	120	24	Refrigerator, Clear	B, C-7A	1⅞	2¼	400	142		
	S-14	Med.▲	24179-4	15S14/IF	34	120	Train, I.F.	B, C-6		3½	1000	141		
			24180-2	15S14/IF/1	34	120	Train, I.F. Insulated Lead	B, C-6		3½	1000	141		
	T-6	Cand.▲	X	24186-9	15T6	60	60	Switchboard	B, C-7A		3⅞	2000	120	
				21486-6	15T6	115-125	60	Switchboard, Clear	B, C-7A		3⅞	2000	114	
				21490-8	15T6	140-150	60	Switchboard, Clear(63)	B, C-7A		3⅞	2000	106	
		D.C. Bay.	21492-4	15T6DC	115-125	60	Clear	B, C-7A		3⅞	2000	114		
	T-7	D.C. Bay.	X	21506-1	15T7DC/IF	115-125	60	Appliance, Frosted	B, C-7A		2¼	(4)	113	
			X	21510-3	15T7DC/IF	130	60	Appliance, Frosted	B, C-7A		2¼	(4)	113	
				21503-8	15T7DC	115-125	60	Appliance, Clear	B, C-7A		2¼	(4)	115	
			29890-1	BC-15T7DC	12/1	115-125	12	Appliance, Clear	B, C-7A		2¼	(4)	115	
		Cand.▲	X	21499-9	15T7C/IF	115-125	60	Appliance, Frosted	B, C-7A		2¼	(4)	113	
			21496-5	15T7C	115-125	60	Appliance, Clear	B, C-7A		2¼	(4)	115		
		Inter.▲	X	21513-7	15T7N/IF	115-125	60	Appliance, Frosted	B, C-7A		2¼	(4)	113	
			21511-1	15T7N	115-125	60	Appliance, Clear	B, C-7A		2¼	(4)	115		
			29904-0	BC-15T7N	12/1	115-125	12	Appliance, Clear	B, C-7A		2¼	(4)	115	
	T-8	Cand.▲		21515-2	15T8C	115-125	60	Clear	B, C-7A		2¾	1000	150	
			Inter.▲	20115-2	15T8N	115-125	60	Clear	B, C-7A		2¾	1000	150	
	T-10	Med.▲		37671-5	BC-15T10	12/1	115-125	12	Aquarium, Clear	B, C-9	5¾	2500	115	
15 135 150	T-19	3 Ct. Med.▲	36688-0	15/150T/WL	12/1	120	12	Longer Life Soft White Three-Way (8)	C, 2CC-6	5⅞	1600	100 2200 2300		
17	R-20	Med.	23263-7	17R20	6.3	60	Reflector, Lt., I.F.	C, C-6		3⅞	2000			
	S-11	S.C. Bay.	24197-6	17S11SC	13.5	120	Rwy. Lt. Signal(72)	C, C-2V	1¼	2⅞	2000			
18	A-15	2 Pin Sl.	24200-8	18A15/3	10	60	Rwy. Lt. Signal(74)	C, C-2V	2⅞	3¾	1500			
		3 Pin Sl.	24203-2	18A15/7	10	60	Rwy. Lt. Signal(74)	C, C-2R	2⅞	3¾	1500			
		2 Pin Sl.	X	24201-6	18/3.5A15/5	10	60	Rwy. Lt. Signal—both Fil. in Multiple(74)	C, C-2V CC-6	2⅞	3¾	1500		
	S-11	S.C. Bay	24210-7	18S11/1SC	10	120	Rwy. Lt. Signal(72)	C, CC-6	1¼	2⅞	2000			
			24213-1	18/5S11SC	12	120	Rwy. Lt. Signal(72) (73)	C, CC-6 CC-6	1¼	2⅞	1000			
20	S-11	S.C. Bay	26616-3	20S11/1SC	10	120	Rwy. Lt. Signal(72)	C, CC-6	1¼	2⅞	3000			
	T-6½	Inter.	22511-0	20T6½/IF	120	60	Exit Sign, Frosted	B, C-8		5½	(3)	90		
			25795-6	20T6½/CL	120	60	Exit Sign, Clear	B, C-8		5½	(3)	90		
			D.C. Bay.	22512-8	20T6½DC/IF	120	60	Exit Sign, Frosted	B, C-8		5½	(3)	90	
			22121-8	20T6½DC	120	60	Exit Sign, Clear	B, C-8		5½	(3)	90		
24	T-6½	Inter.	28712-8	24T6½/IF	120	60	Exit Sign, Frosted One Year Life	B, C-8		5½	8760	170		
		D.C. Bay.	28714-4	24T6½DC/IF	120	60	Exit Sign, Frosted One Year Life	B, C-8		5½	8760	170		
25	A-15	Med.▲		23165-4	25A15/1	115-125	120	Refrigerator, I.F.	B, C-9		3½	1000	210	
			X	31055-7	25A15/1/TF	115-125	120	Refrigerator, Frost Silicone Coated	B, C-9		3½	1000		
		Med.	22638-1	25A15/RFL	130	120	Sign Reflector, I.F.	B, C-9		3½	2500			
	A-19	Med.▲	X	24222-2	25A	6	120	Inside Frosted	C, C-6		4¼	1000	380	
				36804-3	25A	12/2	12	24	Inside Frosted	C, C-6		4¼	1000	375
				24224-8	25A	12	120	Inside Frosted	C, C-6		4¼	1000	375	
				24227-1	25A	24	120	Inside Frosted	C, C-6		4¼	1000	345	
				24229-7	25A	30	120	Train, I.F.	C, C-6		4¼	1000	325	
				24235-4	25A	34	120	Train, I.F.	C, C-6		4¼	1000	325	

□ Exclusive Product

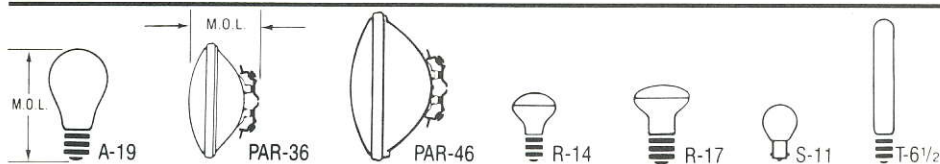
SSS — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps

INCANDESCENT



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens	
25	A-19	Med.▲	X	24240-4	25A	60	120	Train, I.F.	C, C-6		4¼	1000	280	
				24243-8	25A	75	120	Inside Frosted	B, C-9		3 ¹⁵ / ₁₆	1000	265	
				39888-3	25A	120	120	Inside Frosted	B, C-9		3 ¹⁵ / ₁₆	2500	232	
				30031-9	25A/TF	115-125	120	Frost Silicone Coated	B, C-9		3 ¹⁵ / ₁₆	2500		
				39890-9	25A	130	120	Inside Frosted	B, C-9		3 ¹⁵ / ₁₆	2500	232	
				24498-8	25A	230	120	Inside Frosted	B, C-17		3 ¹⁵ / ₁₆	1000	220	
				24508-4	25A	250	120	Inside Frosted	B, C-17		3 ¹⁵ / ₁₆	1000	220	
				29926-3	25A	277	120	Inside Frosted	B, C-17		3 ¹⁵ / ₁₆	1000	200	
				21573-1	25A/CL	120	120	Clear	B, C-9	2½	3 ¹⁵ / ₁₆	2500	232	
				21615-0	25A/CL	130	120	Clear	B, C-9	2½	3 ¹⁵ / ₁₆	2500	232	
				24507-6	25A/CL	250	120	Clear	B, C-17	2½	3 ¹⁵ / ₁₆	1000	220	
				21557-4	25A/B	115-125	60	Blue	B, C-9		3 ¹⁵ / ₁₆	2500		
				21561-6	25A/G	115-125	60	Green	B, C-9		3 ¹⁵ / ₁₆	2500		
				21555-8	25A/O	115-125	60	Orange	B, C-9		3 ¹⁵ / ₁₆	2500		
				21564-0	25A/R	115-125	60	Red	B, C-9		3 ¹⁵ / ₁₆	2500		
				X	21636-6	25A/R	130	60	Red	B, C-9		3 ¹⁵ / ₁₆	2500	
				X	24504-3	25A/R	230	120	Red	B, C-17		3 ¹⁵ / ₁₆	1000	
				X	24512-6	25A/R	250	120	Red	B, C-17		3 ¹⁵ / ₁₆	1000	
		Med.	X	21566-5	25A/R2	115-125	60	Rose	B, C-9		3 ¹⁵ / ₁₆	2500		
			X	21594-7	25A/WH	115-125	120	White	B, C-9		3 ¹⁵ / ₁₆	2500		
				21567-3	25A/Y	115-125	60	Yellow	B, C-9		3 ¹⁵ / ₁₆	2500		
			X	21643-2	25A/Y	130	60	Yellow	B, C-9		3 ¹⁵ / ₁₆	2500		
			X	29908-1	25A/Y	230	120	Yellow	B, C-17		3 ¹⁵ / ₁₆	1000		
				24231-3	25A19/RS	32	120	Rough Service, I.F.	B, C-9		3 ¹⁵ / ₁₆	1000		
				33365-8	25A19/RS	75	120	Train, Rough Service, I.F.	B, C-17		3 ¹⁵ / ₁₆	1000	240	
				21588-9	25A/RS	120	120	Rough Service, I.F.	B, C-17		3 ¹⁵ / ₁₆	1000	235	
				21625-9	25A/RS	125-130	120	Rough Service, I.F.	B, C-17		3 ¹⁵ / ₁₆	1000	235	
			X	21589-7	25A/VS	120	120	Vibration, I.F.	B, C-9		3 ¹⁵ / ₁₆	1000	265	
		Med.▲	X	21626-7	25A/VS	125-130	120	Vibration, I.F.	B, C-9		3 ¹⁵ / ₁₆	1000	265	
			X	21577-2	25A/CL/VS	120	120	Vibration, Clear	B, C-9	2½	3 ¹⁵ / ₁₆	1000	265	
				21618-4	25A/CL/VS	125-130	120	Vibration, Clear	B, C-9	2½	3 ¹⁵ / ₁₆	1000	265	
			X	29734-1	25A19/GR/CL	120	120	Clear	B, C-9		3 ¹⁵ / ₁₆	3000	210	
				29736-6	25A19/GR/CL	130	120	Clear	B, C-9		3 ¹⁵ / ₁₆	3000	210	
				36130-3	25A/TB	12/1	115-125	12	Transparent Blue	B, C-9		3 ¹⁵ / ₁₆	3000	
				36131-1	25A/TG	12/1	115-125	12	Transparent Green	B, C-9		3 ¹⁵ / ₁₆	3000	
				36138-6	25A/TR	12/1	115-125	12	Transparent Red	B, C-9		3 ¹⁵ / ₁₆	3000	
				36142-8	25A/TY	12/1	115-125	12	Transparent Yellow	B, C-9		3 ¹⁵ / ₁₆	3000	
			Med.	X	38055-0	25A/CL/RFL	125-130	60	Sign Reflector, Clear	B, C-9		3 ¹⁵ / ₁₆	3000	
		□		25848-3	25A19/35	120	60	Industrial Service, I.F.	B, C-9		3 ¹⁵ / ₁₆	3500	220	
		□		25847-5	25A19/35	125-130	60	Industrial Service, I.F.	B, C-9		3 ¹⁵ / ₁₆	3500	220	
	PAR-36	M-P		27530-5	25PAR36	5.5	12	*Display Spot, Clear	C, C-6		2¾	1000		
				20208-5	25PAR36/VNSP	12	12	*PAR Compact Very Narrow Spot	C, C-6		2¾	2000	150	
	PAR-46	M-P		27528-9	25PAR46	5.5	12	*Display Spot, Clear	C, C-6		3¾	1000		
	R-14	Inter.■		31830-3	25R12/R14N Replaces 25R12N and 25R14N	120	25	Mini-Refl. Lt. Fr. Actual Bulb Dia. 1½"	C, C-9		2 ¹ / ₁₆	1500	200	
	R-17	Med.	□	28717-7	25R17	120	60	Mini-Refl., Frost(23)(31)(52)	C, C-9			2¾	1500	
	S-11	S.C.Bay.		24250-3	25S11/4SC	10	120	Rwy. Lt. Signal(72)	C, CC-6	1¼		2⅞	1000	
		Cand.▲		21702-6	25S11/2C	120	120	Headlamp, Clear(2)	B, C-7A	1 ⁷ / ₁₆		2¼	500	220
		Inter.▲	X	21706-7	25S11N/1	120	120	Sewing Machine, I.F.(2)	B, C-1			2 ⁵ / ₁₆	600	210
	T-6½	Inter.▲		21718-2	25T6½/IF	115-125	60	Frosted	B, C-8			5½	1000	250
				21721-6	25T6½/IF	130	60	Frosted	B, C-8			5½	1000	250
				21714-1	25T6½	115-125	60	Clear	B, C-8			5½	1000	250

□ Exclusive Product

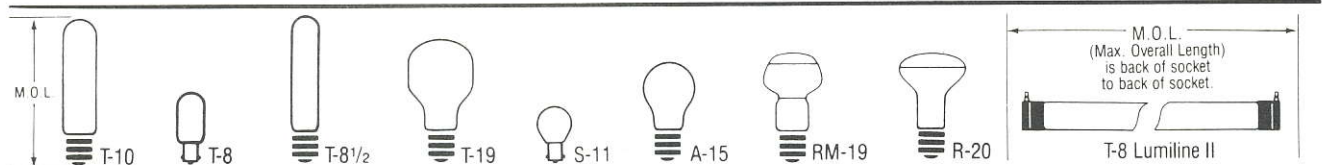
\$\$\$ — Energy Saving Product

† New Since Last Printing

● — Consider compact fluorescent lamps listed on page 64 for energy savings.

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



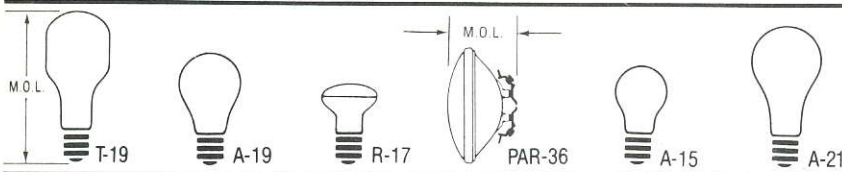
Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens
25	T-10	Med.▲	22856-9	25T6½	24 Pk.	115-125	24	Clear	B, C-8	5½	1000	250
			21720-8	25T6½		130	60	Clear	B, C-8	5½	1000	250
		D.C.Bay.	21710-9	25T6½DC/IF		115-125	60	Frosted	B, C-8	5½	1000	250
			21713-3	25T6½DC/IF		130	60	Frosted	B, C-8	5½	1000	250
			21709-1	25T6½DC		115-125	60	Clear	B, C-8	5½	1000	250
			21712-5	25T6½DC		130	60	Clear	B, C-8	5½	1000	250
	T-8	D.C.Bay.	21730-7	25T8DC/IF		115-125	60	Appliance, Frosted	B, C-7A	2½	(4)	235
			21736-4	25T8DC/IF		130	60	Appliance, Frosted	B, C-7A	2½	(4)	235
			29909-9	BC-25T8DC	12/1	115-125	12	Appliance, Clear	B, C-7A	2½	(4)	235
			21726-5	25T8DC		115-125	60	Appliance, Clear	B, C-7A	2½	(4)	235
			21735-6	25T8DC		130	60	Appliance, Clear	B, C-7A	2½	(4)	235
			24521-7	25T8DC		250	60	Clear	B, C-7A	2½	(4)	210
		Cand.▲	21722-4	25T8C		115-125	60	Appliance, Clear	B, C-7A	2½	(4)	235
		Inter.▲	20116-0	25T8N		115-125	60	Appliance, Clear	B, C-7A	2½	(4)	235
			33208-0	25T8N		230	60	Clear	B, C-7A	2½	(4)	210
	T-8½	Med.▲	24278-4	25T8½/IF		34	60	Inside Frosted	C, C-8	5½	1000	350
	T-10	Med.▲	37674-9	BC-25T10/IF	12/1	120	12	Frosted	B, C-8	5½	1000	260
			21764-6	25T10/IF		120	60	Frosted	B, C-8	5½	1000	260
			21782-8	25T10/IF		130	60	Frosted	B, C-8	5½	1000	260
			20363-8	BC-25T10	12/1	120	12	Clear	B, C-8	5½	1000	260
			21760-4	25T10		120	60	Clear	B, C-8	5½	1000	260
			21780-2	25T10		130	60	Clear	B, C-8	5½	1000	260
			24526-6	25T10		230-250	60	Clear	B, C-17	5½	1000	220
			28558-5	25T10		277	60	Clear	B, C-17	5½	1000	220
	T-19	Med.▲	36500-7	25T/SW	12/2	120	24	Soft White	C, CC-6	4½	2500	235
			20433-9	25T/WL	12/2	120	24	Longer Life Soft White	C, CC-6	4½	3350	205
28	S-11	S.C. Bay X□	28332-5	28S11/4SC		10	120	Rwy. Lt. Signal(72)	C, CC-6	1¼	2½	2000
30	A-15	2-PinSl. □	24289-1	30A15/1		10	60	Rwy. Lt. Signal(74)	C, C-2V	2¾	3¼	1500
	S-11	D.C.Bay.	24294-1	30S11/100		32	60	Clear	C, C-9	1¼	2½	500
			24296-6	30S11DC		64	60	Train Marker, Clear	C, C-7A	1¾	2½	500
			24298-2	30S11DC		75	60	Clear	C, C-9	1¾	2½	500
	A-15	Med. X□	21932-9	30A15		120	120	Sign Service, I.F.	C, C-9	3½	3000	225
			30448-5	30A15		130	120	Sign Service, I.F.	C, C-9	3½	3000	225
			20275-4	30A15/TF		130	120	Sign Service, Frost Silicone Coated	C, C-9	3½	3000	
			20207-7	30A15/CL		120	120	Sign Service, Clear	C, C-9	2¾	3½	3000
			30452-7	30A15/CL		130	120	Sign Service, Clear	C, C-9	2¾	3½	3000
	RM-19	Med. †□ \$\$\$	31199-3	30RM19/25°		120	12	Spotline Refl.	CC-11	4½	2000	
		▲ †□ \$\$\$	31572-1	30RM19/25°		130	12	Spotline Refl.	CC-11	4½	2000	
	R-20	Med.▲	20165-7	30R20	12/1	115-125	12	Reflector, Lt. I.F.	C, C-9	3½	2000	210
			23884-0	30R20		115-125	60	Reflector, Lt. I.F.	C, C-9	3½	2000	210
			37453-8	30R20		130	60	Reflector, Lt. I.F.	C, C-9	3½	2000	210
		Med. †	20264-8	30R20/SFL		120	60	Reflector Sign, Lt. I.F.	C, C-9	3½	6000	
			22601-9	30R20/SFL/TF		125-130	60	Reflector Sign, Frost Silicone Coated	C, C-9	3½	6000	
			27557-8	30R20/SFL/5TD		120	60	Refl. Sign, Transp. Daylight(10)	C, C-9	3½	6000	
			27561-0	30R20/SFL/5TR		120	60	Refl. Sign, Transp. Red(10)	C, C-9	3½	6000	
			27553-7	30R20/SFL/5TG		120	60	Refl. Sign, Transp. Green(10)	C, C-9	3½	6000	
	T-8	End Caps	37727-5	L30		115-125	24	Lumiline II, Clear(7)	B, C-8	18½	1500	245
			37725-9	L30/IF		115-125	24	Lumiline II, Frost(7)	B, C-8	18½	1500	245
			37729-1	L30/W		115-125	24	Lumiline II, White(7)	B, C-8	18½	1500	
30 70 100	T-19	3Ct. Med.▲	36662-5	30/100T/SW	12/1	120	12	Soft White Three-Way(8)	C, 2CC-6	5½	1200	310 945 1255

□ Exclusive Product
30

\$\$\$ — Energy Saving Product
X — Orders will be shipped until inventory is depleted; no longer manufactured.

† New Since Last Printing

Incandescent Lamps



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens	
30 70 100	T-19	3Ct. Med.▲	□	20451-1	30/100T/WL	12/1	120	Longer Life Soft White Three-Way(8)	C, 2CC-6		5 ⁵ / ₁₆	1600	300 940 1240	
32	A-19	Med.		39441-1	32A19/49		120	Sign, Clear	C, C-9	2 ⁷ / ₈	4 ¹ / ₄	3000	255	
33	A-19	Med.		22145-7	33A19/5		130	Sign, Clear	C, C-9		3 ¹⁵ / ₁₆	3000		
				30549-0	33A19/GR/CL		130	Sign, Clear	B, C-9		3 ¹⁵ / ₁₆	3000	260	
	R-17	Med.	□	26998-5	33R17		120	Sign, Mini-Refl., Frost(12)(31)	C, C-9		2 ³ / ₄	2500	225	
			□	26997-7	33R17		130	Sign, Mini-Refl., Frost(12)(31)	C, C-9		2 ³ / ₄	2500	225	
34	A-19	Med.▲●\$\$\$		29117-9	40A-34A/EW		120	Econ-o-watt, I.F.	C, CC-6		4 ⁷ / ₁₆	1500	410	
		\$\$\$		29175-7	40A-34A/EW		130	Econ-o-watt, I.F.	C, CC-6		4 ⁷ / ₁₆	1500	410	
		●\$\$\$		29232-6	40A-34A/99/EW		120	Econ-o-watt, Ext. Sv., I.F.	C, CC-6		4 ⁷ / ₁₆	2500	365	
		\$\$\$		29235-9	40A-34A/99/EW		125-130	Econ-o-watt, Ext. Sv., I.F.	C, CC-6		4 ⁷ / ₁₆	2500	365	
35	PAR-36	M-P	X□	28667-4	35PAR36/SP		12	*PAR Compact Spot	C, C-6		2 ³ / ₄	2000	200	
40	A-15	Med.▲		29999-0	BC-40A15/LL	12/1	115-125	240	Home Appl., Clear, Lngr. Lf.	C, C-9		3 ¹ / ₂	1750	400
			□	20684-7	40A15		115-125	120	Home Appliance, I.F.	C, C-9		3 ¹ / ₂	1000	455
				25109-0	40A15/TF		115-125	120	Refrigerator, Frost Silicone Coated	C, C-9		3 ¹ / ₂	1000	
				39462-7	40A15		130	120	Home Appliance, I.F.	C, C-9		3 ¹ / ₂	1000	455
				20002-2	40A15/22		115-125	120	Home Oven, Clear	C, C-9		4	1000	455
	A-19	Med.▲	X	24305-5	40A		30	120	Train, I.F.	C, C-6		4 ¹ / ₄	1000	580
			●	27081-9	40A	12/4	120	48	Inside Frosted	C, CC-6		4 ⁷ / ₁₆	1500	480
			●	39891-7	40A		120	120	Inside Frosted	C, CC-6		4 ⁷ / ₁₆	1500	480
				\$\$\$ — CONSIDER 40A-34A/EW 120 VOLT FOR ENERGY SAVINGS										
				39893-3	40A		130	120	Inside Frosted	C, CC-6		4 ⁷ / ₁₆	1500	480
				\$\$\$ — CONSIDER 40A-34A/EW 130 VOLT FOR ENERGY SAVINGS										
				30033-5	40A/TF		115-125	120	Frost Silicone Coated	C, C-9		4 ¹ / ₄	1500	
				36644-3	40A/CL	12/2	120	24	Clear	C, CC-6	3 ¹ / ₈	4 ⁷ / ₁₆	1500	480
				21840-4	40A/CL		120	120	Clear	C, CC-6	3 ¹ / ₈	4 ⁷ / ₁₆	1500	480
				21857-8	40A/CL		130	120	Clear	C, CC-6	3 ¹ / ₈	4 ⁷ / ₁₆	1500	480
			●	21850-3	40A/99		120	120	Extended Service, I.F.	C, C-9		4 ¹ / ₄	2500	415
				\$\$\$ — CONSIDER 40A-34A/99/EW 120 VOLT FOR ENERGY SAVINGS										
				21863-6	40A/99		125-130	120	Extended Service, I.F.	C, C-9		4 ¹ / ₄	2500	415
				\$\$\$ — CONSIDER 40A-34A/99/EW 125-130 VOLT FOR ENERGY SAVINGS										
			X	21859-4	40A/99CL		125-130	120	Extended Service, Clear	C, C-9		4 ¹ / ₄	2500	415
			X□	35554-5	40A/99Y		125-130	48	Bug-A-Way Yellow	C, CC-6		4 ⁷ / ₁₆	2500	
	Med.		X□	25846-7	40A19/35		120	60	Industrial Service, I.F.	C, C-9		4 ¹ / ₄	3500	400
			□	25845-9	40A19/35		125-130	60	Industrial Service, I.F.	C, C-9		4 ¹ / ₄	3500	400
			X□	20276-2	40A19/TF		130	120	Sign Service, Frost Silicone Coated	C, C-9		4 ¹ / ₄	2500	
	Med.▲			24424-4	BC-40A/GD	12/2	120	24*	Garage Door, I.F.	C, C-9		3 ¹⁵ / ₁₆	3500	370
	A-21	Med.		21871-9	40A/B		115-125	120	Blue	B, C-9		4 ⁷ / ₁₆	1000	
				21874-3	40A/G		115-125	120	Green	B, C-9		4 ⁷ / ₁₆	1000	
				21870-1	40A/O		115-125	120	Orange	B, C-9		4 ⁷ / ₁₆	1000	
				21876-8	40A/R		115-125	120	Red	B, C-9		4 ⁷ / ₁₆	1000	
				21878-4	40A/R2		115-125	120	Rose	B, C-9		4 ⁷ / ₁₆	1000	
				21879-2	40A/Y		115-125	120	Yellow	B, C-9		4 ⁷ / ₁₆	1000	
			X	21892-5	40A/Y		130	120	Yellow	B, C-9		4 ⁷ / ₁₆	1000	
			X	20197-0	40A21/GR/CL		130	120	Sign, Clear	B, C-9	2 ⁷ / ₈	4 ⁷ / ₁₆	3000	
			X	30891-6	40A21/GR/TB		115-125	120	Sign, Transparent Blue	B, C-9		4 ⁷ / ₁₆	3000	
			X	30895-7	40A21/GR/TG		115-125	120	Sign, Transparent Green	B, C-9		4 ⁷ / ₁₆	3000	

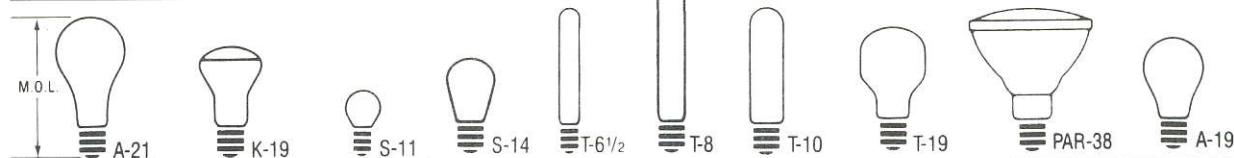
□ Exclusive Product

\$\$\$ — Energy Saving Product † New Since Last Printing

● — Consider compact fluorescent lamps listed on page 64 for energy savings.

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate		
												Hours Life	Initial Lumens	
40	A-21	Med.	X	30899-9	40A21/GR/TO	115-125	120	Sign, Transparent Orange	B, C-9		4 7/16	3000		
			X	30888-2	40A21/GR/TR	115-125	120	Sign, Transparent Red	B, C-9		4 7/16	3000		
			X	38845-4	40A21/GR/TY	115-125	120	Sign, Transparent Yellow	B, C-9		4 7/16	3000		
		Med.▲	X	21881-8	40A/TS	120	120	Traffic Signal(12)	C, C-9	2 7/16	4 7/16	2000	365	
				21885-9	40A/TS	130	120	Traffic Signal(12)	C, C-9	2 7/16	4 7/16	2000	365	
	K-19	Med.▲	†	30728-0	40K19/DL	120	6/2	Director	C, C-9		4 1/8	1150		
	S-11	Inter.▲		32270-1	40S11N/IF	120	120	Frosted	C, CC-2V		2 9/16	500		
	S-14	Med.▲		28453-9	BC-40S14/FAN	12/2	115-125	Fan Service, Clear	C, C-9	2 1/2	3 1/2	1000	455	
	T-6 1/2	Inter.▲		21909-7	40T6 1/2/IF	115-125	60	Frosted	B, C-8		5 1/2	1000	440	
				21908-9	40T6 1/2/2	115-125	60	Refrigerator, Clear	B, C-8		5 1/2	1000	440	
				20491-7	BC-40T6 1/2/2	12/1	115-125	Refrigerator, Clear	B, C-8		5 1/2	1000	440	
	T-8	Med.▲		21916-2	40T8/IF	115-125	24	Frost	B, C-8		11 7/8	1000	410	
				21914-7	40T8	115-125	24	Clear	B, C-8		11 7/8	1000	410	
		End Caps		37716-8	L40	115-125	24	Lumiline II, Clear(7)	B, C-8		12 1/16	1500	370	
				37715-0	L40/IF	115-125	24	Lumiline II, Frost(7)	B, C-8		12 1/16	1500	370	
	T-10	Med.▲		37723-4	L40/W	115-125	24	Lumiline II, White(7)	B, C-8		12 1/16	1500		
				37679-8	BC-40T10/IF	12/1	120	12	Frosted	B, C-8		5 5/8	1000	440
				21928-7	40T10/IF	120	60	Frosted	B, C-8		5 5/8	1000	440	
				21940-2	40T10/IF	130	60	Frosted	B, C-8		5 5/8	1000	440	
				20368-7	BC-40T10	12/1	120	12	Clear	B, C-8		5 5/8	1000	440
				21924-6	40T10	120	60	Clear	B, C-8		5 5/8	1000	440	
				21938-6	40T10	130	60	Clear	B, C-8		5 5/8	1000	440	
		Med.Pf.		21941-0	40T10P	120	60	Aviation, Airport Marker	C, CC-2V	1 1/2	3 15/16	1000		
	T-19	Med.▲	●	26407-7	40T/SW	12/4	120	48	Soft White	C, CC-6		4 7/16	1000	490
				29777-0	40T/SW/TP	24/4	120	96	Soft White, Tra-Pak	C, CC-6		4 7/16	1000	490
			●	26372-3	40T/WL	12/4	120	48	Longer Life, Soft White	C, CC-6		4 7/16	1350	480
			†	29775-4	40T/WL/TP	24/4	120	96	Longer Life, S.W., Tra-Pak	C, CC-6		4 7/16	1350	480
	45	PAR-38	Med. Skt.	\$\$\$	26365-7	45PAR38/H/FL	120	12	*Halogen MASTERLINE Flood(29)(42)(50)	C-CC-8		5 5/16	2000	
				\$\$\$	26366-5	45PAR38/H/FL	130	12	*Halogen MASTERLINE Flood(29)(42)(50)	C-CC-8		5 5/16	2000	
				\$\$\$	26363-2	45PAR38/H/SP	120	12	*Halogen MASTERLINE Spot(29)(42)(50)	C-CC-8		5 5/16	2000	
				\$\$\$	26361-6	45PAR38/H/SP	130	12	*Halogen MASTERLINE Spot(29)(42)(50)	C-CC-8		5 5/16	2000	
	50	A-19	Med.▲	X	35546-1	50A	6	120	Inside Frosted	C, C-6		4 1/4	1000	810
				36805-0	50A	12/2	12	24	Inside Frosted	C, C-6		4 1/4	1000	790
				34774-0	50A	12	120	Inside Frosted	C, C-6		4 1/4	1000	790	
				34765-8	50A	24	120	Inside Frosted	C, C-6		4 1/4	1000	825	
				34766-6	50A	30	120	Inside Frosted	C, C-6		4 1/4	1000	805	
				34769-0	50A	34	120	Inside Frosted	C, C-6		4 1/4	1000	790	
				24558-9	50A	230	120	Inside Frosted	C, C-17A		3 15/16	1000		
				24569-6	50A	250	120	Inside Frosted	C, C-17A		3 15/16	1000		
X				24553-0	50A19/37	230	120	Clear	C, C-17A		3 15/16	1000		
				24567-0	50A19/37	250	120	Clear	C, C-17A		3 15/16	1000		
X				24321-2	50A/RS	30	120	Rough Service, I.F.	B, C-6		3 15/16	1000	500	
				24324-6	50A/RS	34	120	Rough Service, I.F.	B, C-6		3 15/16	1000	500	
				24326-1	50A19/RS	75	120	Train, Rough Service, I.F.	B, C-17		3 15/16	1000	500	
				21952-7	50A19/31	115-125	120	Commercial Oven, Clear	B, C-9	2 1/2	3 15/16	1000	500	
X				20163-2	50A/RS	12/2	120	24	Rough Service, I.F.	B, C-17A		3 15/16	1000	465
				21972-5	50A/RS	120	120	Rough Service, I.F.	B, C-17A		3 15/16	1000	465	
				22004-6	50A/RS	125-130	120	Rough Service, I.F.	B, C-17A		3 15/16	1000	465	
				24560-5	50A/RS	230	120	Rough Service, I.F.	C, C-17A		3 15/16	1000		
				24572-0	50A/RS	250	120	Rough Service, I.F.	C, C-17A		3 15/16	1000		

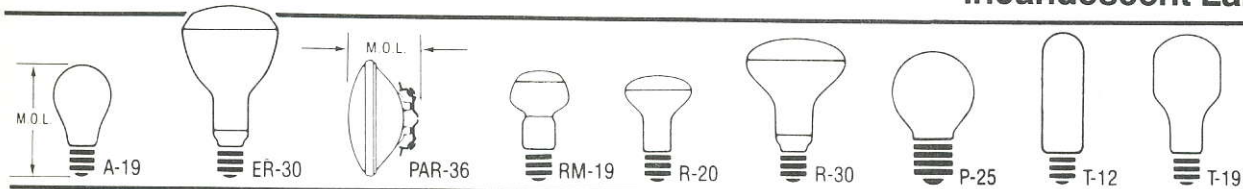
□ Exclusive Product

\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens	
50	A-19	Med.▲		30034-3	50A/RS/TF	115-125	120	Rough Service, Frost Silicone Coated	B, C-17A		3 ¹⁵ / ₁₆	1000		
			X	21966-7	50A19/5	120	120	Rough Service, Clear	B, C-17A	2 ¹ / ₂	3 ¹⁵ / ₁₆	1000	465	
			X	21997-2	50A19/5	125-130	120	Rough Service, Clear	B, C-17A	2 ¹ / ₂	3 ¹⁵ / ₁₆	1000	465	
				21976-6	50A/VS	120	120	Vibr. Service, I.F.(13)	B, C-9	2 ¹ / ₂	3 ¹⁵ / ₁₆	1000	480	
				22007-9	50A/VS	125-130	120	Vibr. Service, I.F.(13)	B, C-9	2 ¹ / ₂	3 ¹⁵ / ₁₆	1000	480	
				21968-3	50A/CL/VS	120	120	Vibr. Service, Cl.(13)	B, C-9	2 ¹ / ₂	3 ¹⁵ / ₁₆	1000	480	
				22000-4	50A/CL/VS	125-130	120	Vibr. Service, Cl.(13)	B, C-9	2 ¹ / ₂	3 ¹⁵ / ₁₆	1000	480	
				24576-1	50A/R	250	120	Red	C, C-17A		3 ¹⁵ / ₁₆	1000		
				24556-3	50A19/38	230-250	120	Commercial Oven, Clear	C, C-17A	2 ¹ / ₂	3 ¹⁵ / ₁₆	1000		
			X	24582-9	50A19	277	120	Mine, I.F.	C, C-17A		3 ¹⁵ / ₁₆	1000		
				24588-6	50A19	300	120	Mine, I.F.	C, C-17A		3 ¹⁵ / ₁₆	1000		
				24583-7	50A19/RS	277	120	Rough Service, I.F.	C, C-17A		3 ¹⁵ / ₁₆	1000		
			X	24589-4	50A19/RS	300	120	Rough Service, I.F.	C, C-17A		3 ¹⁵ / ₁₆	1000		
				24586-0	50A19/35	300	120	Mine, Clear	C, C-17A		3 ¹⁵ / ₁₆	1000		
			X	24592-8	50A19/G	300	120	Green	C, C-17A		3 ¹⁵ / ₁₆	1000		
			X	24593-6	50A19/R	300	120	Red	C, C-17A		3 ¹⁵ / ₁₆	1000		
	ER-30	Med.▲	\$\$\$	22367-7	50ER30	120	24	Elliptical Reflector	C, CC-6		6 ³ / ₈	2000		
			\$\$\$	27830-9	50ER30	130	24	Elliptical Reflector	C, CC-6		6 ³ / ₈	2000		
	PAR-36	M-P		29603-8	50PAR36/WFL	12	12	*PAR Compact Wide Flood	C, C-6		2 ³ / ₄	2000	300	
				22859-3	50PAR36/NSP	12	12	*PAR Compact Narrow Spot	C, C-6		2 ³ / ₄	2000	300	
				26945-6	50PAR36/VNSP	12	12	*PAR Compact Very Narrow Spot	C, C-6		2 ³ / ₄	2000	300	
			†□\$\$\$	31170-4	50PAR36Q/VNSP	12	12	*PAR Compact Halogen Very Narrow Spot	C, C-6		2 ³ / ₄	2000		
			†□\$\$\$	31175-3	50PAR36Q/NSP	12	12	*PAR Compact Halogen Narrow Spot	C, C-6		2 ³ / ₄	2000		
	RM-19	Med.†□\$\$\$	▲†□\$\$\$	31195-1	50RM19/25°	120	12	Spotline Refl.	CC-11		4 ¹ / ₈	2000		
				31573-9	50RM19/25°	130	12	Spotline Refl.	CC-11		4 ¹ / ₈	2000		
	R-20	Med.▲		20166-5	50R20	12/1	115-125	12	Reflector, Lt. I.F.(82)	C, C-9		3 ¹⁵ / ₁₆	2000	420
			\$\$\$ — CONSIDER 30RM19/25° 120 VOLT FOR ENERGY SAVINGS											
				23886-5	50R20	115-125	60	Reflector, Lt. I.F.(82)	C, C-9		3 ¹⁵ / ₁₆	2000	420	
			\$\$\$ — CONSIDER 30RM19/25° 120 VOLT FOR ENERGY SAVINGS											
				36687-2	50R20	130	60	Reflector, Lt. I.F.(82)	C, C-9		3 ¹⁵ / ₁₆	2000	420	
			\$\$\$ — CONSIDER 30RM19/25° 130 VOLT FOR ENERGY SAVINGS											
				26635-3	50R20/PK	115-125	60	Pink(19)(82)	C, C-9		3 ¹⁵ / ₁₆	2000		
	R-30	Med.▲	\$\$\$	24233-9	50R30/FL	120	6	Reflector Flood	C, CC-6		5 ³ / ₁₆	2000		
		Med.†		24299-0	50R30/SFL	120	60	Reflector Sign, I.F.			5 ³ / ₁₆	5000		
50 50	P-25	3Ct.Mog.		22018-6	50/50P25/28	120	60	Marine (15)	C, C-5, C-9	3 ⁵ / ₁₆	5 ¹ / ₁₆	750	375	
	T-12	3Ct. Med.		37508-9	50/50T12	115	24	Marine Running Light, Clear(8)	C, C-5, C-9	3	5 ⁵ / ₁₆	750		
50 100 150	T-19	3Ct. Med.▲		36671-6	50/150T/SW	12/1	120	12	Soft White Three-Way(8)	C, 2CC-8		5 ⁵ / ₁₆	1200	610 1510 2120
			†	27755-8	50/150T/SW/TP	60/1	120	60	Soft White, Tra-Pak Three-Way(8)	C, 2CC-8		5 ⁵ / ₁₆	1200	610 1510 2120
			□	20453-7	50/150T/WL	12/1	120	12	Longer Life Soft White Three-Way(8)	C, 2CC-8		5 ⁵ / ₁₆	1600	575 1450 2025

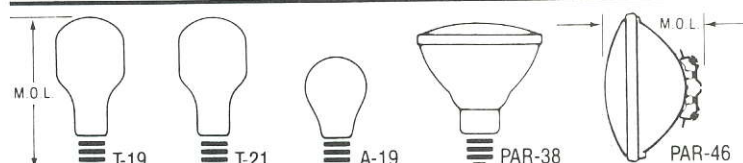
□ Exclusive Product

\$\$\$ — Energy Saving Product † New Since Last Printing

● — Consider compact fluorescent lamps listed on page 64 for energy savings.

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



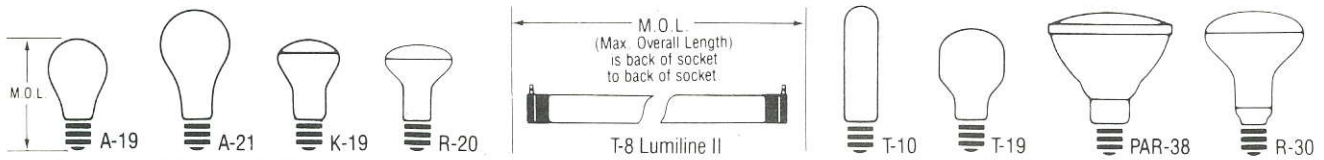
											Approximate			
Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens		
50 100 150	T-19	3Ct. Med.▲	†□	27753-3	50/150T/WL/TP 60/1	120	60	Longer Life, Tra-Pak Soft White Three-Way(8)	C, 2CC-8	5 ⁵ / ₁₆	1600	575 1450 2025		
			†□	31736-2	50/150T/STP/BL 12/1	120	12	softone Pastel Blue Three-Way(8)	C, 2CC-8	5 ⁵ / ₁₆	1200	530 1260 1790		
			†□	31717-2	50/150T/STP/GRN 12/1	120	12	softone Pastel Green Three-Way(8)	C, 2CC-8	5 ⁵ / ₁₆	1200	530 1260 1790		
			†□	32063-0	50/150T/STP/IVY	120	8	softone Pastel Ivory Three-Way(8)	C, 2CC-6	5 ⁵ / ₁₆	1200	550 1450 2000		
			†□	31716-4	50/150T/STP/PCH12/1	120	12	softone Pastel Peach Three-Way(8)	C, 2CC-8	5 ⁵ / ₁₆	1200	610 1510 2120		
			†□	31739-6	50/150T/STP/PK 12/1	120	12	softone Pastel Pink Three-Way(8)	C, 2CC-8	5 ⁵ / ₁₆	1200	550 1310 1860		
			†□	31743-8	50/150T/STP/Y 12/1	120	12	softone Pastel Yellow Three-Way(8)	C, 2CC-8	5 ⁵ / ₁₆	1200	610 1510 2120		
50 200 250	T-21	3Ct. Med.▲	□	20454-5	50/250T/WL 12/1	120	12	Longer Life Soft White Three-Way(8)	C, 2CC-6	5 ⁵ / ₁₆	1600	575 3250 3825		
51	A-19	Med. †□ \$\$\$	31763-6	51A19/RR/TS	120	120	Ring Refl. Traffic Sig., Clear	C, C7A	2 ⁷ / ₁₆	4	8000			
			31756-0	51A19/RR/TS	125	120	Ring Refl. Traffic Sig., Clear	C, C7A	2 ⁷ / ₁₆	4	8000			
			31755-2	51A19/RR/TS	130	120	Ring Refl. Traffic Sig., Clear	C, C7A	2 ⁷ / ₁₆	4	8000			
52	A-19	Med.▲ • \$\$\$	29118-7	60A-52A/EW	120	120	Econ-o-watt, I.F.	C, CC-8		4 ⁷ / ₁₆	1000	800		
			29127-8	60A-52A/EW	130	120	Econ-o-watt, I.F.	C, CC-8		4 ⁷ / ₁₆	1000	800		
			29276-3	60A-52A/99/EW	120	120	Econ-o-watt, Ext. Sv., I.F.	C, CC-8		4 ⁷ / ₁₆	2500	705		
			29279-7	60A-52A/99/EW	125-130	120	Econ-o-watt, Ext. Sv., I.F.	C, CC-8		4 ⁷ / ₁₆	2500	705		
54	A-19	Med. □ \$\$\$	26827-6	54A19/35	125-130	60	Econ-o-watt Industrial Service, I.F.	C, C-9		4 ¹ / ₄	3500	590		
			37166-6	K54A19/TS/EW	120-125	120	Krypton Econ-o-watt Traffic Signal, Clear(12)	C, C-11V	2 ⁷ / ₁₆	4 ³ / ₈	8000	530		
55	PAR-38	Med.Skt. \$\$\$	28771-4	55PAR/FL/EP	120-130	12	*Econ-o-Par Flood(29)	C, CC-6		5 ⁵ / ₁₆	3000	520		
		\$\$\$	28747-4	55PAR/SP/EP	120-130	12	*Econ-o-Par Spot(29)	C, CC-6		5 ⁵ / ₁₆	3000	520		
	T-19	Med.▲ \$\$\$	36564-3	55T/W/ES 12/4	120	48	Energy Saving, White	C, CC-8		4 ⁷ / ₁₆	1000	860		
60	PAR-46	M-P		23969-9	60PAR/2/R	38	12	*Red Warning Light, Anti-Vibration	C, CC-2V		3 ³ / ₄	800		
	A-19	Med.▲ •	27082-7	60A 12/4	120	48	Inside Frosted	C, CC-8		4 ⁷ / ₁₆	1000	890		
			22114-3	60A	120	120	Inside Frosted	C, CC-8		4 ⁷ / ₁₆	1000	890		
			\$\$\$ — CONSIDER 60A-52A/EW 120 VOLT FOR ENERGY SAVINGS											
			22136-6	60A	125	120	Inside Frosted	C, CC-8		4 ⁷ / ₁₆	1000	890		
			22144-0	60A	130	120	Inside Frosted	C, CC-8		4 ⁷ / ₁₆	1000	890		
			\$\$\$ — CONSIDER 60A-52A/EW 130 VOLT FOR ENERGY SAVINGS											
			30038-4	60A/TF	115-125	120	Frost Silicone Coated	C, CC-6		4 ⁷ / ₁₆	1000			
			22123-4	60A/99	120	120	Extended Service, I.F.	C, CC-8		4 ⁷ / ₁₆	2500	740		
			\$\$\$ — CONSIDER 60A-52A/99/EW 120 VOLT FOR ENERGY SAVINGS											
			22148-1	60A/99	125-130	120	Extended Service, I.F.	C, CC-8		4 ⁷ / ₁₆	2500	740		
			\$\$\$ — CONSIDER 60A-52A/99/EW 130 VOLT FOR ENERGY SAVINGS											
			Med.	□	25844-2	60A19/35	120	60	Industrial Service, I.F.	C, C-9		4 ¹ / ₄	3500	670
				□	25842-6	60A19/35	125-130	60	Industrial Service, I.F.	C, C-9		4 ¹ / ₄	3500	670
				\$\$\$ — CONSIDER 54A19/35 125-130 VOLT FOR ENERGY SAVINGS										
□	25836-8	60A/35/TF		120	60	Industrial Service, Frost Silicone Coated	C, C-9		4 ¹ / ₄	3500				

□ Exclusive Product

\$\$\$ — Energy Saving Product †New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens			
60	A-19	Med.▲		20148-3	60A/CL	12/2	120	24	Clear	C, CC-6	3⅞	47/16	1000	890		
				22111-9	60A/CL		120	120	Clear	C, CC-6	3⅞	47/16	1000	890		
				22141-6	60A/CL		130	120	Clear	C, CC-6	3⅞	47/16	1000	890		
				22113-5	60A/99CL		120	120	Extended Service, Clear	C, CC-8	3⅞	47/16	2500	740		
				31218-1	60A/99CL		125-130	120	Extended Service, Clear	C, CC-8	3⅞	47/16	2500	740		
				36292-1	60A/AGRO	24/1	120	24	Agro-Lite Plant Light	C, C-9		47/16	1000			
				22086-3	60A/D		115-125	120	Daylight, I.F.	C, CC-6		47/16	1000	515		
			X	22149-9	60A/D		130	120	Daylight, I.F.	C, CC-6		47/16	1000	515		
				22228-1	60A/Y		115-125	120	Bug-A-Way Yellow	C, CC-6		47/16	1000			
				22227-3	60A/Y		130	120	Bug-A-Way Yellow	C, CC-6		47/16	1000			
				22099-6	60A19/B		115-125	60	Blue	C, CC-6		47/16	1000			
				22102-8	60A19/G		115-125	60	Green	C, CC-6		47/16	1000			
				22097-0	60A19/O		115-125	60	Orange	C, CC-6		47/16	1000			
				22106-9	60A19/R		115-125	60	Red	C, CC-6		47/16	1000			
				22109-3	60A19/R2		115-125	60	Rose	C, CC-6		47/16	1000			
				22110-1	60A19/Y		115-125	60	Yellow	C, CC-6		47/16	1000			
			23941-8	60A/SB		115-125	120	Silvered Bowl, I.F.(43)	C, CC-6		47/16	1000	810			
		Med.	\$\$\$	21056-7	K60A19/TS/EW		120-125	120	Krypton Econ-o-watt Traffic Signal, Clear(12)	C, C-11V	27/16	4⅜	8000	610		
			\$\$\$	37167-4	K60A19/TS/EW		130	120	Krypton Econ-o-watt Traffic Signal, Clear(12)	C, C-11V	27/16	4⅜	8000	610		
		Med.▲		28111-3	60A		230	120	Inside Frosted	C, C-17A		3⅞16	1000	545		
			28112-1	60A		250	120	Inside Frosted	C, C-17A		3⅞16	1000	545			
		A-21	Med.	X	22166-3	60A21/TS		120	120	Traffic Signal, Clear(12)	C, C-9	27/16	47/16	2000	665	
				22168-9	60A21/TS		125	120	Traffic Signal, Clear(12)	C, C-9	27/16	47/16	2000	665		
				X	22172-1	60A21/TS		130	120	Traffic Signal, Clear(12)	C, C-9	27/16	47/16	2000	665	
	K-19	Med.▲	†□		22486-5	60K19/DL	6/2	120	12	Director	C, C-9		4⅞	1150	770	
	R-20	Med.	†□		30231-5	60R20/SFL/5TB		120	60	Refl. Sign Transp. Blue(10)	C, C-9		3⅞16	6000		
	T-8	End Caps			37731-7	L60		115-125	24	Lumiline II, Clear(7)	B, C-8		18⅞16	1500	535	
					37730-9	L60/IF		115-125	24	Lumiline II, Frost(7)	B, C-8		18⅞16	1500	535	
					37732-5	L60/W		115-125	24	Lumiline II, White(7)	B, C-8		18⅞16	1500	450	
	T-10	Med.			22178-8	60T10/64IF		115-125	60	Frosted	B, C-8		5⅞8	1000	745	
					22176-2	60T10/64		115-125	60	Clear	B, C-8		5⅞8	1000	745	
	T-19	Med.▲	●		26408-5	60T/SW	12/4	120	48	Soft White	C, CC-8		47/16	1000	860	
			\$\$\$ — CONSIDER 55T/W/ES 120 VOLT FOR ENERGY SAVINGS													
					26621-3	60T/SW/TP	24/4	120	96	Soft White, Tra-Pak	C, CC-8		47/16	1000	860	
			●□		26376-4	60T/WL	12/4	120	48	Longer Life Soft White	C, CC-8		47/16	1350	840	
			□		26602-3	60T/WL/TP	24/4	120	96	Longer Life Soft White	C, CC-8		47/16	1350	840	
			X		36639-3	60T/PK	12/2	115-125	24	Beauty Tone Pink	C, CC-8		47/16	1000		
			†□		30058-2	60T/STP/BL	8/2	120	16	softone Pastel Blue	C, CC-6		4⅜16	1000		
			†□		30055-8	60T/STP/GRN	8/2	120	16	softone Pastel Green	C, CC-6		4⅜16	1000		
			†□		30381-8	60T/STP/IVY	8/2	120	16	softone Pastel Ivory	C, CC-6		4⅜16	1000		
			†□		30049-1	60T/STP/PCH	8/2	120	16	softone Pastel Peach	C, CC-6		4⅜16	1000		
			†□		30048-3	60T/STP/PK	8/2	120	16	softone Pastel Pink	C, CC-6		4⅜16	1000		
			†□		30050-9	60T/STP/Y	8/2	120	16	softone Pastel Yellow	C, CC-6		4⅜16	1000		
			□		22573-0	60T/YL	12/2	115-125	24	Bug-A-Way Yellow, Longer Life	C, CC-8		47/16	1350		
65			PAR-38	Med. Skt.	\$\$\$	30232-3	75-65PAR/FL/EP		120	12	*Econ-o-Par Flood(29)	C,CC-6		5⅞16	2000	
					\$\$\$	30234-9	75-65PAR/FL/EP		130	12	*Econ-o-Par Flood(29)	C,CC-6		5⅞16	2000	
	\$\$\$	30235-6			75-65PAR/SP/EP		120	12	*Econ-o-Par Spot(29)	C,CC-6		5⅞16	2000			
	\$\$\$	30236-4			75-65PAR/SP/EP		130	12	*Econ-o-Par Spot(29)	C,CC-6		5⅞16	2000			
	R-30	Med.	†	24195-0	65R30/SFL		120	24	Refl. Sign, I.F.	C, C-17A		5⅞16	5000			
			X□	24270-1	65R30/SFL/TF		125-130	24	Reflector Sign, Frost Silicone Coated	C, C-17A		5⅞16	5000			

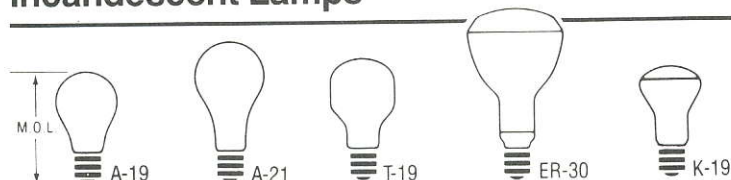
□ Exclusive Product

\$\$\$ — Energy Saving Product † New Since Last Printing

● — Consider compact fluorescent lamps listed on page 64 for energy savings.

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens
67	A-19	Med.▲	\$\$\$ 29130-2	75A-67A/EW	120	120	Econ-o-watt, I.F.	C, CC-8		4 7/16	750	1130
			\$\$\$ 29132-8	75A-67A/EW	130	120	Econ-o-watt, I.F.	C, CC-8		4 7/16	750	1130
			\$\$\$ 29242-5	75A-67A/99/EW	120	120	Econ-o-watt, Ext. Sv., I.F.	C, CC-8		4 7/16	2500	945
			\$\$\$ 29245-8	75A-67A/99/EW	125-130	120	Econ-o-watt, Ext. Sv., I.F.	C, CC-8		4 7/16	2500	945
	A-21	Med.	39417-1	67A21/40/6M	125	120	Traffic Signal, Clear(12)	C, C-9	2 7/16	4 7/16	6000	665
			22192-9	67A21/99TS	120	120	Traffic Signal, Clear(12)	C, C-11V	2 7/16	4 7/16	8000	610
			\$\$\$ — CONSIDER K60A19/TS/EW 120-125 VOLT FOR ENERGY SAVINGS									
			22197-8	67A21/99TS	130	120	Traffic Signal, Clear(12)	C, C-11V	2 7/16	4 7/16	8000	610
			\$\$\$ — CONSIDER K60A19/TS/EW 130 VOLT FOR ENERGY SAVINGS									
69	A-21	Med.	X 25341-9	69A21/TS/IF	125	120	Traffic Signal, I.F.(12)	C, C-9		4 7/16	8000	685
			22199-4	69A21/TS	120	120	Traffic Signal, Clear(12)	C, C-9	2 7/16	4 7/16	8000	685
			\$\$\$ — CONSIDER K60A19/TS/EW 120-125 VOLT FOR ENERGY SAVINGS									
			22202-6	69A21/TS	125	120	Traffic Signal, Clear(12)	C, C-9	2 7/16	4 7/16	8000	685
			22204-2	69A21/TS	130	120	Traffic Signal, Clear(12)	C, C-9	2 7/16	4 7/16	8000	685
			\$\$\$ — CONSIDER K60A19/TS/EW 130 VOLT FOR ENERGY SAVINGS									
70	T-19	Med.▲	\$\$\$ 36566-8	70T/W/ES	12/4	120	48 Energy Saving, White	C, CC-8		4 7/16	750	1180
75	A-19	Med.▲	• 39897-4	75A	120	120	Inside Frosted	C, CC-8		4 7/16	750	1220
			\$\$\$ — CONSIDER 75A-67A/EW 120 VOLT FOR ENERGY SAVINGS									
			• 27083-5	75A	12/4	120	48 Inside Frosted	C, CC-8		4 7/16	750	1220
			39898-2	75A	125	120	Inside Frosted	C, CC-8		4 7/16	750	1220
			39899-0	75A	130	120	Inside Frosted	C, CC-8		4 7/16	750	1220
			\$\$\$ — CONSIDER 75A-67A/EW 130 VOLT FOR ENERGY SAVINGS									
			• 33595-0	75A/99	120	120	Extended Service, I.F.	C,CC-6		4 7/16	2500	1000
			\$\$\$ — CONSIDER 75A-67A/99/EW 120 VOLT FOR ENERGY SAVINGS									
			33618-0	75A/99	125-130	120	Extended Service, I.F.	C,CC-6		4 7/16	2500	1000
			\$\$\$ — CONSIDER 75A-67A/99/EW 125-130 VOLT FOR ENERGY SAVINGS									
	A-21	Med.▲	X 22225-7	75A/RX	115-125	120	Exit Light, Red	C,CC-6		4 7/16	5000	
			29589-9	75A/RS/VS	120	120	Rough & Vib. Serv., I.F.	C,C-17A		3 15/16	1000	750
			29588-1	75A/RS/VS	125-130	120	Rough & Vib. Serv., I.F.	C,C-17A		3 15/16	1000	750
			24352-7	75A21	6	120	Inside Frosted	C,C-6		5 5/16	1000	1200
	A-19	Med.▲	24353-5	75A21	12	120	Inside Frosted	C,C-6		5 5/16	1000	1100
			34779-9	75A21	34	120	Train, I.F.	C,C-6		5 5/16	1000	1100
			36646-8	75A/CL	12/2	120	24 Clear	C, CC-6	3 1/8	4 7/16	750	1220
			22213-3	75A/CL	120	120	Clear	C, CC-6	3 1/8	4 7/16	750	1220
			22232-3	75A/CL	130	120	Clear	C, CC-6	3 1/8	4 7/16	750	1220
	A-21	Med.▲	31305-6	75A21	120-130	120	Inside Frosted	C,CC-8		5 5/16	1000	1130
			24623-1	75A21	230	120	Inside Frosted	C,C-7A		5 5/16	1000	815
			29640-0	75A/RS/TF	115-125	120	Rough Service, Frost Silicone Coated	C,C-17A		5 5/16	1000	
			† 20922-1	75A/RH/TF	12/1	120	12 Tough Bulb, Frost Silicone Coated	C,C-17A		5 5/16	1000	
	Med.L.H.T.		□ \$\$\$ 25668-5	75A/1SBIF	130	120	I.F. Silvered bowl(43)(64)	C,CC-6		5 5/16	1000	
			24351-9	75A21/LHT	12	120	Inside Frosted(18)	C,C-6		5 5/16	1000	1100
	A-19	Med.▲	† 24427-7	BC-75A/GD	12/1	120	12 Garage Door, I.F.	C,C-9		3 15/16	3500	800
	A-21	Med.▲	20470-1	75A/RH	12/1	120	12 Rough House, I.F.	C,C-17A		5 5/16	1000	750
	ER-30	Med.▲	\$\$\$ 20572-4	75ER30	120	24	Elliptical Reflector(19)(37)(82)	C,CC-6		6 3/8	2000	
			\$\$\$ 29636-8	75ER30	130	24	Elliptical Reflector(19)(37)(82)	C,CC-6		6 3/8	2000	
	K-19	Med.▲	† □ 22487-3	75K19/DL	6/2	120	12 Director	C,C-9		4 1/8	1150	1000

□ Exclusive Product

\$\$\$ — Energy Saving Product

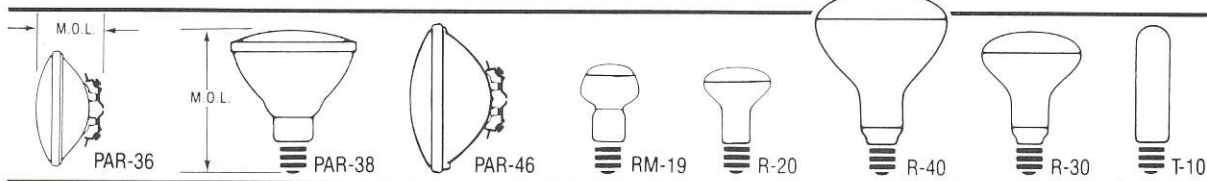
† New Since Last Printing

• — Consider compact fluorescent lamps listed on page 64 for energy savings.

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps

INCANDESCENT



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens	
75	PAR-36	M-P	□	26278-2	75PAR36/VNSP	12	12	★PAR Compact Very Narrow Spot	C,C-6		2¼	2000		
	PAR-36	End Prong	□	20191-3	75PAR36/NFL	120	12	★PAR Compact Narrow Flood	C,CC-6		3⅞	2000		
			□	20187-1	75PAR36/NFL	125-130	12	★PAR Compact Narrow Flood	C,CC-6		3⅞	2000		
	PAR-38	Med.Skt.	X	32452-5	75PAR/FL	32	12	★PAR Flood	C,C-6		5⅞	1000		
			●	20167-3	75PAR/FL	6/1 115-125	6	★PAR Flood(29)	C,CC-6		5⅞	2000	750	
			●	23236-3	75PAR/FL	115-125	12	★PAR Flood(29)	C,CC-6		5⅞	2000	750	
	\$\$\$ — CONSIDER 75-65PAR/FL/EP or 45PAR38/H/FL 120 VOLT FOR ENERGY SAVINGS													
				23242-1	75PAR/FL	130	12	★PAR Flood(29)	C,CC-6		5⅞	2000	750	
	\$\$\$ — CONSIDER 75-65PAR/FL/EP or 45PAR38/H/FL 130 VOLT FOR ENERGY SAVINGS													
			●†	30069-9	75PAR/FL/LL	6/1 120	6	★PAR Flood, Longer Life(29)	C,CC-6		5⅞	2500	720	
			●†	30070-7	75PAR/FL/LL	120	12	★PAR Flood, Longer Life(29)	C,CC-6		5⅞	2500	720	
				36223-6	75PAR/SP	6/1 115-125	6	★PAR Spot(29)	C,CC-6		5⅞	2000	750	
				23233-0	75PAR/SP	115-125	12	★PAR Spot(29)	C,CC-6		5⅞	2000	750	
	\$\$\$ — CONSIDER 75-65PAR/SP/EP or 45PAR38/H/SP 120 VOLT FOR ENERGY SAVINGS													
				23241-3	75PAR/SP	130	12	★PAR Spot(29)	C,CC-6		5⅞	2000	750	
	\$\$\$ — CONSIDER 75-65PAR/SP/EP or 45PAR38/H/SP 130 VOLT FOR ENERGY SAVINGS													
				39817-2	75PAR38/2FL	115-125	12	★PAR Cool Beam Flood(52)(82)	C,CC-6		5⅞	2000	750	
				35582-6	75PAR38/2FL	130	12	★PAR Cool Beam Flood(52)(82)	C,CC-6		5⅞	2000	750	
		Med.Side Prong		23245-4	75PAR/3FL	115-125	12	★PAR Compact Flood(32)	C,CC-6		4⅞	2000	750	
				23246-2	75PAR/3SP	115-125	12	★PAR Compact Spot(32)	C,CC-6		4⅞	2000	750	
			X	20126-9	75PAR/3SP	130	12	★PAR Compact Spot(32)	C,CC-6		4⅞	2000	750	
	PAR-46	M-P			37698-8	75PAR46	48	12	★PAR Headlight(33)	C,CC-2V		3¾	800	
	RM-19	Med.▲	†□		31193-6	75RM19/25°	120	12	Spotline Refl.(41)(82)	CC-11		4⅞	2000	
	R-20	Med.	□		23352-8	75R20	115-125	60	Reflector, Lt. I.F.(82)	C,C-9		3⅞	2000	800
	\$\$\$ — CONSIDER 50RM19/25° 120 VOLT FOR ENERGY SAVINGS													
	R-30	Med.▲			20235-8	75R30/FL	8/1 120	8	Reflector Flood	C,CC-6		5⅞	2000	830
					37873-7	75R30/FL	120	24	Reflector Flood	C,CC-6		5⅞	2000	830
					24225-5	75R30/FL	125-130	24	Reflector Flood	C,CC-6		5⅞	2000	830
					24277-6	75R30/FL/TF	115-125	24	Reflector, Frost Silicone Coated	C,CC-6		5⅞	2000	
					22590-4	75R30/FL/LL	8/1 120	8	Reflector Flood, Longer Life	C,CC-6		5⅞	2500	800
			X□		24254-5	75R30/FL/4M	120	24	Reflector Flood	C,CC-6		5⅞	4000	690
			X□		24262-8	75R30/FL/4M	125-130	24	Reflector Flood	C,CC-6		5⅞	4000	690
					20236-6	75R30/SP	8/1 120	8	Reflector Spot	C,CC-6		5⅞	2000	830
					24196-8	75R30/SP	120	24	Reflector Spot	C,CC-6		5⅞	2000	830
					24209-9	75R30/SP	125-130	24	Reflector Spot	C,CC-6		5⅞	2000	830
					20242-4	75R30/AGRO	6/1 120	6	Agro-Lite Plant Light(19)	C,CC-6		5⅞	2000	
					36299-6	75R30/A	8/1 115-125	8	Amber(19)	C,CC-6		5⅞	2000	
					36300-2	75R30/B	8/1 115-125	8	Blue(19)	C,CC-6		5⅞	2000	
			X		36311-9	75R30/G	8/1 115-125	8	Green(19)	C,CC-6		5⅞	2000	
					36312-7	75R30/PK	8/1 115-125	8	Pink(19)	C,CC-6		5⅞	2000	
					36317-6	75R30/R	8/1 115-125	8	Red(19)	C,CC-6		5⅞	2000	
					36333-3	75R30/Y	8/1 115-125	8	Yellow(19)	C,CC-6		5⅞	2000	
	R-40	Med.▲	●		23426-0	75R/FL	120	24	Flood	C,CC-6		6½	2000	850
	\$\$\$ — CONSIDER 50ER30 120 VOLT FOR ENERGY SAVING IN DEEP RECESSED LUMINAIRES													
					23433-6	75R/FL	125-130	24	Flood	C,CC-6		6½	2000	850
	\$\$\$ — CONSIDER 50ER30 130 VOLT FOR ENERGY SAVING IN DEEP RECESSED LUMINAIRES													
					23424-5	75R/SP	120	24	Spot	C,CC-6		6½	2000	850
					23431-0	75R/SP	125-130	24	Spot	C,CC-6		6½	2000	850
	T-10	Med.▲			22258-8	75T10/45	115-125	24	Clear	B,C-8		11⅞	1000	820

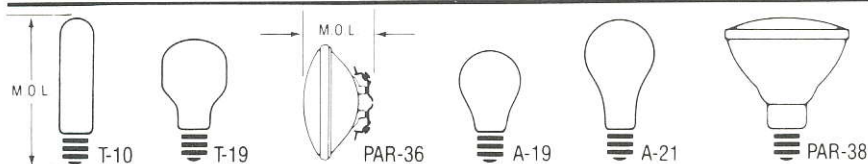
☐ Exclusive Product

\$\$\$ — Energy Saving Product †New Since Last Printing

• — Consider compact fluorescent lamps listed on page 64 for energy savings.

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens	
75	T-10	Med. ■	☒	33474-8	75T10/SPRF	120	24	*Spatterproof, Clear	C,C-7A	3	5½	500	750	
	T-19	Med. ▲	●	26409-3	75T/SW	12/4	120	48 Soft White	C,CC-8		4⅞	750	1180	
	\$\$\$ — CONSIDER 70T/W/ES 120 VOLT FOR ENERGY SAVINGS													
				26622-1	75T/SW/TP	24/4	120	96 Soft White	C,CC-8		4⅞	750	1180	
			● ☐	26381-4	75T/WL	12/4	120	48 Longer Life Soft White	C,CC-8		4⅞	1000	1150	
			☐	26603-1	75T/WL/TP	24/4	120	96 Longer Life Soft White	C,CC-8		4⅞	1000	1150	
88	PAR-36	M-P		29863-8	88PAR36/FL	75	12	Floodlight, Anti-Vibration	C,CC-6		2¾	1500		
90	A-19	Med. ▲	\$\$\$	29138-5	100A-90A/EW	120	120	Econ-o-watt, I.F.	C,CC-8		4⅞	750	1620	
			\$\$\$	29149-2	100A-90A/EW	130	120	Econ-o-watt, I.F.	C,CC-8		4⅞	750	1620	
			\$\$\$	29246-6	100A-90A/99/EW	120	120	Econ-o-watt, Ext. Sv., I.F.	C,CC-8		4⅞	2500	1375	
			\$\$\$	29280-5	100A-90A/99/EW	125-130	120	Econ-o-watt, Ext. Sv., I.F.	C,CC-8		4⅞	2500	1375	
		Med.	\$\$\$	37168-2	K90A19/TS/EW	120-125	120	Krypton Econ-o-watt Traffic Signal, Clear(12)	C, C-11V	2⅞	4⅞	8000	1040	
			\$\$\$	37615-2	K90A19/1/TS/EW	120-125	120	Krypton Econ-o-watt Traffic Signal, Clear(12)	C, C-11V	3	4⅞	8000	1040	
	A-21	Med.	☐ \$\$\$	26829-2	90A21/35	125-130	60	Econ-o-watt Indus. Serv., I.F.	C,C-9		5⅞	3500	1090	
	PAR-38	Med. Skt.	\$\$\$	30578-9	90PAR38/H/FL	120	12	*Halogen MASTERLINE Flood (29)(42)(50)	C, CC-8		5⅞	2000		
			\$\$\$	37784-6	90PAR38/H/FL	130	12	*Halogen MASTERLINE Flood (29)(42)(50)	C, CC-8		5⅞	2000		
			\$\$\$	37782-0	90PAR38/H/SP	120	12	*Halogen MASTERLINE Spot (29)(42)(50)	C, CC-8		5⅞	2000		
			\$\$\$	37783-8	90PAR38/H/SP	130	12	*Halogen MASTERLINE Spot (29)(42)(50)	C, CC-8		5⅞	2000		
			† ☐	31766-9	90T/W/WATCHMAN	120	12	Soft White	C, 2CC-6		5⅞	1200	900	
	95	T-19	Med. ▲	\$\$\$	36567-6	95T/W/ES	12/4	120	48 Energy Saving, White	C,CC-8		4⅞	750	1710
	100	A-19	Med. ▲		27086-8	100A	12/4	120	48 Inside Frosted	C,CC-8		4⅞	750	1750
				22279-4	100A		120	120 Inside Frosted	C,CC-8		4⅞	750	1750	
\$\$\$ — CONSIDER 100A-90A/EW 120 VOLT FOR ENERGY SAVINGS														
				22287-7	100A	125	120	120 Inside Frosted	C,CC-8		4⅞	750	1750	
				22291-9	100A	130	120	120 Inside Frosted	C,CC-8		4⅞	750	1750	
\$\$\$ — CONSIDER 100A-90A/EW 130 VOLT FOR ENERGY SAVINGS														
				22286-9	100A/99	120	120	120 Extended Service, I.F.	C, CC-8		4⅞	2500	1510	
\$\$\$ — CONSIDER 100A-90A/99/EW 120 VOLT FOR ENERGY SAVINGS														
				22295-0	100A/99	125-130	120	120 Extended Service, I.F.	C, CC-8		4⅞	2500	1510	
\$\$\$ — CONSIDER 100A-90A/99/EW 125-130 VOLT FOR ENERGY SAVINGS														
				20150-9	100A/CL	12/2	120	24 Clear	C, CC-8	3⅞	4⅞	750	1750	
				22277-8	100A/CL		120	120 Clear	C, CC-8	3⅞	4⅞	750	1750	
				22290-1	100A/CL		130	120 Clear	C, CC-8	3⅞	4⅞	750	1750	
				37022-1	100A/99CL	125-130	120	120 Extended Service, Clear	C, CC-8		4⅞	2500	1510	
A-21		Med. ▲		34803-7	100A	12	120	120 Inside Frosted	C,C-6		5⅞	1000	2050	
				34793-0	100A	24	120	120 Inside Frosted	C,C-6		5⅞	1000	1940	
				24363-4	100A21/3	32	120	120 Loco. Hdt.(12)(22)	C,C-5	3	4⅞	500	1570	
				34781-5	100A	34	120	120 Train, I.F.	C,C-6		5⅞	1000	1940	
				22338-8	100A21	120	120	120 Inside Frosted	C, CC-8		5⅞	750	1680	
				22393-3	100A21	130	120	120 Inside Frosted	C, CC-8		5⅞	750	1680	
				30051-7	100A21/TF	115-125	120	120 Frost Silicone Coated	C, CC-8		5⅞	750		
				29956-0	100A	230	120	120 Inside Frosted	C, C-7A		5⅞	1000	1270	
				29955-2	100A	250	120	120 Inside Frosted	C, C-7A		5⅞	1000	1270	
			24661-1	100A	277	120	120 Mine, I.F.	C, C-7A		5⅞	1000	1070		
		X	24668-6	100A	300	120	120 Inside Frosted	C, C-7A		5⅞	1000	1040		
			22343-8	100A21/99	120	120	120 Extended Service, I.F.	C, CC-8		5⅞	2500	1425		
			22400-6	100A21/99	125-130	120	120 Extended Service, I.F.	C, CC-8		5⅞	2500	1425		

□ Exclusive Product

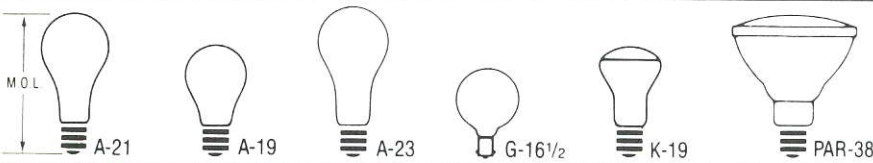
\$\$\$ — Energy Saving Product †New Since Last Printing

● — Consider compact fluorescent lamps listed on page 64 for energy savings.

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps

INCANDESCENT



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens
100	A-21	Med.▲	24655-3	100A/99	250	120	Extended Service, I.F.	C, C-7A		5 ⁵ / ₁₆	2500	1065
			20848-8	100A21/99Y	125-130	120	Extended Service, Yellow	C, CC-8		5 ⁵ / ₁₆	2500	
			25851-7	100A21/35	120	60	Industrial Service, I.F.	C, C-9		5 ⁵ / ₁₆	3500	1280
			25838-4	100A21/35/TF	120	60	Industrial Service(14), Frost Silicone Coated	C, C-9		5 ⁵ / ₁₆	3500	
			25834-3	100A21/35	125-130	60	Industrial Service, I.F.	C, C-9		5 ⁵ / ₁₆	3500	1280
			\$\$\$ — CONSIDER 90A21/35 125-130 VOLT FOR ENERGY SAVINGS									
			22344-6	100A/RS/VS	120	120	Rough & Vib. Serv., I.F.	C, C-17A		5 ⁵ / ₁₆	1000	1230
			20337-2	100A/RS/VS	125-130	120	Rough & Vib. Serv., I.F.	C, C-17A		5 ⁵ / ₁₆	1000	1230
			30052-5	100A/RS/TF	115-125	120	Rough Service, Frost Silicone Coated	C, C-17A		5 ⁵ / ₁₆	1000	
			29802-6	100A/RS	250	120	Rough Service, I.F.	C, C-17A		5 ⁵ / ₁₆	1000	1030
			24928-4	100A/RS/TF	250	120	Rough Service, Frost Silicone Coated	C, C-17A		5 ⁵ / ₁₆	1000	
			25829-3	100A/35RS	120	60	Industrial Rough Service, I.F.	C, C-17A		5 ⁵ / ₁₆	3500	1020
			25828-5	100A/35RS	125-130	60	Industrial Rough Service, I.F.	C, C-17A		5 ⁵ / ₁₆	3500	1020
			24669-4	100A/RS	300	120	Rough Service, I.F.	C, C-17A		5 ⁵ / ₁₆	100	860
			22325-5	100A21/CL	120	120	Clear	C, CC-8	3 ³ / ₈	5 ⁵ / ₁₆	750	1680
			22383-4	100A21/CL	130	120	Clear	C, CC-8	3 ³ / ₈	5 ⁵ / ₁₆	750	1680
			29954-5	100A/CL	250	120	Clear	C, C-7A	3 ³ / ₈	5 ⁵ / ₁₆	1000	1270
			25742-8	100A/LHT	32	120	Inside Frosted(18)	C, C-6		5 ⁵ / ₁₆	1000	1820
			36757-3	100A/LHT	120	120	Inside Frosted(18)	C, CC-8		4 ⁷ / ₁₆	750	1750
			36491-9	100A/LHT	130	120	Inside Frosted(18)	C, CC-8		4 ⁷ / ₁₆	750	1750
			22300-8	100A/3	120	120	Inside Frosted(18)	C, CC-8		5 ⁵ / ₁₆	750	1680
			22304-0	100A/3	130	120	Inside Frosted (18)	C, CC-8		5 ⁵ / ₁₆	750	1680
			20327-3	100A/CL/RS/VS	120	120	Rough & Vib. Serv., Clear	C, C-17A		5 ⁵ / ₁₆	1000	1230
			20335-6	100A/CL/RS/VS	125-130	120	Rough & Vib. Serv., Clear	C, C-17A		5 ⁵ / ₁₆	1000	1230
			23609-1	100A21/SP/33	120	60	Spotlight(23)	C, C-5	3	4 ⁷ / ₁₆	200	1350
			22333-9	100A21/TS	120	120	Traffic Signal, Clear(12)	C, C-9	2 ⁷ / ₁₆	4 ⁷ / ₁₆	2000	1260
			22390-9	100A21/TS	130	120	Traffic Signal, Clear(12)	C, C-9	2 ⁷ / ₁₆	4 ⁷ / ₁₆	2000	1260
			22310-7	100A21P	120	60	Aviation-Airport Marker(12)	C, CC-2V	2 ³ / ₄	5 ⁵ / ₁₆	2000	
			35717-8	100A/D	115-125	60	Daylight, I.F.	C, C-9		5 ⁵ / ₁₆	750	1000
			23944-2	100A/1SBIF	115-125	120	I.F. Silvered Bowl(43)(64)	C, CC-6		5 ⁵ / ₁₆	1000	1420
			31760-2	100A/1SBIF	130	120	I.F. Silvered Bowl(43)(64)	C, CC-6		5 ⁵ / ₁₆	1000	1420
			23943-4	100A/1SB	115-125	120	Silvered Bowl, Clear(43)(64)	C, CC-6		5 ⁵ / ₁₆	1000	1420
A-23	Med.▲		22430-3	100A23	120-130	120	Inside Frosted	C, CC-6		6 ⁵ / ₁₆	750	1650
			22404-8	100A23/20	115-125	120	Commercial Oven, Clear	C, C-9	4 ³ / ₈	6 ⁵ / ₁₆	1000	1530
			22415-4	100A23/B	115-125	60	Blue	C, CC-6		6 ⁵ / ₁₆	750	
			22418-8	100A23/G	115-125	60	Green	C, CC-6		6 ⁵ / ₁₆	750	
			22422-0	100A23/R	115-125	60	Red	C, CC-6		6 ⁵ / ₁₆	750	
			22425-3	100A23/R2	115-125	60	Rose	C, CC-6		6 ⁵ / ₁₆	750	
			22426-1	100A23/Y	115-125	60	Yellow	C, CC-6		6 ⁵ / ₁₆	750	
			24597-7	100A/SB	120-130	120	Silvered Bowl, I.F.(43)	C, CC-6		6 ⁵ / ₁₆	1000	1530
			23619-0	100G16 1/2/29DC	120	24	Spotlight(12)(25)	C, CC-13	1 ³ / ₈	3	200	1630
			22491-5	100K19/DL	6/2	120	Director	C, C-9		4 ⁷ / ₈	1150	1440
PAR-38	Med.Skt.		36619-5	100PAR/FL	120	12	*PAR Flood(29)	C, CC-6		5 ⁵ / ₁₆	2000	1250
			20467-7	100PAR/FL	125-130	12	*PAR Flood(29)	C, CC-6		5 ⁵ / ₁₆	2000	1250
			36620-3	100PAR/SP	120	12	*PAR Spot(29)	C, CC-6		5 ⁵ / ₁₆	2000	1250
			20468-5	100PAR/SP	125-130	12	*PAR Spot(29)	C, CC-6		5 ⁵ / ₁₆	2000	1250
			36235-0	100PAR/A	6/1	115-125	*PAR Amber(29)	C, CC-6		5 ⁵ / ₁₆	2000	
			20177-2	100PAR/B	6/1	115-125	*PAR Blue(29)	C, CC-6		5 ⁵ / ₁₆	2000	
			36237-6	100PAR/BW	6/1	115-125	*PAR Blue White(29)	C, CC-6		5 ⁵ / ₁₆	2000	
			20186-3	100PAR/G	6/1	115-125	*PAR Green(29)	C, CC-6		5 ⁵ / ₁₆	2000	

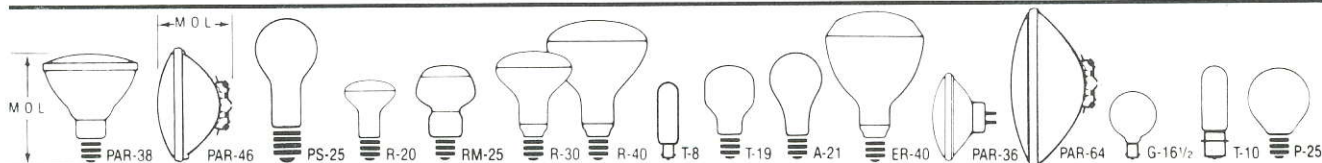
□ Exclusive Product

\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code		Volts	Pkg. Qty.	Description	Class and Filament	L. C. L. (In.)	M. O. L. (In.)	Approximate			
												Hours Life	Initial Lumens		
100	PAR-38	Med. Skt.	36249-1	100PAR/PK	6/1	115-125	6	*PAR Pink(29)	C, CC-6		5 ⁵ / ₁₆	2000			
			20228-3	100PAR/R	6/1	115-125	6	*PAR Red(29)	C, CC-6		5 ⁵ / ₁₆	2000			
			20232-5	100PAR/Y	6/1	115-125	6	*PAR Yellow(29)	C, CC-6		5 ⁵ / ₁₆	2000			
	PAR-46	M-P.	22951-8	100PAR46		60	12	*PAR Mine Lamp, Lens Cover	C, CC-2V		3 ⁷ / ₈	800	1240		
100 200 300	PS-25	3 Ct. Mog.▲	36734-2	100/300/W	12/1	120	12	Soft White Three-Way (8)	C, 2CC-6		6 ¹³ / ₁₆	1200	1350 3350 4700		
100	R-20	Med. ■	□	33703-0	100R20/FL/S	12	60	Reflector Flood Swimming Pool(12)(26)	C, C-6		3 ¹⁵ / ₁₆	2000			
			□	33702-2	100R20	120-130	60	Reflector, Lt. I.F.(12)	C, C-9		3 ¹⁵ / ₁₆	2000			
	RM-25	Med.▲	†□	31574-7	100RM25/25°	120	12	Spotline Refl. (41)(82)	C-11		4 ¹ / ₂	2000			
	R-30	Med.	X□	24241-2	100R30/FL/S	12	24	Reflector Flood Swimming Pool(12)(26)	C, C-6		5 ⁵ / ₈	2000			
				□	37507-1	100R30/FL	120	24	Reflector Flood(19)	C, CC-6		5 ⁵ / ₁₆	2000		
	R-40	Med.▲	□	23441-9	100R/FL	120	24	Flood(19)	C, CC-6		6 ¹ / ₂	2000	1160		
			\$\$\$ — CONSIDER 75ER30 120 VOLT FOR ENERGY SAVING IN DEEP RECESSED LUMINAIRES												
			□	23447-6	100R/FL	125-130	24	Flood(19)	C, CC-6		6 ¹ / ₂	2000	1160		
			\$\$\$ — CONSIDER 75ER30 130 VOLT FOR ENERGY SAVING IN DEEP RECESSED LUMINAIRES												
			□	23439-3	100R/SP	120	24	Spot(19)	C, CC-6		6 ¹ / ₂	2000	1160		
			□	23446-8	100R/SP	125-130	24	Spot(19)	C, CC-6		6 ¹ / ₂	2000	1160		
	T-8	S. C. Bay.	X	24386-5	100T8/1SC	20	24	Contour Map	C, CC-6	2 ³ / ₁₆	3 ¹ / ₈	50	2600		
	T-19	Med.▲	X□	26410-1	100T/SW	12/4	120	48	Soft White	C, CC-8		4 ⁷ / ₁₆	750	1710	
				\$\$\$ — CONSIDER 95T/W/ES 120 VOLT FOR ENERGY SAVINGS											
				□	26623-9	100T/SW/TP	24/4	120	96	Soft White, Tra-Pak	C, CC-8		4 ⁷ / ₁₆	750	1710
				□	26382-2	100T/WL	12/4	120	48	Longer Life Soft White	C, CC-8		4 ⁷ / ₁₆	1000	1660
□				26606-4	100T/WL/TP	24/4	120	96	Longer Life Soft White	C, CC-8		4 ⁷ / ₁₆	1000	1660	
X				36640-1	100T/PK	12/2	115-125	24	Beauty Tone Pink	C, CC-8		4 ⁷ / ₁₆	1000		
□				22581-3	100T/YL	12/2	115-125	24	Bug-A-Way Yellow, Longer Life	C, CC-8		4 ⁷ / ₁₆	1350		
110	R-30	Med.	24265-1	110R30/RS		120	24	Reflector Flood, Rough Service, I.F.	C, C-17		5 ⁵ / ₁₆	2000	1195		
116	A-21	Med.	22483-2	116A21/TS		120	120	Traffic Signal, Clear(12)	C, C-9	2 ⁷ / ₁₆	4 ⁷ / ₁₆	8000	1260		
			22485-7	116A21/TS		130	120	Traffic Signal, Clear(12)	C, C-9	2 ⁷ / ₁₆	4 ⁷ / ₁₆	8000	1260		
120	ER-40	Med.▲	\$\$\$	21562-4	120ER40	120	24	Elliptical Reflector (19)(37)(82)	C, CC-6		7 ³ / ₈	2000			
			\$\$\$	21565-7	120ER40	130	24	Elliptical Reflector (19)(37)(82)	C, CC-6		7 ³ / ₈	2000			
	PAR-36	End. Prong	†□	30500-3	120PAR36/NFL	120	12	*PAR Compact Narrow Flood(29)(82)	C, CC-6		3 ⁷ / ₁₆	2000			
	PAR-38	Med. Skt.	\$\$\$	28355-6	150-120PAR/FL/EP	120	12	*Econ-o-Par Flood(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1450		
			\$\$\$	28661-7	150-120PAR/FL/EP	125-130	12	*Econ-o-Par Flood(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1450		
			\$\$\$	28356-4	150-120PAR/SP/EP	120	12	*Econ-o-Par Spot(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1450		
			\$\$\$	28663-3	150-120PAR/SP/EP	125-130	12	*Econ-o-Par Spot(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1450		
	PAR-64	M.P.		36260-8	120PAR64/VNSP	6	8	*PAR Spotlight, Flat Lens	C, C-6		4	3000			
125	G-16½	D. C. Bay.	X	23634-9	125G16½DC	120	24	Spotlight(12)(25)	C, C-13B	1½	3	600	1630		
	R-40	Med. Skt.		23821-2	125R40	115-125	24	Infrared Indust. (11)(19)	C, C-9		7 ¹ / ₄	(27)			
		Med.▲		36350-7	125R40/1	6/1	115-125	6	Infrared (11)(19)	C, C-9		6 ¹ / ₂	(27)		
	T-10	Med. Pf.		23640-6	125T10P	120	24	Spotlight(8)	C, C-13B	2 ³ / ₁₆	5 ³ / ₄	500	1740		
133	P-25	Med.	X	29215-1	133P25/TS	125	60	Traffic Signal, Clear(12)	C, C-9	3	4 ³ / ₄	3000	1650		
				22489-9	133P25/TS	130	60	Traffic Signal, Clear(12)	C, C-9	3	4 ³ / ₄	3000	1650		
135	A-21	Med.▲	\$\$\$	29162-5	150A-135A/EW	120	60	Econ-o-watt, I.F.	C, CC-8		5 ⁵ / ₁₆	750	2580		
			\$\$\$	29164-1	150A-135A/EW	130	60	Econ-o-watt, I.F.	C, CC-8		5 ⁵ / ₁₆	750	2580		
			\$\$\$	29281-3	150A-135A/99/EW	120	60	Econ-o-watt, Ext. Sv., I.F.	C, CC-8		5 ⁵ / ₁₆	2500	2105		

□ Exclusive Product

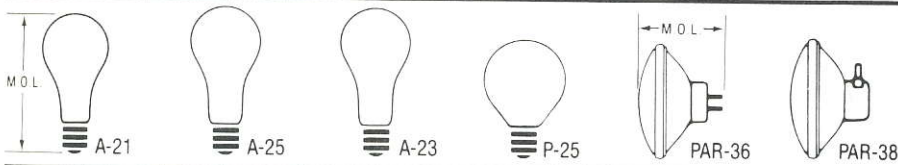
\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps

INCANDESCENT



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens	
135	A-21	Med.▲	\$\$\$	29288-8	150A-135A/99/EW	125-130	60	Econ-o-watt, Ext. Sv., I.F.	C, CC-8		5 ⁵ / ₁₆	2500	2105	
			\$\$\$	37616-0	K135A21/TS/EW	120-125	60	Krypton Econ-o-watt Traffic Signal, Clear(12)	C, C-11V	3	4 ¹ / ₁₆	6000	1750	
	A-25	Med. □	\$\$\$	26836-7	135A25/35	125-130	60	Econ-o-watt Indus. Serv., I.F.	C, C-9		6 ¹⁵ / ₁₆	3500	1790	
150	A-21	Med.▲		29693-9	150A	120	60	Inside Frosted	C, CC-8		5 ⁵ / ₁₆	750	2850	
				\$\$\$ — CONSIDER 150A-135A/EW 120 VOLT FOR ENERGY SAVINGS										
				30481-6	150A	125	60	Inside Frosted	C, CC-8		5 ⁵ / ₁₆	750	2850	
				30483-2	150A	130	60	Inside Frosted	C, CC-8		5 ⁵ / ₁₆	750	2850	
				\$\$\$ — CONSIDER 150A-135A/EW 130 VOLT FOR ENERGY SAVINGS										
				28416-6	150A/99	120	60	Extended Service, I.F.	C, CC-8		5 ⁵ / ₁₆	2500	2350	
				\$\$\$ — CONSIDER 150A-135A/99/EW 120 VOLT FOR ENERGY SAVINGS										
				28452-1	150A/99	125-130	60	Extended Service, I.F.	C, CC-8		5 ⁵ / ₁₆	2500	2350	
				\$\$\$ — CONSIDER 150A-135A/99/EW 125-130 VOLT FOR ENERGY SAVINGS										
				36659-1	150A/CL	12/1	120	12	Clear	C, CC-8	3 ⁷ / ₈	5 ⁵ / ₁₆	750	2850
				39641-6	150A/CL		120	60	Clear	C, CC-8	3 ⁷ / ₈	5 ⁵ / ₁₆	750	2850
				39611-9	150A/CL		130	60	Clear	C, CC-8	3 ⁷ / ₈	5 ⁵ / ₁₆	750	2850
			X	28455-4	150A/99CL		120	60	Extended Service, Clear	C, CC-8	4 ⁵ / ₈	5 ⁵ / ₁₆	2500	2350
				28457-0	150A/99CL		125-130	60	Extended Service, Clear	C, CC-8	4 ⁵ / ₈	5 ⁵ / ₁₆	2500	2350
	A-23	Med.▲		22509-4	150A23		120	60	Inside Frosted	C, CC-6		6 ⁵ / ₁₆	750	2740
				22529-2	150A23		130	60	Inside Frosted	C, CC-6		6 ⁵ / ₁₆	750	2740
		Med.L.H.T. X		22492-3	150A23/LHT		120	60	Inside Frosted(18)	C, CC-6		6 ⁵ / ₁₆	750	2740
				22494-9	150A23/LHT		130	60	Inside Frosted(18)	C, CC-6		6 ⁵ / ₁₆	750	2740
		Med.▲		22506-0	150A23/CL		120	60	Clear	C, CC-6	4 ⁵ / ₈	6 ⁵ / ₁₆	750	2740
				22526-8	150A23/CL		130	60	Clear	C, CC-6	4 ⁵ / ₈	6 ⁵ / ₁₆	750	2740
				32253-7	150A/RS/VS		120	60	Rough & Vib. Serv., I.F.	C, C-17A		6 ¹ / ₁₆	1000	2100
				32256-0	150A/RS/VS		125-130	60	Rough & Vib. Serv., I.F.	C, C-17A		6 ¹ / ₁₆	1000	2100
			X	24968-0	150A/CL/RS/VS		120	60	Rough & Vib. Serv., Clear	C, C-17A	4 ⁵ / ₈	6 ⁵ / ₁₆	1000	2100
				24939-1	150A/CL/RS/VS		125-130	60	Rough & Vib. Serv., Clear	C, C-17A	4 ⁵ / ₈	6 ⁵ / ₁₆	1000	2100
			X	22505-2	150A/Y		115-125	24	Bug-A-Way Yellow	C, CC-8		6 ⁵ / ₁₆	1000	
		Med. □		33362-5	150A/35RS		120	60	Industrial Rough Serv., I.F.	C, C-17A		6 ¹ / ₁₆	3500	1770
				33363-3	150A/35RS		125-130	60	Industrial Rough Serv., I.F.	C, C-17A		6 ¹ / ₁₆	3500	1770
	A-25	Med. □		39771-1	150A25/35		120	60	Industrial Service, I.F.	C, C-9		6 ¹⁵ / ₁₆	3500	2150
				22965-8	150A25/35/TF		120	60	Industrial Service(14), Frost Silicone Coated	C, C-9		6 ¹⁵ / ₁₆	3500	
				39810-7	150A25/35		125-130	60	Industrial Service, I.F.	C, C-9		6 ¹⁵ / ₁₆	3500	2150
				\$\$\$ — CONSIDER 135A25/35 125-130 VOLT FOR ENERGY SAVINGS										
	P-25	Med. X		23653-9	150P25/2		120	60	Spotlight, Clear(23)	C, C-5		4 ³ / ₄	200	2100
				24938-3	150P25/2SB		120	60	Spotlight, Clear Silvered Bowl(31)	C, C-5		4 ³ / ₄	200	
				23654-7	150P25/10		120	60	Spotlight, Light I.F.(23)	C, C-5	3	4 ³ / ₄	200	2100
			X	23658-8	150P25/10		125-130	60	Spotlight, Light I.F.(23)	C, C-5	3	4 ³ / ₄	200	2100
	PAR-36	End Prong □		22929-4	150PAR36/SP		120	12	*PAR Compact Spot(29)(82)	C, CC-6		3 ¹ / ₄	2000	
	PAR-38	Med. Side Prong		23328-8	150PAR38/FL		12	12	*PAR Flood, Anti-Vibration (55)(71)	C, C-6		4 ⁵ / ₁₆	1000	
				38040-2	150PAR38		32	12	*PAR Anti-Vibration(46)(55)(71)	C, CC-8		4 ⁵ / ₁₆	1000	
		Med.Skt.		20175-6	150PAR/FL	6/1	120	6	*PAR Flood(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
				23290-0	150PAR/FL		120	12	*PAR Flood(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
				\$\$\$ — CONSIDER 150-120PAR/FL/EP or 90PAR38/H/FL 120 VOLT FOR ENERGY SAVINGS										
				23319-7	150PAR/FL		125-130	12	*PAR Flood(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
				\$\$\$ — CONSIDER 150-120PAR/FL/EP or 90PAR38/H/FL 130 VOLT FOR ENERGY SAVINGS										
			□	25121-5	150PAR/FL/LL		120	12	*PAR Flood, Longer Life(29)(82)	C, CC-6		5 ⁵ / ₁₆	2500	1670

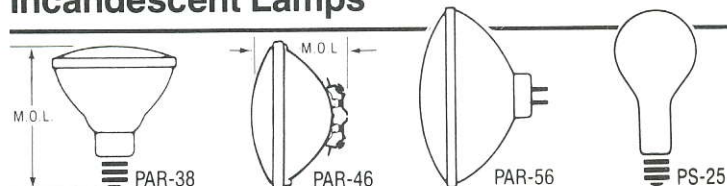
□ Exclusive Product

\$\$\$ — Energy Saving Product

†New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



				NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens
150	PAR-38	Med.Skt.	<input type="checkbox"/>	22586-2	150PAR/FL/LL 6/1	120	6	*PAR Flood, Longer Life(29)(82)	C, CC-6		5 ⁵ / ₁₆	2500	1670
			X <input type="checkbox"/>	23402-1	K150PAR/FL	120	12	*PAR Flood (Krypton)(29)(82)	C, CC-6		5 ⁵ / ₁₆	4000	1660
			<input type="checkbox"/>	23407-0	K150PAR/FL	125-130	12	*PAR Flood (Krypton)(29)(82)	C, CC-6		5 ⁵ / ₁₆	4000	1660
				38540-1	150PAR/WFL	120	12	*PAR Wide Flood(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
				38782-9	150PAR/WFL	125-130	12	*PAR Wide Flood(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
				20176-4	150PAR/SP 6/1	120	6	*PAR Spotlight(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
				23284-3	150PAR/SP	120	12	*PAR Spotlight(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
			\$\$\$ — CONSIDER 150-120PAR/SP/EP or 90PAR38/H/SP 120 VOLT FOR ENERGY SAVINGS										
				23316-3	150PAR/SP	125-130	12	*PAR Spotlight(29)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
			\$\$\$ — CONSIDER 150-120PAR/SP/EP 125-130 or 90PAR38/H/SP 130 VOLT FOR ENERGY SAVINGS										
			<input type="checkbox"/>	23408-8	K150PAR/SP	120	12	*PAR Spotlight (Krypton)(82)	C, CC-6		5 ⁵ / ₁₆	4000	1660
				36365-5	150PAR38/2FL	120	12	*PAR Cool Beam Flood(9)(52)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
				36534-6	150PAR38/2FL	125-130	12	*PAR Cool Beam Flood(9)(52)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
			X	20142-6	150PAR38/2WFL	125-130	12	*PAR Cool Beam Wide Flood(9)(52)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
			X	36366-3	150PAR38/2SP	120	12	*PAR Cool Beam Spot(9)(52)(82)	C, CC-6		5 ⁵ / ₁₆	2000	1730
		Med.Side Prong		23331-2	150PAR/3FL	115-125	12	*PAR Compact Flood(32)	C, CC-6		4 ⁵ / ₁₆	2000	1730
				23336-1	150PAR/3FL	130	12	*PAR Compact Flood(32)	C, CC-6		4 ⁵ / ₁₆	2000	1730
				26980-3	150PAR/3VWFL	120-130	12	*PAR Very Wide Flood Mine(32)(71)	C, C-13		4 ⁵ / ₁₆	2000	
				23329-6	150PAR/3SP	115-125	12	*PAR Compact Spot(32)	C, CC-6		4 ⁵ / ₁₆	2000	1730
				23335-3	150PAR/3SP	130	12	*PAR Compact Spot(32)	C, CC-6		4 ⁵ / ₁₆	2000	1730
				23334-6	150PAR/4FL	120-130	12	*PAR Flood, Anti-vibration(32)(71)	C, C-13		4 ⁵ / ₁₆	2000	
				23315-5	150PAR/5FL	120-130	12	*PAR Flood, Anti-vibration(82)	C, C-13		5 ⁵ / ₁₆	2000	
		PAR-46	M-P.		23340-3	150PAR46/1	32	12	*PAR Headlight, Rounded Cover	C, CC-8		3 ⁷ / ₈	1000
				23345-2	150PAR46	120-130	12	*PAR Mine Locomotive Headlight(33)	C, C-13		3 ⁷ / ₈	1000	
				24018-4	150PAR56/NSP	125-130	8	*PAR Narrow Spot(46)(55)	C, CC-13		5	2000	
	PAR-56	Mog. End Prong	X <input type="checkbox"/>	22568-0	150	120	60	Inside Frosted	C, C-9		6 ¹⁵ / ₁₆	750	2650
	PS-25	Med.▲		22612-6	150	130	60	Inside Frosted	C, C-9		6 ¹⁵ / ₁₆	750	2650
				30056-6	150PS25/TF	115-125	60	Frost Silicone Coated	C, C-9		6 ¹⁵ / ₁₆	1000	
			X	24679-3	150PS25/IF	230	60	Inside Frosted	C, CC-9		6 ¹⁵ / ₁₆	1000	2150
			X	24685-0	150PS25/IF	250	60	Inside Frosted	C, CC-9		6 ¹⁵ / ₁₆	1000	2100
				22574-8	150PS25/99	120	60	Extended Service, I.F.	C, C-9		6 ¹⁵ / ₁₆	2500	2300
				22617-5	150PS25/99	125-130	60	Extended Service, I.F.	C, C-9		6 ¹⁵ / ₁₆	2500	2300
				30045-9	150/RS/TF	115-125	60	Rough Service, Frost Silicone Coated	C, C-17A		6 ¹⁵ / ₁₆	1000	
			X	24687-6	150PS25/99IF	250	60	Extended Service, I.F.	C, CC-9		6 ¹⁵ / ₁₆	2500	1840
				22557-3	150/CL	120	60	Clear	C, C-9	5 ¹ / ₄	6 ¹⁵ / ₁₆	750	2650
				22597-9	150/CL	130	60	Clear	C, C-9	5 ¹ / ₄	6 ¹⁵ / ₁₆	750	2650
			X	24674-4	150PS25	230	60	Clear	C, CC-9		6 ¹⁵ / ₁₆	1000	2150
			X	24682-7	150PS25	250	60	Clear	C, CC-9		6 ¹⁵ / ₁₆	1000	2100
			X	24689-2	150PS25	277	60	Clear	C, CC-9		6 ¹⁵ / ₁₆	1000	1875
				22604-3	150PS25/99CL	125-130	60	Extended Service, Clear	C, C-9	5 ¹ / ₄	6 ¹⁵ / ₁₆	2500	2300
				24684-3	150PS25/99CL	250	60	Extended Service, Clear	C, CC-9		6 ¹⁵ / ₁₆	2500	1840
			X	22548-2	150/D	115-125	60	Daylight, I.F.	C, C-9		6 ¹⁵ / ₁₆	1000	
				23949-1	150/SB	120	60	Silvered Bowl, I.F.(31)(43)	C, C-9		6 ¹⁵ / ₁₆	1000	2250
				23952-5	150/SB	125-130	60	Silvered Bowl, I.F.(31)(43)	C, C-9		6 ¹⁵ / ₁₆	1000	2250
				22550-8	150/WB	115-125	60	White Bowl	C, C-9		6 ¹⁵ / ₁₆	750	2500

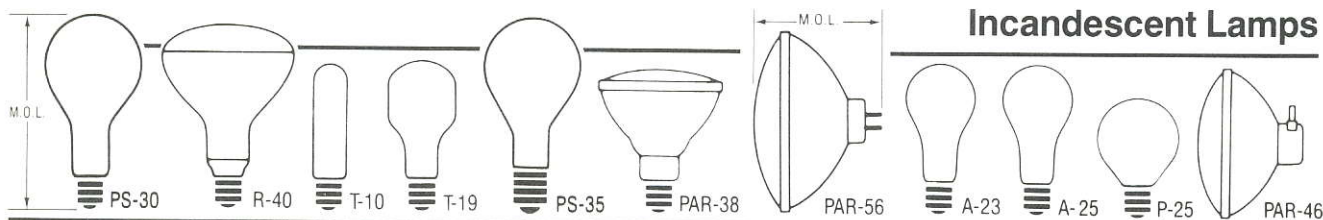
☐ Exclusive Product

\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens	
150	PS-30	Med.▲	X	20437-0	150PS30	130	60	Inside Frosted	C, C-9		8 1/16	1000	2400	
	R-40	Med.▲		20237-4	150R/FL 6/1	120	6	Reflector Flood(9)(19)	C, CC-6		6 1/2	2000	1900	
				23474-0	150R/FL	120	24	Reflector Flood(9)(19)	C, CC-6		6 1/2	2000	1900	
	\$\$\$ — CONSIDER 75ER30 120 VOLT FOR ENERGY SAVING IN DEEP RECESSED LUMINAIRES													
				23494-8	150R/FL	125-130	24	Reflector Flood(9)(19)	C, CC-6		6 1/2	2000	1900	
	\$\$\$ — CONSIDER 75ER30 130 VOLT FOR ENERGY SAVING IN DEEP RECESSED LUMINAIRES													
			X	34838-3	150R/FL/4M	120	24	Reflector Flood(9)(19)	C, CC-6		6 1/2	4000	1580	
				34849-0	150R/FL/4M	125-130	24	Reflector Flood(9)(19)	C, CC-6		6 1/2	4000	1580	
				36340-8	150R/SP 6/1	120	6	Reflector Spot(9)(19)	C, CC-6		6 1/2	2000	1900	
				23470-8	150R/SP	120	24	Reflector Spot(9)(19)	C, CC-6		6 1/2	2000	1900	
				23491-4	150R/SP	125-130	24	Reflector Spot(9)(19)	C, CC-6		6 1/2	2000	1900	
			X	20694-6	150R40/TB	120	24	Jewelry Spot-Reflector, Transparent Daylight Blue(34)(41)	C, CC-6		6 1/2	2000		
			X	20697-9	150R40/TB	130	24	Jewelry Spot-Reflector, Transparent Daylight Blue(34)(41)	C, CC-6		6 1/2	2000		
				27191-6	150R/B	115-125	24	Blue(9)(19)	C, CC-6		6 1/2	2000		
			X	27198-1	150R/G	115-125	24	Green(9)(19)	C, CC-6		6 1/2	2000		
				27210-4	150R/PK	115-125	24	Pink(9)(19)	C, CC-6		6 1/2	2000		
				27230-2	150R/R	115-125	24	Red(9)(19)	C, CC-6		6 1/2	2000		
				27300-3	150R/Y	115-125	24	Yellow(9)(19)	C, CC-6		6 1/2	2000		
				20239-0	150R/AGRO 6/1	120	6	Agro-Lite Plant Light(9)(19)	C, CC-6		6 1/2	2000		
		T-10	Med.■	X	33502-6	150T10/SPRF	120	24	*Spatterproof, Clear(8)	C,C-7A	3	5 1/2	500	2000
		T-19	Med.▲		20443-8	150T/WL 12/1	120	12	Longer Life Soft White	C, CC-8		5 5/16	1000	2650
		PS-35	3Ct.Mog.		23659-6	150/400	115-125	24	Hospital, I.F.	C, 2C-7A		9 3/8	200	
175	PAR-38	Med. Skt.	\$\$\$ †	37780-4	175PAR38/HEAT	115-125	15	*PAR Infrared, Clear(41)(82)	C, C-9		5 5/16	(27)		
				28275-6	175PAR38/HEAT/R	115-125	15	*PAR Infrared, Red(41)(82)	C, C-9		5 5/16	(27)		
199	PAR-56	Mog.End Prong		23347-8	199PAR56/6.6	6.6A	8	*PAR Aviation-Airport Approach, Lens cover(55)	C, C-13		5	75	4800	
200	A-23	Med.▲		36289-7	200A	120	60	Inside Frosted	C, CC-8		6 5/16	750	3900	
				36291-3	200A	125-130	60	Inside Frosted	C, CC-8		6 5/16	750	3900	
				36144-4	200A/CL 12/1	120	12	Clear	C, CC-8	4 5/8	6 5/16	750	3900	
				39642-4	200A/CL	120	60	Clear	C, CC-8	4 5/8	6 5/16	750	3900	
				39995-6	200A/CL	125-130	60	Clear	C, CC-8	4 5/8	6 5/16	750	3900	
				32447-5	200A/99	120	60	Extended Service, I.F.	C, CC-8		6 5/16	2500	3250	
				32451-7	200A/99	125-130	60	Extended Service, I.F.	C, CC-8		6 5/16	2500	3250	
				X	32373-3	200A/99CL	120	60	Extended Service, Clear	C, CC-8	4 5/8	6 5/16	2500	3250
					32383-2	200A/99CL	125-130	60	Extended Service, Clear	C, CC-8	4 5/8	6 5/16	2500	3250
	A-25	Med.▲		22656-3	200A25	120	60	Inside Frosted	C, CC-8		6 15/16	750	3900	
				22674-6	200A25	130	60	Inside Frosted	C, CC-8		6 15/16	750	3900	
				22670-4	200A25/CL	130	60	Clear	C, CC-8	5 1/4	6 15/16	750	3900	
		Med.	X	39761-2	200A25/35	120	60	Industrial Service, I.F.	C, C-9		6 15/16	3500	2890	
				39813-1	200A25/35	125-130	60	Industrial Service, I.F.	C, C-9		6 15/16	3500	2890	
	P-25	Med.		22645-6	200P25/26	115-125	60	X-Ray Illuminator, Daylight, I.F.	C, C-7A		4 3/4	100		
	PAR-46	Med.Side Prong		23349-4	200PAR46/3MFL	120	12	*PAR Medium Flood(9)(32)	C, CC-13		4	2000	2250	
				23357-7	200PAR46/3MFL	125-130	12	*PAR Medium Flood(9)(32)	C, CC-13		4	2000	2250	
				23351-0	200PAR46/3NSP	120	12	*PAR Narrow Spot(9)(32)	C, CC-13		4	2000	2250	
				23359-3	200PAR46/3NSP	125-130	12	*PAR Narrow Spot(9)(32)	C, CC-13		4	2000	2250	
	PAR-56	M-P		23371-8	200PAR	30	8	*PAR Headlight(10)	C, CC-8		4 1/2	500		
	PAR-56	Mog.End Prong	\$\$\$ †	21982-4	200PAR56/MFL	125-130	8	*PAR Medium Flood(9)(55)	C, CC-13		5	2000	2700	
				29917-2	200PAR56/NSP	125-130	8	*PAR Narrow Spot (9)(46)(55)	C, CC-13		5	2000	2700	
	PS-30	Med.▲		22708-2	200/IF	120	60	Inside Frosted	C, C-9		8 1/16	750	3710	
				22735-5	200/IF	130	60	Inside Frosted	C, C-9		8 1/16	750	3710	

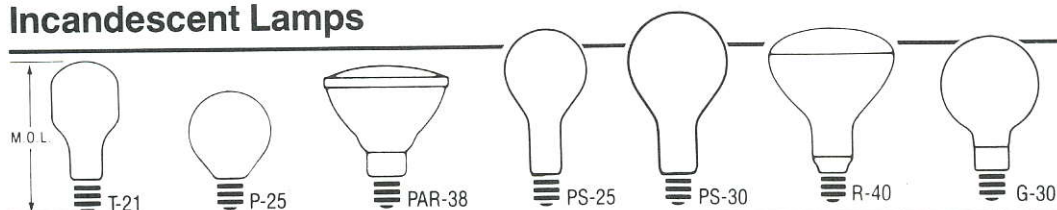
Exclusive Product

\$\$\$ — Energy Saving Product

†New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



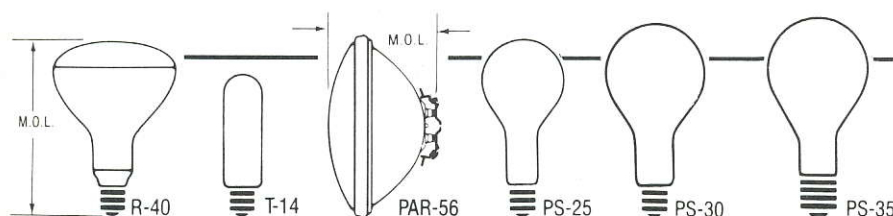
Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens	
200	PS-25	Med.▲	X	34961-3	200/IF	230	60	Inside Frosted	C, CC-9		6 ¹⁵ / ₁₆	1000	3000	
				34974-6	200/IF	250	60	Inside Frosted	C, CC-9		6 ¹⁵ / ₁₆	1000	3000	
			X	34982-9	200/IF	300	60	Inside Frosted	C, CC-9		6 ¹⁵ / ₁₆	1000	2600	
	PS-30	Med.▲		24397-2	200	32	60	Clear	C, C-6		8 ¹ / ₁₆	1000	3800	
				22701-7	200	120	60	Clear	C, C-9	6	8 ¹ / ₁₆	750	3710	
				22729-8	200	130	60	Clear	C, C-9	6	8 ¹ / ₁₆	750	3710	
	PS-25	Med.▲		30059-0	200/TF	115-125	60	Frost Silicone Coated	C, C-9		8 ¹ / ₁₆	750		
				34965-4	200	250	60	Clear	C, CC-9	5¼	6 ¹⁵ / ₁₆	1000	3000	
				34976-1	200	277	60	Mine, Clear	C, CC-9	5¼	6 ¹⁵ / ₁₆	1000	2650	
				34979-5	200	300	60	Mine, Clear	C, CC-9	5¼	6 ¹⁵ / ₁₆	1000	2600	
	PS-30	Med.▲		22707-4	200/99IF	120	60	Extended Service, I.F.	C, C-9		8 ¹ / ₁₆	2500	3200	
				22737-1	200/99IF	125-130	60	Extended Service, I.F.	C, C-9		8 ¹ / ₁₆	2500	3200	
	PS-25	Med.▲		36116-2	200/99IF	250	60	Extended Service, I.F.	C, CC-9		6 ¹⁵ / ₁₆	2500	2650	
	PS-30	Med.▲		22703-3	200/99	120	60	Extended Service, Clear	C, C-9	6	8 ¹ / ₁₆	2500	3200	
				22731-4	200/99	125-130	60	Extended Service, Clear	C, C-9	6	8 ¹ / ₁₆	2500	3200	
		Med.	□	22995-5	200/35/TF	120	60	Industrial Service(14), Frost Silicone Coated	C, C-9		8 ¹ / ₁₆	3500		
	PS-25	Med.▲		36117-0	200/99	250	60	Extended Service, Clear	C, CC-9		6 ¹⁵ / ₁₆	2500	2650	
	PS-30	Med.▲		23956-6	200/SBIF	120	60	Silvered Bowl, I.F.(31)(43)	C, C-9		8 ¹ / ₁₆	1000	3320	
				23958-2	200/SBIF	125-130	60	Silvered Bowl, I.F.(31)(43)	C, C-9		8 ¹ / ₁₆	1000	3320	
		Mog.	X		22747-0	200PS30/12IF	120	60	Inside Frosted	C, C-9		8 ¹ / ₁₆	750	3700
				22024-4	200PS30/12IF	125-130	60	Inside Frosted	C, C-9		8 ¹ / ₁₆	750	3700	
		X			22746-2	200PS30/12	120	60	Clear	C, C-9	6 ³ / ₈	8 ¹ / ₁₆	750	3700
				22751-2	200PS30/12	125-130	60	Clear	C, C-9	6 ³ / ₈	8 ¹ / ₁₆	750	3700	
		Med.▲			22704-1	200PS30/23	120	60	Rough Service, I.F.	C, C-9		8 ¹ / ₁₆	1000	3500
				22732-2	200PS30/23	125-130	60	Rough Service, I.F.	C, C-9		8 ¹ / ₁₆	1000	3500	
				22698-5	200PS30/24	120	60	Rough Service, Clear	C, C-9	6	8 ¹ / ₁₆	1000	3500	
				22726-4	200PS30/24	125-130	60	Rough Service, Clear	C, C-9	6	8 ¹ / ₁₆	1000	3500	
				30022-8	200PS30/RS/TF	115-125	60	Rough Service, Frost Silicone Coated	C, C-9		8 ¹ / ₁₆	1000		
				24722-1	200PS30/RS/IF	250	60	Rough Service, I.F.	C, C-9		8 ¹ / ₁₆	1000	2850	
				24717-1	200PS30/RS	250	60	Rough Service, Clear	C, C-9	6	8 ¹ / ₁₆	1000	2850	
	R-40	Med.▲	X		23510-1	200R/FL	120	24	Reflector Flood(9)(19)(82)	C, C-9		6½	2000	2050
					23519-2	200R/FL	125-130	24	Reflector Flood(9)(19)(82)	C, C-9		6½	2000	2050
	T-21	Med.▲	□	20447-9	200T/WL	12/1	120	12	Longer Life Soft White	C, CC-8		6 ¹ / ₈	1000	3600
250	G-30	Med. Skt.	X	23822-0	250G30	115-125	60	Infrared, Indust.(11)(31)	C, C-11	5	7 ⁹ / ₁₆	(27)		
	P-25	Med.	X	24409-5	250P25	32	60	Headlight(12)(22)	C, C-5A	3	4¾	500	4500	
	PAR-38	Med. Skt.	□	32239-6	K250PAR38/FL	120	12	*PAR Floodlight (Krypton)(53)(82)	C, CC-6		5 ⁵ / ₁₆	4000	3100	
			□	28348-1	K250PAR38/FL	125-130	12	*PAR Floodlight (Krypton)(53)(82)	C, CC-6		5 ⁵ / ₁₆	4000	3100	
			□	32240-4	K250PAR38/SP	120	12	*PAR Spotlight (Krypton)(53)(82)	C, CC-6		5 ⁵ / ₁₆	4000	3100	
			□	28349-9	K250PAR38/SP	125-130	12	*PAR Spotlight (Krypton)(53)(82)	C, CC-6		5 ⁵ / ₁₆	4000	3100	
	R-40	Med.▲		20489-1	250R40/HR	12/1	115-125	12	*Heat Ray, Red Bowl(41)(82)	C, C-9		6 ⁷ / ₈	(27)	
			\$\$\$ — CONSIDER 175PAR38/HEAT/R 115-125 VOLT FOR ENERGY SAVINGS											
				23831-1	250R40/HR/1	115-125	12	*Reflector Infrared, Industrial Red Bowl(41)(82)	C, C-9		6 ⁷ / ₈	(27)		
			\$\$\$ — CONSIDER 175PAR38/HEAT/R 115-125 VOLT FOR ENERGY SAVINGS											
			20243-2	250R40/1	6/1	115-125	6	Reflector Infrared, Lt. I.F.(19)(9)(41)(82)	C, C-9		6½	(27)		
		23827-9	250R40/1	115-125	24	Reflector Infrared, Lt. I.F.(19)(9)(41)(82)	C, C-9		6½	(27)				
\$\$\$ — CONSIDER 175PAR38/HEAT 115-125 VOLT FOR ENERGY SAVINGS														

□ Exclusive Product

\$\$\$ — Energy Saving Product †New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens	
250	R-40	Med.▲	X	23832-9	250R40/3	115-125	24	Reflector Infrared, Brooder-Lite(19)(9)(41)(82)	C, C-9		6½	(27)		
		Med. Skt.		23825-3	250R40/4	115-125	24	Reflector Infrared, Industrial, Lt. I.F.(19)(9)(41)(82)	C, C-9		7¼	(27)		
		\$\$\$ — CONSIDER 175PAR38/HEAT 115-125 VOLT FOR ENERGY SAVINGS												
			X	23824-6	250R40/5	115-125	24	*Reflector Infrared, Industrial(41)(82)	C, C-9		7¾	(27)		
	\$\$\$ — CONSIDER 175PAR38/HEAT 115-125 VOLT FOR ENERGY SAVINGS													
	T-14	Med.■		33505-9	250T14/1	120	24	Spotlight, Clear(8)	C,C-7A		5½	800	3750	
275	R-40	Med.▲	X□	36739-1	275R40/HR/1	230-250	12	*Reflector Infrared, Industrial-Red Bowl(31)(76)	C, C-7A		6¾	(27)		
300	PAR-56	M-P		26084-4	300PAR56/WFL	12	8	*PAR Wide Flood, Swimming Pool(84)	C, C-6		4½	1000	6000	
			Mog.End Prong		23382-5	300PAR56/MFL	120	8	*PAR Medium Flood(9)(55)	C, CC-13		5	2000	3720
				23405-4	300PAR56/MFL	125-130	8	*PAR Medium Flood(9)(55)	C, CC-13		5	2000	3720	
		\$\$\$ — CONSIDER 200PAR56/MFL 125-130 VOLT FOR ENERGY SAVINGS												
				23388-2	300PAR56/WFL	120	8	*PAR Wide Flood(9)(55)	C, CC-13		5	2000	3720	
				23410-4	300PAR56/WFL	125-130	8	*PAR Wide Flood(9)(55)	C, CC-13		5	2000	3720	
				23378-3	300PAR56/NSP	120	8	*PAR Narrow Spotlight (9)(46)(55)	C, CC-13		5	2000	3720	
				23400-5	300PAR56/NSP	125-130	8	*PAR Narrow Spotlight (9)(46)(55)	C, CC-13		5	2000	3720	
	\$\$\$ — CONSIDER 200PAR56/NSP 125-130 VOLT FOR ENERGY SAVINGS													
	PS-25	Med.▲		36259-0	300M/IF	12/1	120	12	Inside Frosted	C, CC-8		6½/16	750	6300
				37154-2	300M/IF		120	60	Inside Frosted	C, CC-8		6½/16	750	6300
				37156-7	300M/IF		130	60	Inside Frosted	C, CC-8		6½/16	750	6300
				37151-8	300M		120	60	Clear	C, CC-8	5¼	6½/16	750	6300
				37153-4	300M		130	60	Clear	C, CC-8	5¼	6½/16	750	6300
	PS-30	Med.▲		24740-3	300M/1	250	60	Clear	C, CC-9	6	8½/16	1000	4800	
			X	20835-5	300M/1	277	60	Clear	C, CC-9	6	8½/16	1000	4300	
	PS-25	Med.▲		35008-2	300M/99IF	120	60	Extended Service, I.F.	C, CC-8		6½/16	2500	5060	
				35009-0	300M/99IF	125-130	60	Extended Service, I.F.	C, CC-8		6½/16	2500	5060	
				35006-6	300M/99	120	60	Extended Service, Clear	C, CC-8	5¼	6½/16	2500	5060	
				35007-4	300M/99	125-130	60	Extended Service, Clear	C, CC-8	5¼	6½/16	2500	5060	
	PS-30	Med.▲		22783-5	300M/PS30IF	120	60	Inside Frosted	C, C-9		8½/16	750	6100	
				22808-0	300M/PS30IF	130	60	Inside Frosted	C, C-9		8½/16	750	6100	
				22779-3	300M/PS30	120	60	Clear	C, C-9	6	8½/16	750	6100	
				22802-3	300M/PS30	130	60	Clear	C, C-9	6	8½/16	750	6100	
		Med.	X□	39767-9	300M/PS30/35	120	60	Industrial Service, I.F.	C, C-9		8½/16	3500	4880	
			□	39798-4	300M/PS30/35	125-130	60	Industrial Service, I.F.	C, C-9		8½/16	3500	4880	
		Mog.▲		22820-5	300/2IF	120	24	Inside Frosted	C, CC-8		8¾	1000	6000	
			22833-8	300/2IF	130	24	Inside Frosted	C, CC-8		8¾	1000	6000		
			22816-3	300/2	120	24	Clear	C, CC-8	7	8¾	1000	6000		
			22829-6	300/2	130	24	Clear	C, CC-8	7	8¾	1000	6000		
PS-35	Mog.		39658-0	300/RSIF	120	24	Rough Service, I.F.	C, C-9		9¾	1000	5250		
			39450-2	300/RS	120	24	Rough Service, Clear	C, C-9	7	9¾	1000	5250		
			39661-4	300/RS	125-130	24	Rough Service, Clear	C, C-9	7	9¾	1000	5250		
	Mog.▲		22869-2	300/IF	120	24	Inside Frosted	C, C-9		9¾	1000	5700		
			22897-3	300/IF	130	24	Inside Frosted	C, C-9		9¾	1000	5700		
			24750-2	300/IF	230	24	Inside Frosted	C, CC-9		9¾	1000	4800		
			22862-7	300	120	24	Clear	C, C-9	7	9¾	1000	5700		
			22889-0	300	130	24	Clear	C, C-9	7	9¾	1000	5700		
			24754-4	300	250	24	Clear	C, CC-9	7	9¾	1000	4800		
			24759-3	300	277	24	Clear	C, CC-9	7	9¾	1000	4300		
		Mog.	X	22870-0	300/99IF	120	24	Extended Service, I.F.	C, C-9		9¾	2500	5200	

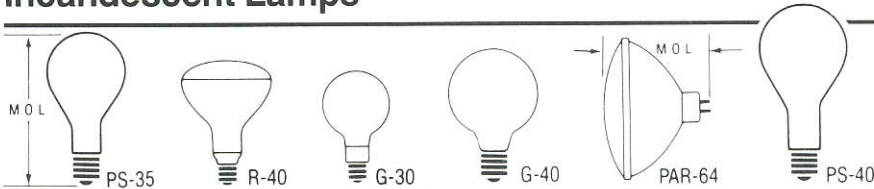
Exclusive Product

\$\$\$ — Energy Saving Product

†New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



				NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens	
300	PS-35	Mog.		22898-1	300/99IF	125-130	24	Extended Service, I.F.	C, C-9		9%	2500	5200	
			X	22865-0	300/99	120	24	Extended Service, Clear	C, C-9	7	9%	2500	5200	
				22890-8	300/99	125-130	24	Extended Service, Clear	C, C-9	7	9%	2500	5200	
			X	39770-3	300PS35/35	120	24	Industrial Service, I.F.	C, C-9		9%	3500	4930	
				39800-8	300PS35/35	125-130	24	Industrial Service, I.F.	C, C-9		9%	3500	4930	
		Mog. ▲		23966-5	300/SBIF	120	24	Silvered Bowl, I.F.(31)(43)	C, C-9		9%	1000	5400	
				23970-7	300/SBIF	125-130	24	Silvered Bowl, I.F.(31)(43)	C, C-9		9%	1000	5400	
			Med. Skt.	23961-6	300MS/SBIF	130	24	Silvered Bowl, I.F.(31)(43)	C, C-9		9%	1000	5400	
		R-40	Med. ▲		23530-9	300R/FL	120	24	Reflector Flood (9)(19)(31)(37)	C, CC-11		6½	2000	3600
				\$\$\$ — CONSIDER 120ER40 120 VOLT FOR ENERGY SAVING IN DEEP RECESSED LUMINAIRES										
					23545-7	300R/FL	125-130	24	Reflector Flood (9)(19)(31)(37)	C, CC-11		6½	2000	3600
					\$\$\$ — CONSIDER 120ER40 130 VOLT FOR ENERGY SAVING IN DEEP RECESSED LUMINAIRES									
			Med. ■		33710-5	300R/FL/1	12	24	*Reflector Flood, I.F. Swim Pool (19)(37)(53)	C, C-2V		6%	2000	
			Med. ▲		23533-3	300R/FL/1	120	24	*Reflector Flood (31)(37)(51)	C, CC-11		6%	2000	3600
					23547-3	300R/FL/1	125-130	24	*Reflector Flood (31)(37)(51)	C, CC-11		6%	2000	3600
			Mog.		23551-5	300R/3FL	120	24	*Reflector Flood (51)	C, CC-11		7¼	2000	3600
					23557-2	300R/3FL	125-130	24	*Reflector Flood (51)	C, CC-11		7¼	2000	3600
			X		31013-6	300R/3FL	230	24	*Reflector Flood(19)	C, C-7A		7¼	2000	3000
					24760-1	300R/3FL	250	24	*Reflector Flood(19)	C, C-7A		7¼	2000	3000
			Med. ▲	X	23526-7	300R/SP	120	24	Reflector Spot (9)(19)(31)(37)	C, CC-11		6½	2000	3600
				X	23542-4	300R/SP	125-130	24	Reflector Spot (9)(19)(31)(37)	C, CC-11		6½	2000	3600
	375	G-30	Med. Skt.	X	23837-8	375G30	115-125	60	Infrared, Indus.(11)(31)	C, C-7A	5	7⅙	(27)	
		R-40	Med. Skt.		23838-6	375R40	115-125	24	Reflector Infrared, Ind. Lt. I.F.(11)(19)(31)	C, C-7A		7¼	(27)	
				23840-2	375R40/1	115-125	24	*Reflector Infrared, Ind. Lt. I.F.(11)(31)	C, C-7A		7%	(27)		
400	G-30	Med. ■		23699-2	400G/FL	120	60	Floodlight(12)(22)	C, C-7A	3	5⅛	800	6760	
				35710-3	400G/FL	130	60	Floodlight(12)(22)	C, C-7A	3	5⅛	800	6760	
	R-40	Med. ■	†	31069-8	400R40/FL	120	24	Swimming Pool (12)(31)(53)	C, C-7A	3¾	6¾	2000		
500	G-30	Med. Skt.	X	23843-6	500G30/1	115-125	60	Infrared, Indus.(11)(31)	C, C-7A	5	7⅙	(27)		
	G-40	Mog.	X	23712-3	500G/FL	120	24	Floodlight(12)(22)	C, C-5	4¼	7⅙	800	8800	
	PAR-64	Ext. Mog. End Prong		23417-9	500PAR64/MFL	120	8	*PAR Med. Flood(9)(55)	C, CC-13		6	2000	6500	
				23421-1	500PAR64/MFL	125-130	8	*PAR Med. Flood(9)(55)	C, CC-13		6	2000	6500	
				23418-7	500PAR64/WFL	120	8	*PAR Wide Flood(9)(55)	C, CC-13		6	2000	6500	
				23423-7	500PAR64/WFL	125-130	8	*PAR Wide Flood(9)(55)	C, CC-13		6	2000	6500	
				23416-1	500PAR64/NSP	120	8	*PAR Narrow Spot (9)(46)(55)	C, CC-13		6	2000	6500	
	PS-35	Mog.		22914-6	500	120	24	Clear	C, CC-8	7	9%	1000	10750	
				22916-1	500	130	24	Clear	C, CC-8	7	9%	1000	10750	
	PS-40	Mog.		24773-4	500	250	24	Clear	C, CC-9	7	9¾	1000	9100	
				24780-9	500	277	24	Clear	C, CC-9		9¾	1000	7700	
	PS-35	Mog.		20020-4	500/IF	120	24	Inside Frosted	C, CC-8	7	9%	1000	10750	
				20022-0	500/IF	130	24	Inside Frosted	C, CC-8	7	9%	1000	10750	
				35010-8	500/99	120	24	Extended Service, Clear	C, CC-8	7	9%	2500	8750	
				35011-6	500/99	125-130	24	Extended Service, Clear	C, CC-8	7	9%	2500	8750	
	PS-40	Mog.		24775-9	500/99	250	24	Extended Service, Clear	C, CC-9	7	9¾	2500	7800	
	PS-35	Mog.	X	35013-2	500/99IF	120	24	Extended Service, I.F.	C, CC-8		9%	2500	8750	
				35016-5	500/99IF	125-130	24	Extended Service, I.F.	C, CC-8		9%	2500	8750	

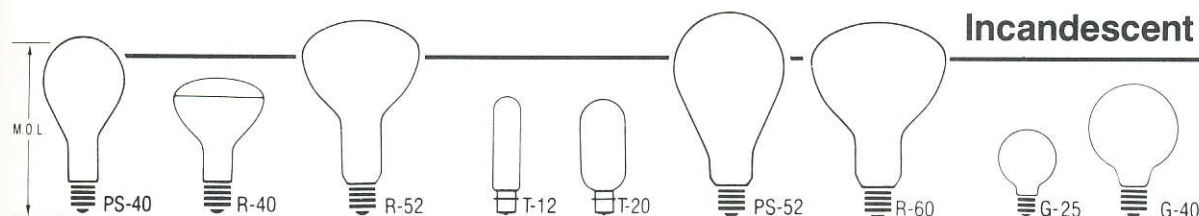
□ Exclusive Product

\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens
500	PS-40	Mog.		22932-8 500PS40	120	24	Clear	C, C-9	7	9¾	1000	10100
			X	22953-4 500PS40	130	24	Clear	C, C-9	7	9¾	1000	10100
			X	22938-5 500PS40/IF	120	24	Inside Frosted	C, C-9		9¾	1000	10100
				22960-9 500PS40/IF	130	24	Inside Frosted	C, C-9		9¾	1000	10100
			X	39796-8 500PS40/35CL	125-130	24	Industrial Service, Clear	C, C-9	7	9¾	3500	8480
				23975-6 500/SBIF	120	24	Silvered Bowl, I.F.(14)(31)	C, C-9		9¾	1000	9500
			X	23977-2 500/SBIF	125-130	24	Silvered Bowl, I.F.(14)(31)	C, C-9		9¾	1000	9500
			X	22936-9 500/RS	120	24	Rough Service, Clear	C, C-9	7	9¾	1000	9500
				22957-5 500/RS	125-130	24	Rough Service, Clear	C, C-9	7	9¾	1000	9500
	R-40	Mog.		23563-0 500R/3FL	120	24	*Reflector Flood, I.F. (51)(53)	C, CC-11		7¼	2000	6500
				23568-9 500R/3FL	125-130	24	*Reflector Flood, I.F. (51)(53)	C, CC-11		7¼	2000	6500
				24783-3 500R/3FL	250	24	*Reflector Flood, I.F. Special Service(19)	C, C-7A		7¼	2000	5400
		Med. ■		33730-3 500R/3FL/2S	125-130	24	*Reflector Flood, I.F. (31)(53)	C, C-7A		6⅞	2000	
	R-52	Mog.		32310-5 500R52	120	12	Reflector Wide Beam (9)(19)(54)	C, C-7A		11¾	2000	7850
				32306-3 500R52	130	12	Reflector Wide Beam (9)(19)(54)	C, C-7A		11¾	2000	7850
				32300-6 500R52	250	12	Reflector Wide Beam (9)(19)(54)	C, C-7A		11¾	2000	6600
	T-12	Med. Pf.		23721-4 500T12/9	120	24	*Spotlight(14)	C, C-13D	3½	5¾	200	10200
	T-20	Med. Pf.		23733-9 500T20/48	120	12	*Spotlight	C, C-13	2⅞	5¾	200	11000
				23734-7 500T20/64	120	12	*Display Spot(12)	C, C-13	2⅞	5¾	500	9500
620	PS-40	Mog. Pf.		22992-2 620PS40P	120	24	Code Beacon	C, C-7A	5⅞	10⅞	3000	11000
				22994-8 620PS40P	130	24	Code Beacon	C, C-7A	5⅞	10⅞	3000	11000
750	PS-52	Mog.	X	31194-4 750	120	12	Clear	C, CC-8	9½	13⅞	1000	16700
				31204-1 750	130	12	Clear	C, CC-8	9½	13⅞	1000	16700
				32401-2 750	250	12	Clear	C, C-7A	9½	13⅞	2000	13600
			X	31197-7 750/IF	120	12	Inside Frosted	C, CC-8		13⅞	1000	16700
				31206-6 750/IF	130	12	Inside Frosted	C, CC-8		13⅞	1000	16700
				31356-9 750/99	125-130	12	Extended Service, Clear	C, C-7A	9½	13⅞	2500	14000
			X	31329-6 750/SBIF	120	12	Silvered Bowl, I.F.(14)(31)	C, CC-8		13⅞	1000	
	R-52	Mog.	X	32305-5 750R52	120	12	Reflector Wide Beam (9)(19)(54)	C, C-7A		11¾	2000	12700
				32303-0 750R52	130	12	Reflector Wide Beam (9)(19)(54)	C, C-7A		11¾	2000	12700
				32299-0 750R52	277	12	Wide Beam Reflector, Lt. I.F.(9)(19)(54)	C, C-7A		11¾	2000	9900
	R-60	Mog.	X	20585-6 750R60/FL	125-130	6	*Reflector Flood, Light I.F.(14)	C, C-7A		10⅞	2000	11800
				34409-3 750R60/FL	230-250	6	*Reflector Flood	C, C-5		10⅞	2000	
	T-12	Med. Pf.		23744-6 750T12/9	120	24	*Spotlight(14)	C, C-13D	3½	6⅞	200	16500
1000	G-25	Med.		23043-3 1M/G25/1	115-125	12	*Diving, under-water burning only(2)	C, C-5	3⅞	5½	50	24500
	G-40	Mog.	X	23768-5 1M/G40FL	120	24	*Flood(12)	C, C-5	5¼	8	800	19500
		Mog. Pf.		23758-6 1M/G40PSP	120	24	*Spotlight(12)	C, C-5	3⅞	8⅞	200	22500
	PS-52	Mog.		31233-0 1000	120	12	Clear	C, CC-8	9½	13⅞	1000	23100
				31254-6 1000	130	12	Clear	C, CC-8	9½	13⅞	1000	23100
				32403-8 1000	250	12	Clear	C, C-7A	9½	13⅞	2000	17700
			X	31275-1 1000	277	12	Clear	C, C-7A	9½	13⅞	1000	17500
			X	31238-9 1000/IF	120	12	Inside Frosted	C, CC-8		13⅞	1000	23100
				31256-1 1000/IF	130	12	Inside Frosted	C, CC-8		13⅞	1000	23100
			X	31362-7 1000/99	120	12	Extended Service, Clear	C, C-7A	9½	13⅞	2500	19500
				31370-0 1000/99	125-130	12	Extended Service, Clear	C, C-7A	9½	13⅞	2500	19500
	R-60	Mog.	X	20576-5 1000R60/FL	120	6	*Reflector Flood(14)	C, C-7A		10⅞	2000	16800
			X	20582-3 1000R60/FL	250	6	*Reflector Flood(14)	C, C-7A		10⅞	2000	13600

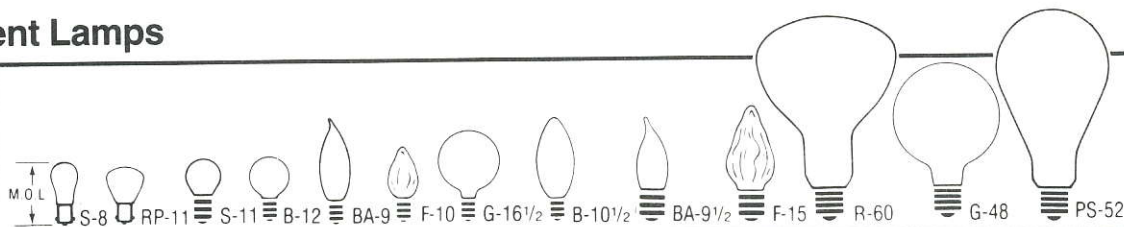
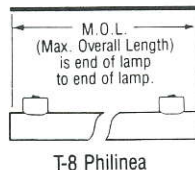
□ Exclusive Product

\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens
1000	R-60	Mog.	<input type="checkbox"/>	34413-5	1000R60/FL	277	6	*Reflector Flood	C, C-7A	10 3/8	2000	
1500	G-48	Mog.	X	23789-1	1500G48/6	125	6	*Flood(12)	C, C-5	5 1/4	800	30000
	PS-52	Mog.		31292-6	1500	120	12	Clear(56)	C, C-7A	9 1/2	1000	33300
				31303-1	1500	130	12	Clear(56)	C, C-7A	9 1/2	1000	33300
			X	32405-3	1500	250	12	Clear	C, C-7A	9 1/2	2000	26000
			X	31327-0	1500	277	12	Clear	C, C-7A	9 1/2	1000	27000
				31393-2	1500/99	125-130	12	Extended Service, Clear(56)	C, C-7A	9 1/2	2500	30200

Philinea Lamps

										Approximate		
Watts	Bulb	Base	<input type="checkbox"/>	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	M.O.L. (In.)	Hours Life	Initial Lumens
35	T-8	2XS14s	<input type="checkbox"/>	42517-3	P35/W/6275X	120	25	Philinea, White	B, C-8	11 ¹³ / ₁₆	1500	230
60	T-8	2XS14s	<input type="checkbox"/>	42519-9	P60/W/6276X	120	25	Philinea, White	B, C-8	19 ¹¹ / ₁₆	1500	400
120	T-8	2XS14s	<input type="checkbox"/>	42521-5	P120/W/6277X	120	12	Philinea, White	B, C-8	39 ³ / ₈	1500	780

High Intensity Lamps

Watts or C.P.	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approx. Hours Life
15C.P.	S-8	S.C.Bay.	20362-0	BC-93	12/2	120*	Clear	C, C-2R	1 1/8	2	500
32C.P.	RP-11	S.C.Bay.	36100-6	BC-1133	12/2	120*	Clear	C, C-2R	1 1/4	2 1/4	200
40W	S-11	Inter.▲	30002-0	BC-40S11N	12/1	120	Clear	C, CC-2V	1 9/16	2 5/16	500

Decorative Lamps (Blister Carded)

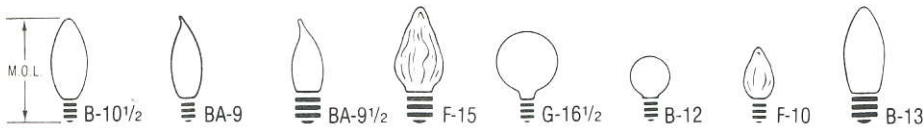
Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approx. Hours Life
10	B-12	Cand.	<input type="checkbox"/>	36778-9	BC-10B12C/W	6/2	120	White(12)	B, CC-2R	2 5/16	1500
15	BA-9	Cand.		20210-1	BC-15BA9C	6/2	120	Bent Tip, Clear(12)	B, CC-2R	3 3/4	1500
	F-10	Cand.		36779-7	BC-15F10C	6/2	120	Flame, Clear(12)	B, CC-2R	3 1/16	1500
				36780-5	BC-15F10C/A	6/2	120	Flame, Amber(12)	B, CC-2R	3 1/16	1500
	G-16 1/2	Cand.	X	36798-7	BC-15G16 1/2 C/W	6/2	120	Globe, White(12)	B, CC-2R	3	1500
25	B-10 1/2	Cand.		20299-4	BC-25B10 1/2	6/2	120	Blunt Tip, Clear(12)	C, CC-2R	4 1/16	1500
	BA-9	Cand.		20213-5	BC-25BA9C	6/2	120	Bent Tip, Clear(12)	C, CC-2R	4 3/16	1500
				23158-9	BC-25BA9C/LL	6/2	120	Bent Tip, Clear, Lngr. Lf.(12)	C, CC-2R	4 3/16	2000
			†	27800-2	BC-25BA9C/LL/4	6/4	120	Bent Tip, Clear, Lngr. Lf.(12)	C, CC-2R	4 3/16	2000
				20267-1	BC-25BA9C/F	6/2	120	Bent Tip, Frost(12)	C, CC-2R	4 3/16	1500
			†	25326-0	BC-25BA9C/FLL	6/2	120	Bent Tip, Frost, Lngr. Lf.(12)	C, CC-2R	4 3/16	2000
	BA-9 1/2	Med.		20270-5	BC-25BA9 1/2	6/2	120	Bent Tip, Clear(12)	C, CC-2R	4 1/16	1500
	F-10	Cand.		36782-1	BC-25F10C	6/2	120	Flame, Clear(8)	C, CC-2R	3 1/16	1500
	F-15	Med.▲		20352-1	BC-25F15	6/2	120	Flame, Clear(12)	B, C-9	4 1/2	1500
				23144-9	BC-25F15/LL	6/2	120	Flame, Clear, Lngr. Lf.(12)	B, C-9	4 1/2	2000
				36786-2	BC-25F15/A	6/2	120	Flame, Transparent Amber(12)	B, C-9	4 1/2	1500
			X	36788-8	BC-25F15/IR	6/2	120	Flame, Iridescent(12)	B, C-9	4 1/2	1500
			X	36789-6	BC-25F15/W	6/2	120	Flame, White(12)	B, C-9	4 1/2	1500
	G-16 1/2	Cand.		20358-8	BC-25G16 1/2 C	6/2	120	Globe, Clear(12)	B, CC-2R	3	1500
				23143-1	BC-25G16 1/2 C/LL	6/2	120	Globe, Clear, Lngr. Lf.(12)	B, CC-2R	3	2000
				20354-7	BC-25G16 1/2 C/W	6/2	120	Globe, White(12)	B, CC-2R	3	1500
				23140-7	BC-25G16 1/2 C/WLL	6/2	120	Globe, White, Lngr. Lf.(12)	B, CC-2R	3	2000

☐ Exclusive Product

☐ SSS — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approx. Hours Life
-------	------	------	-------------------------	---------------	-------	-----------	-------------	--------------------	--------------	--------------	--------------------

Decorative Lamps (Blister Carded)

40	B-10 1/2	Cand.	20300-0	BC-40B10 1/2	6/2	120	12*	Blunt Tip, Clear(12)	C, CC-2R	4 1/16	1500
			X 36771-4	BC-40B10 1/2 W	6/2	120	12*	Blunt Tip, White(12)	C, CC-2R	4 1/16	1500
	BA-9	Cand.	20216-8	BC-40BA9C	6/2	120	12*	Bent Tip, Clear(12)	C, CC-2R	4 3/16	1500
			23176-1	BC-40BA9C/LL	6/2	120	12*	Bent Tip, Clear, Lngr. Lf.(12)	C, CC-2R	4 3/16	2000
			† 27801-0	BC-40BA9C/LL/4	6/4	120	24	Bent Tip, Clear, Lngr. Lf.(12)	C, CC-2R	4 3/16	2000
			20268-9	BC-40BA9C/F	6/2	120	12*	Bent Tip, Frost(12)	C, CC-2R	4 3/16	1500
			† 25325-2	BC-40BA9C/LL	6/2	120	12*	Bent Tip, Frost, Lngr. Lf.(12)	C, CC-2R	4 3/16	2000
	BA-9 1/2	Med.	20283-8	BC-40BA9 1/2	6/2	120	12*	Bent Tip, Clear(8)	C, CC-2R	4 1/16	1500
			23189-4	BC-40BA9 1/2/LL	6/2	120	12*	Bent Tip, Clear, Lngr. Lf.(8)	C, CC-2R	4 1/16	2000
			† 27805-1	BC-40BA9 1/2/LL/4	6/4	120	24	Bent Tip, Clear, Lngr. Lf.(8)	C, CC-2R	4 1/16	2000
			20298-6	BC-40BA9 1/2/F	6/2	120	12*	Bent Tip, Frost(8)	C, CC-2R	4 1/16	1500
			† 22160-6	BC-40BA9 1/2/FLL	6/2	120	12*	Bent Tip, Frost, Lngr. Lf.(8)	C, CC-2R	4 1/16	2000
	F-15	Med.▲	20353-9	BC-40F15	6/2	120	12*	Flame, Clear(12)	C, C-9	4 1/2	1500
			23145-6	BC-40F15/LL	6/2	120	12*	Flame, Clear, Lngr. Lf.(12)	C, C-9	4 1/2	2000
			X 36795-3	BC-40F15/IR	6/2	120	12*	Flame, Iridescent(12)	C, C-9	4 1/2	1500
			36796-1	BC-40F15/W	6/2	120	12*	Flame, White(12)	C, C-9	4 1/2	1500
60	G-16 1/2	Cand.	20359-6	BC-40G16 1/2 C	6/2	120	12*	Globe, Clear(12)	C, CC-2R	3	1500
			20357-0	BC-40G16 1/2 C/W	6/2	120	12*	Globe, White(12)	C, CC-2R	3	1500
	B-10 1/2	Cand.	20343-0	BC-60B10 1/2	6/2	120	12*	Blunt Tip, Clear(12)	C, CC-2R	4 1/16	1500
	BA-9	Cand.	20224-2	BC-60BA9C	6/2	120	12*	Bent Tip, Clear(12)	C, CC-2R	4 3/16	1500
			23195-1	BC-60BA9C/LL	6/2	120	12*	Bent Tip, Clear, Lngr. Lf.(12)	C, CC-2R	4 3/16	2000
			† 27804-4	BC-60BA9C/LL/4	6/4	120	24	Bent Tip, Clear, Lngr. Lf.(12)	C, CC-2R	4 3/16	2000
			20269-7	BC-60BA9C/F	6/2	120	12*	Bent Tip, Frost(12)	C, CC-2R	4 3/16	1500
			† 22206-7	BC-60BA9C/FLL	6/2	120	12*	Bent Tip, Frost, Lngr. Lf.(12)	C, CC-2R	4 3/16	2000
	BA-9 1/2	Med.	20284-6	BC-60BA9 1/2	6/2	120	12*	Bent Tip, Clear(8)	C, CC-2R	4 1/16	1500
			20676-3	BC-60BA9 1/2/F	6/2	120	12*	Bent Tip, Frost(8)	C, CC-2R	4 1/16	1500
	F-15	Med.▲	36797-9	BC-60F15	6/2	120	12*	Flame, Clear(12)	C, C-9	4 1/2	1500

Decorative Lamps (Boxed†)

Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approx. Hours Life
10	B-12	Cand.	31113-4	10B12C/W	120	25	White(12)	B, C-7A		2 1/2	1500
15	BA-9	Cand.	31087-0	15BA9C	120	25	Bent Tip, Clear(12)	B, C-7A		4 3/16	1500
			31088-8	15BA9C/F	120	25	Bent Tip, Frost(12)	B, C-7A		4 3/16	1500
	F-10	Cand.	31126-6	15F10C	120	25	Flame, Clear(12)	B, C-7A		3 1/16	1500
			31128-2	15F10C/A	120	25	Flame, Amber(12)	B, C-7A		3 1/16	1500
	G-16 1/2	Cand.	31132-4	15G16 1/2 C	120	25	Globe, Clear(12)	B, C-7A		3	1500
			31129-0	15G16 1/2 C/W	120	25	Globe, White(12)	B, C-7A		3	1500
25	B-10 1/2	Cand.	31114-2	25B10 1/2	120	25	Blunt Tip, Clear(12)	C, C-7A		4 1/16	1500
	BA-9	Cand.	31090-4	25BA9C	120	25	Bent Tip, Clear(12)	C, C-7A		4 3/16	1500
			31091-2	25BA9C/F	120	25	Bent Tip, Frost(12)	C, C-7A		4 3/16	1500
	BA-9 1/2	Med.	31097-9	25BA9 1/2	120	25	Bent Tip, Clear(12)	C, C-7A		4 1/16	1500
			31100-1	25BA9 1/2 F	120	25	Bent Tip, Frost(12)	C, C-7A		4 1/16	1500
	F-10	Cand.	31127-4	25F10C	120	25	Flame, Clear(8)	C, C-7A		3 1/16	1500
	B-13	Med.	† 31104-3	25B13	120	25	Blunt Tip, Clear	C, C-7A		3 3/4	1500
	F-15	Med.	31121-7	25F15	120	25	Flame, Clear(12)	C, C-9		4 1/2	1500
			31124-1	25F15/W	120	25	Flame, White(12)	C, C-9		4 1/2	1500
			31242-1	25F15/A	120	25	Flame, Amber(12)	C, C-9		4 1/2	1500
	G-16 1/2	Cand.	31133-2	25G16 1/2 C	120	25	Globe, Clear(12)	C, C-7A		3	1500
			31130-8	25G16 1/2 C/W	120	25	Globe, White(12)	C, C-7A		3	1500

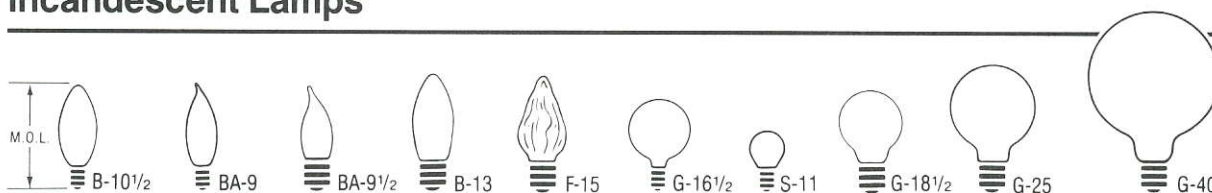
□ Exclusive Product

\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approx. Hours Life
-------	------	------	----------------------------	------------------	-------	--------------	-------------	--------------------------	-----------------	-----------------	--------------------------

Decorative Lamps (Boxed†)

40	B-10 1/2	Cand.	31115-9	40B10 1/2	120	25	Blunt Tip, Clear(12)	C, C-7A		4 1/16	1500
			31117-5	40B10 1/2/W	120	25	Blunt Tip, White(12)	C, C-7A		4 1/16	1500
			31119-1	40B10 1/2/F	120	25	Blunt Tip, Frost(12)	C, C-7A		4 1/16	1500
	BA-9	Cand.	31093-8	40BA9C	120	25	Bent Tip, Clear(12)	C, C-7A		4 3/16	1500
			31094-6	40BA9C/F	120	25	Bent Tip, Frost	C, C-7A		4 3/16	1500
	BA-9 1/2	Med.	31098-7	40BA9 1/2	120	25	Bent Tip, Clear(8)	C, C-7A		4 1/16	1500
			31101-9	40BA9 1/2/F	120	25	Bent Tip, Frost(8)	C, C-7A		4 1/16	1500
	B-13	Med.	31105-0	40B13	120	25	Blunt Tip, Clear(8)	C, C-7A		3 3/4	1500
			31111-8	40B13/W	120	25	Blunt Tip, White(8)	C, C-7A		3 3/4	1500
			31108-4	40B13/F	120	25	Blunt Tip, Frost(8)	C, C-7A		3 3/4	1500
	F-15	Med.	31122-5	40F15	120	25	Flame, Clear	C, C-9		4 1/2	1500
			31125-8	40F15/W	120	25	Flame, White	C, C-9		4 1/2	1500
60	B-10 1/2	Cand.	31134-0	40G16 1/2C	120	25	Globe, Clear	C, C-7A		3	1500
			31131-6	40G16 1/2C/W	6/2 120	25	Globe, White	C, C-7A		3	1500
	BA-9	Cand.	31116-7	60B10 1/2	120	25	Blunt Tip, Clear	C, C-7A		4 1/16	1500
			31118-3	60B10 1/2/W	120	25	Blunt Tip, White	C, C-7A		4 1/16	1500
			31120-9	60B10 1/2/F	120	25	Blunt Tip, Frost	C, C-7A		4 1/16	1500
	BA-9 1/2	Med.	31095-3	60BA9C	120	25	Bent Tip, Clear	C, C-7A		4 3/16	1500
			31096-1	60BA9C/F	120	25	Bent Tip, Frost	C, C-7A		4 3/16	1500
	B-13	Med.	31099-5	60BA9 1/2	120	25	Bent Tip, Clear(8)	C, C-7A		4 1/16	1500
			31103-5	60BA9 1/2/F	120	25	Bent Tip, Frost(8)	C, C-7A		4 1/16	1500
			31107-6	60B13	120	25	Blunt Tip, Clear(8)	C, C-7A		3 3/4	1500
	F-15	Med.	31112-6	60B13/W	120	25	Blunt Tip, White(8)	C, C-7A		3 3/4	1500
			31109-2	60B13/F	120	25	Blunt Tip, Frost	C, C-7A		3 3/4	1500
15	S-11	Cand.	31123-3	60F15	120	25	Flame, Clear	C, C-9		4 1/2	1500
	BA-9	Cand.	21462-7	15S11/13	115-125	60	Clear(12)	B, C-7A	1 9/16	2 1/4	1500
			25111-6	25BA9C	12/8 120	96	Bent Tip, Clear(12)	C, C-7A		4 3/16	1500
			27776-4	25BA9C/4M	120	24	Bent Tip, Clear(12)	C, CC-2V		4 3/16	4000
	F-15	Med.▲	35226-0	25BA9C/4MF	120	24	Bent Tip, Frost(12)	C, CC-2V		4 3/16	4000
			26221-2	25BA9 1/2	12/8 120	96	Bent Tip, Clear(12)	C, C-7A		4 1/16	1500
			35227-8	25F15/4M	120	24	Flame, Clear(12)	B, C-9		4 1/2	4000
	G-16 1/2	Cand.	21671-3	25F15/FT	120	60	Flame, Flametint(12)	B, C-9		4 1/2	1500
			25150-4	25F15/PK	120	60	Flame, Pink(12)	B, C-9		4 1/2	1500
			26175-0	25G16 1/2C	12/8 120	96	Globe, Clear(12)	B, C-7A		3	1500
	G-18 1/2	Med.▲	26173-5	25G16 1/2C/W	12/8 120	96	Globe, White(12)	B, CC-2V		3	1500
			20092-3	25G16 1/2C/4M	120	24	Globe, Clear(12)	B, CC-2V		3	4000
			35228-6	25G16 1/2C/4MW	120	24	Globe, White(12)	B, C-7A		3	4000
25	G-25	Med.▲	21686-1	25G18 1/2	115-125 120		Globe, Clear	B, C-9		3 9/16	1500
			21692-9	25G18 1/2/W	115-125 60		Globe, White	B, C-9		3 9/16	1500
			20194-7	25G25	12/1 120	12	Globe, Clear	C, C-9		4 7/16	1500
	G-40	Med.▲	30403-0	25G25	4/3 120	12	Globe, Clear	C, C-9		4 7/16	1500
			21695-2	25G25	115-125 60		Globe, Clear	C, C-9		4 7/16	1500
			20246-5	25G25/W	12/1 120	12	Globe, White	C, C-9		4 7/16	1500
	G-40	Med.▲	30404-8	25G25/W	4/3 120	12	Globe, White	C, C-9		4 7/16	1500
			21699-4	25G25/W	115-125 60		Globe, White	C, C-9		4 7/16	1500
			33389-8	25G40/4M	120	24	Globe, Clear	C, C-9		6 15/16	4000
	G-40	Med.▲	20588-0	25G40/4MW	120	24	Globe, White	C, C-9		6 15/16	4000

□ Exclusive Product

SSS — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps

INCANDESCENT



Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code		Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approx. Hours Life	
Decorative Lamps (All Other)														
40	BA-9	Cand.	†	25112-4	40BA9C	12/8	120	96	Bent Tip, Clear(12)	C, C-7A		4 ³ / ₁₆	1500	
				35113-0	40BA9C/4M		120	24	Bent Tip, Clear(12)	C, CC-2V		4 ³ / ₁₆	4000	
				35114-8	40BA9C/4MF		120	24	Bent Tip, Frost(12)	C, C-7A		4 ³ / ₁₆	4000	
	BA-9½	Med.	†	26222-0	40BA9½	12/8	120	96	Bent Tip, Clear(8)	C, C-7A		4 ¹ / ₁₆	1500	
	F-15	Med.▲		35117-1	40F15/4M		120	24	Flame, Clear(12)	C, C-9		4½	4000	
	G-16½	Cand.		26946-4	40G16½C/4M		120	60	Globe, Clear(12)	C, CC-2V		3	4000	
			26947-2	40G16½C/4MW		120	60	Globe, White(12)	C, CC-2V		3	4000		
	G-25	Med.▲	†	20198-8	40G25	12/1	120	12	Globe, Clear	C, C-9		4 ⁷ / ₁₆	1500	
				30405-5	40G25	4/3	120	12	Globe, Clear	C, C-9		4 ⁷ / ₁₆	1500	
				20193-9	40G25/W	12/1	120	12	Globe, White	C, C-9		4 ⁷ / ₁₆	1500	
				†	30406-3	40G25/W	4/3	120	12	Globe, White	C, C-9		4 ⁷ / ₁₆	1500
					21905-5	40G/W		115-125	60	Globe, White	C, C-9		4 ⁷ / ₁₆	1500
	G-30	Med.		37657-4	40G30/W		120	24	Globe, White	C, C-9		5½	4000	
	G-40	Med.▲		36168-3	40G40	6/1	120	6	Globe, Clear	C, C-9		6 ¹⁵ / ₁₆	2500	
				32172-9	40G40/4M		120	24	Globe, Clear	C, C-9		6 ¹⁵ / ₁₆	4000	
				36182-4	40G40/W	6/1	120	6	Globe, White	C, C-9		6 ¹⁵ / ₁₆	2500	
				32168-7	40G40/4MW		120	24	Globe, White	C, C-9		6 ¹⁵ / ₁₆	4000	
60	BA-9	Cand.	†	25113-2	60BA9C	12/8	120	96	Bent Tip, Clear(12)	C, C-7A		4 ³ / ₁₆	1500	
				35119-7	60BA9C/4M		120	24	Bent Tip, Clear(12)	C, CC-2V		4 ³ / ₁₆	4000	
	BA-9½	Med.	†	26223-8	60BA9½	12/8	120	96	Bent Tip, Clear(8)	C, C-7A		4 ¹ / ₁₆	1500	
	G-25	Med.▲	†	25327-8	60G25	12/1	120	12	Globe, Clear	C, C-9		4 ⁷ / ₁₆	1500	
				30254-7	60G25	4/3	120	12	Globe, Clear	C, C-9		4 ⁷ / ₁₆	1500	
				25328-6	60G25/W	12/1	120	12	Globe, White	C, C-9		4 ⁷ / ₁₆	1500	
				30255-4	60G25/W	4/3	120	12	Globe, White	C, C-9		4 ⁷ / ₁₆	1500	
				X	29068-4	60G25/4M		115-125	60	Globe, Clear	C, C-9		4 ⁷ / ₁₆	4000
				X	29065-0	60G25/4MW		115-125	60	Globe, White	C, C-9		4 ⁷ / ₁₆	4000
	G-30	Med.	†	28141-0	60G30/W	6/1	120	6	Globe, White	C, C-9		5½	2500	
				37659-0	60G30/W		120	24	Globe, White	C, C-9		5½	4000	
	G-40	Med.▲		20202-8	60G40	6/1	120	6	Globe, Clear	C, C-9		6 ¹⁵ / ₁₆	2500	
				32197-6	60G40/4M		120	24	Globe, Clear	C, C-9		6 ¹⁵ / ₁₆	4000	
				20201-0	60G40/W	6/1	120	6	Globe, White	C, C-9		6 ¹⁵ / ₁₆	2500	
				32196-8	60G40/4MW		120	24	Globe, White	C, C-9		6 ¹⁵ / ₁₆	4000	
100	F-20	Med.	†	31765-1	100F20/POST LT	6/1	120	6	Post Light, Clear	C, C-9		5	3500	
	G-30	Med.	†	28150-1	100G30/W	6/1	120	6	Globe, White	C, C-9		5½	2500	
			†	28156-8	100G30/W		120	24	Globe, White	C, C-9		5½	4000	
	G-40	Med.▲		36187-3	100G40	6/1	120	6	Globe, Clear	C, C-9		6 ¹⁵ / ₁₆	2500	
				32200-8	100G40/4M		120	24	Globe, Clear	C, C-9		6 ¹⁵ / ₁₆	4000	
				20248-1	100G40/W	6/1	120	6	Globe, White	C, C-9		6 ¹⁵ / ₁₆	2500	
				32199-2	100G40/4MW		120	24	Globe, White	C, C-9		6 ¹⁵ / ₁₆	4000	
150	G-40	Med.▲	X	36203-8	150G40	6/1	120	6	Globe, Clear	C, C-9		6 ¹⁵ / ₁₆	2500	
				20265-5	150G40/W	6/1	120	6	Globe, White	C, C-9		6 ¹⁵ / ₁₆	2500	

Street Lighting Lamps (Multiple)(43)

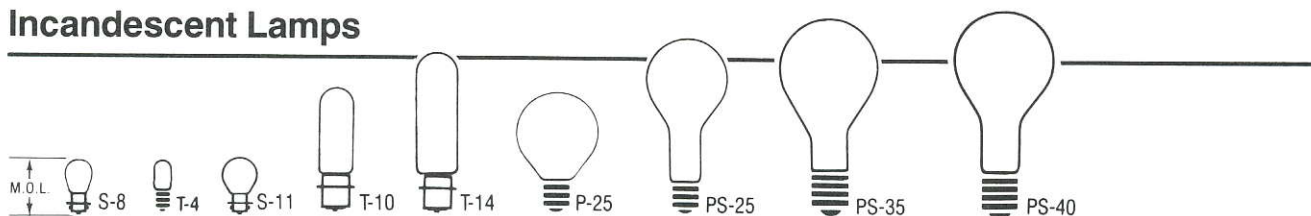
Watts	Nominal Lumens	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens
58	600	A-19	Med.X	24960-7	58A19/62	120	120	Clear	C, C-9	2 7/8	4 1/4	3000	655
			X	24964-9	58A19/62	130	120	Clear	C, C-9	2 7/8	4 1/4	3000	655
92	1000	A-23	Med.	24971-4	92A23/49	120	120	Clear	C, C-9	4 3/8	6 1/16	3000	1200
				39688-7	92A23/49	125	120	Clear	C, C-9	4 3/8	6 1/16	3000	1200
103	1000	A-23	Med.	38447-9	103A23	125	120	Clear	C, C-9	4 3/8	6 1/16	6000	1150
				38448-7	103A23	130	120	Clear	C, C-9	4 3/8	6 1/16	6000	1150

Exclusive Product

\$\$\$ — Energy Saving Product † New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Nominal Lumens	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Initial Life	Approximate Initial Lumens
Street Lighting Lamps (Multiple)(43)													
189	2500	PS-25	Med.	24995-3	189PS25/64	120	60	Clear	C, C-9	5¼	6½ ¹⁵ / ₁₆	3000	2900
				39423-9	189PS25/64	125	60	Clear	C, C-9	5¼	6½ ¹⁵ / ₁₆	3000	2900
				39636-6	189PS25/64	130	60	Clear	C, C-9	5¼	6½ ¹⁵ / ₁₆	3000	2900
202	2500	PS-25	Med. X	20527-8	202PS25	120	60	Clear	C, C-9	5¼	6½ ¹⁵ / ₁₆	6000	2800
				20528-6	202PS25	125	60	Clear	C, C-9	5¼	6½ ¹⁵ / ₁₆	6000	2800
205	2500	PS-25	Med. X	33735-2	K205PS25	120	60	Clear (Krypton)	C, C-9	5¼	6½ ¹⁵ / ₁₆	12000	2750
				33736-0	K205PS25	125	60	Clear (Krypton)	C, C-9	5¼	6½ ¹⁵ / ₁₆	12000	2750
295	4000	PS-35	Mog. X	25020-9	295PS35/58	120	24	Clear	C, C-9	7	9¾	3000	4800
				25021-7	295PS35/58	125	24	Clear	C, C-9	7	9¾	3000	4800
340	...	PS-35	Mog. X	25030-8	340PS35/52	120	24	Clear	C, C-9	7	9¾	3000	5600
405	6000	PS-40	Mog. X	25035-7	405PS40/54	120	24	Clear	C, C-9	7	9¾	3000	6700

Street Lighting Lamps (Series)

Rated Init. (67) Lumens	Amps.	Bulb	Base	NAED Number 04-6677-	Ordering Code	Initial Volts	Pkg. Qty.	Description — Operating Position(43)	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approx. Hours Life
1000	6.6	PS-25	Mog. X	20539-3	1M/66G	11.2	60	Clear	C, C-8	5¾	7½	6000
2500	6.6	PS-25	Mog. X	26968-8	2500/66G/PS25	24.0	60	Clear, Base Up	C, C-2V	5¾	7½	6000
		PS-35	Mog.	25065-4	2500/66R	22.8	24	Clear	C, C-2V	7	9¾	3000
				36785-4	2500/66G	24.0	24	Clear	C, C-2V	7	9¾	6000
4000	6.6	PS-35	Mog.	25069-6	4M/66R	34.0	24	Clear	C, C-2V	7	9¾	3000
				20543-5	4M/66G	36.5	24	Clear	C, C-2V	7	9¾	6000
6000	6.6	PS-40	Mog. X	24941-7	6M/66	48.1	24	Clear	C, C-2V	7	9¾	2000
				25078-7	6M/66R	50.0	24	Clear	C, C-2V	7	9¾	3000
				20540-1	6M/66G	52.7	24	Clear	C, C-2V	7	9¾	6000
6000	20	PS-40	Mog. X	25082-9	6M/20R/BU	16.2	24	Clear, Base Up	C, C-2V	7	9¾	3000
10000	20	PS-40	Mog. X	25086-0	10M/20R/BU	26.3	24	Clear, Base Up	C, C-7	7	9¾	3000

Lamps Listed by Amps. or Lumens

Amps or Lumens	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Initial Life	Approximate Initial Lumens
.25A	S-8	S.C.Pf.(A) X	23164-7	25A/S8SCP	6.2	100	Marine Signal, Spiral Lead	B, C-8	1½	2	500	
.55A	S-8	S.C.Pf.(A)	23181-1	55A/S8	12	100	Marine Signal, Spiral Lead	C, C-8	1½	2	500	
.77A	S-8	S.C.Pf.(A) X	23185-2	77A/S8	12	100	Marine Signal, Spiral Lead	C, C-8	1½	2	500	
.11A	T-4	Cand.	23219-9	11A/T4C	18	100	Switchboard	B, C-2V	1 ¹⁵ / ₁₆	1½	2000	
3.05A	S-11	S.C.Pf.(A) X	23205-8	3.05A/S11SCP	12	120	Marine Signal, Spiral Lead	C, C-8	1½	2¾	500	
6.6A	T-10	Med. Pf.	24300-6	6.6A/T10/1P	30W	60	Airpt. Marker(8)(MS25012-1)	C, C-2V	1½	3 ¹⁵ / ₁₆	1000	435
			24319-6	6.6A/T10P	45W	60	Airpt. Marker(8)(MS25012-1)	C, C-2V	1½	3 ¹⁵ / ₁₆	1000	700
	T-14	Med. Pf.	24402-0	6.6A/T14P	200W	24	Airpt. Marker(8)(MS25012-1)	C, C-13	2¾	5¾	75	4900
			24404-6	6.6A/T14/2P	204W	24	Aviation, Runway Marker (MS25013-2)	C, C-13	2¾	5¾	500	4200
1950L	P-25	Med.	20494-1	1950L/P25/TS	120	60	Traffic Signal(12)	C, C-9	3	4¾	8000	
			24057-2	1950L/P25/TS	125	60	Traffic Signal(12)	C, C-9	3	4¾	8000	
			26482-0	1950L/P25/TS	130	60	Traffic Signal(12)	C, C-9	3	4¾	8000	

Special Lighting

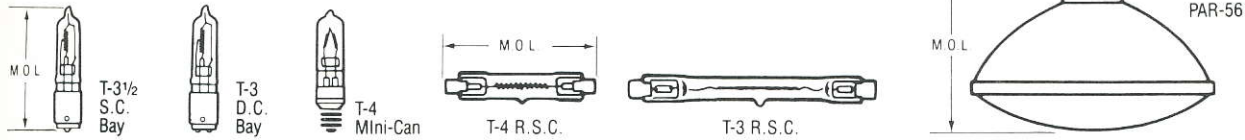
Night Light Plug-in	25139-7	BC-PNL 4C7	12/1	120	12	Plug-in Night Light with Clear 4C7	3000	16
Portable Flashlight Color Assortment	32049-9	BC-Slider Light	3/4		12	3 each of four colors with PR3 (batteries not included)		

☐ Exclusive Product

SSS — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.



Tungsten Halogen Lamps

Tungsten Halogen lamps operate at above atmospheric pressure when lamp is energized and care should be taken to:

1. Provide adequate screening to protect people and surroundings in case of violent failure.
2. Avoid scratching and abrading the quartz tube as this reduces the strength of the tube.

3. Do not operate above 110% rated voltage to prevent excessive pressure.

For satisfactory lamp operation, a minimum quartz tube wall temperature of 500°F is required.

Except where noted, Tungsten Halogen tubular lamps should not be used in equipment where the seal temperature exceeds 650°F.

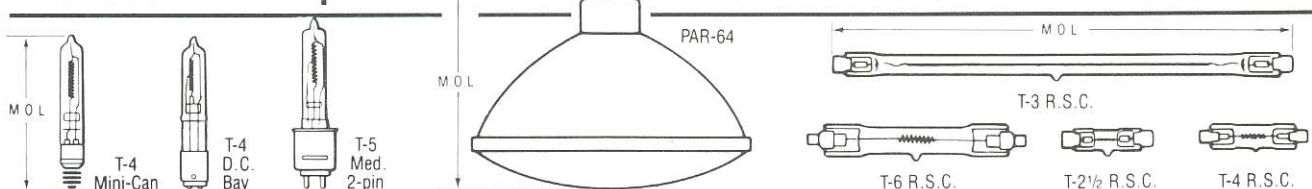
Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens
50	T-3 1/2	S.C. Bay	31286-8	50CL/SC/12V	12	24	Auto Spot	C, C-6F	1 1/4	2 1/8	50	1700
75	T-3	D.C. Bay	44224-4	75T3Q/CL/DC	28	12	*Dental Spot(68)	C, CC-6	1 3/16	2 1/4	2000	1400
		Min. Screw	42996-9	75Q/CL/28V	28	12	Dental Spot(68)	C, CC-6	1 3/16	2 1/4	2000	1400
100	T-4	Mini-Can	44263-2	100Q/CL	12	24	Clear	C, C-6F	1	2 1/4	1000	2500
			30760-3	100Q ETE	120	12	Frosted	C, CC-2V	1 3/8	2 3/4	1000	1850
			30759-5	100Q/CL ESN	120	12	Clear	C, CC-2V	1 3/8	2 3/4	1000	1900
		D.C. Bay	44280-6	100Q/DC ETD	120	12	Frosted	C, CC-2V	1 3/8	2 7/16	1000	1850
			44278-0	100Q/CL/DC ESR	120	12	Clear	C, CC-2V	1 3/8	2 7/16	1000	1900
150	T-4	R.S.C.	44267-3	150T4Q/CL	25	12	*Dental Spot(68)	C, CC-8	5/16	2 9/16	2000	2750
		Mini-Can	34754-2	150Q/CL ETG	120	12	*Clear(68)	C, CC-8	1 1/2	3	2000	2800
			29856-2	150Q ETH	120	12	Frosted	C, CC-8	1 1/2	3	2000	2700
			43011-6	150Q/CL ESL	120	12	Clear	C, CC-2V	1 3/16	2 3/4	1000	2800
			20049-3	150Q/CL	130	12	*Clear(68)	C, CC-8	1 1/2	3	2000	2800
		D.C. Bay	26676-7	150Q/CL/DC ETC	120	12	*Clear (68)	C, CC-8	1 1/2	2 5/8	2000	2800
			29850-5	150Q/DC ETF	120	12	Frosted	C, CC-8	1 1/2	2 5/8	2000	2700
			44265-7	150Q/CL/DC ESP	120	24	Clear	C, CC-2V	1 3/8	2 7/16	1000	2800
			44266-5	150Q/DC	120	12	Frost	C, CC-2V	1 3/8	2 7/16	1000	2700
200	T-3	R.S.C.	38035-2	200T3Q/CL	120	12	*Clear(10)	C, C-8	2	4 11/16	1000	3500
			38047-7	200T3Q	120	12	*Frost(10)	C, C-8	2	4 11/16	1000	3500
	T-4	R.S.C.	44258-2	200T4Q/CL/6.6A	6.6A	24	Airfield Lighting	C, C-8	1 3/16	2 9/16	500	4400
250	T-4	Mini-Can	37857-0	250Q/CL EHT	120	12	*Clear(68)	C, CC-8	1 5/8	3 1/8	2000	4800
			22886-6	250Q/CL	130	12	*Clear(68)	C, CC-8	1 5/8	3 1/8	2000	4800
		D.C. Bay	31584-6	250Q/CL/DC ESS	120	12	*Clear(68)	C, CC-8	1 5/8	2 13/16	2000	4800
			22894-0	250Q/CL/DC	130	12	*Clear(68)	C, CC-8	1 5/8	2 13/16	2000	4800
		Mini-Can	23384-1	250Q ESM	120	12	*Frost	C, CC-8		3 1/8	2000	4800
			35610-5	250Q	130	12	*Frost	C, CC-8		3 1/8	2000	4800
		D.C. Bay	31581-2	250Q/DC ETB	120	12	*Frost	C, CC-8		2 13/16	2000	4800
			22902-1	250Q/DC	130	12	*Frost	C, CC-8		2 13/16	2000	4800
300	T-3	R.S.C.	39282-9	300T3Q/CL EHM	120	12	*Clear(10)	C, C-8	2	4 11/16	2000	6000
			38206-9	300T3Q EHZ	120	12	*Frost(10)	C, C-8		4 11/16	2000	6000
400	T-3	R.S.C.	26545-4	400T3Q/CL	120	12	*Clear (10) Econ-o-watt	C, C-8	2 1/4	4 11/16	2000	9200
	T-4	R.S.C.	20797-7	400T4Q/CL EHR	120	12	*Clear	C, CC-8	3/4	3 1/8	2000	7500
			39162-3	400T4Q/CL	125-130	12	*Clear	C, CC-8	3/4	3 1/8	2000	7500
500	PAR-56	Mog. End Prong	35621-2	500PAR56Q/MFL	120	8	*PAR Medium Flood(9)(55)	C, CC-6		5	4000	7000
			35620-4	500PAR56Q/WFL	120	8	*PAR Wide Flood(9)(55)	C, CC-6		5	4000	7000
			35619-6	500PAR56Q/NSP	120	8	*PAR Narrow Spot(9)(55)	C, CC-6		5	4000	7000
	T-3	R.S.C.	20010-5	500T3Q/CL FCL	120	12	*Clear(10)	C, C-8	2 1/4	4 11/16	2000	10500
\$\$\$ — CONSIDER 400T3Q/CL 120 VOLT FOR ENERGY SAVINGS												
			39284-5	500T3Q/CL	125-130	12	*Clear(10)	C, C-8	2 1/4	4 11/16	2000	10500
			36774-8	500T3Q FCZ	120	12	*Frost(10)	C, C-8		4 11/16	2000	10200
			34727-8	500T3Q	125-130	12	*Frost(10)	C, C-8		4 11/16	2000	10200

□ Exclusive Product

\$\$\$ — Energy Saving Product † New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps



Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code		Volts	Pkg. Qty.	Description	Class and Filament	L.C.L. (In.)	M.O.L. (In.)	Hours Life	Initial Lumens	
Tungsten Halogen Lamps														
500	T-4	Mini-Can	38079-0	500Q/CL	EVR	120	12	*Clear(68)	C, CC-8	2	3 5/8	2000	9800	
			36335-8	500Q/CL	EYW	130	12	*Clear(68)	C, CC-8	2	3 5/8	2000	9800	
		D.C. Bay.		31586-1	500Q/CL/DC		120	12	*Clear(68)	C, CC-8	2	3 7/16	2000	9800
		Mini-Can		35605-5	500Q	EYX	120	12	*Frost	C, CC-8		3 5/8	2000	9800
			35604-8	500Q	EYV	130	12	*Frost	C, CC-8		3 5/8	2000	9800	
		D.C. Bay. X		31585-3	500Q/DC		120	12	*Frost	C, CC-8		3 7/16	2000	9800
		Med. Two-Pin		26971-2	500Q/CL	EHD	120	12	Clear	C-CC-8	2 3/8	3 3/4	2000	10,600
750	T-5	Med. Two-Pin	26972-0	750Q/CL	EHG	120	12	Clear	C-CC-8	2 3/8	4 1/4	2000	15,000	
1000	PAR-64	Ext. Mog. End Prong	27556-0	1000PAR64Q/MFL		120	8	*PAR Medium Flood(9)(55)	C, CC-8		6	4000	19400	
			27558-6	1000PAR64Q/WFL		120	8	* PAR Wide Flood(9)(55)	C, CC-8		6	4000	19400	
			27555-2	1000PAR64Q/NSP		120	8	*PAR Narrow Spot(9)(55)	C, CC-8		6	4000	19400	
	T-3	R.S.C. X	38135-0	1000T3Q/CL		220	12	*Clear(10)	C, C-8	6	10 1/16	2000	21000	
			38320-8	1000T3Q/CL		240	12	*Clear(10)	C, C-8	6	10 1/16	2000	21000	
	T-6	R.S.C.	38711-8	1000T6Q/CL	DWT	120	12	*Clear	C, CC-8	1	5 5/8	2000	21000	
	1200	T-3	R.S.C. \$\$\$	26468-9	1200T3Q/CL		240	12	*Clear(10) Econ-o-watt	C, C-8	6 3/4	10 1/16	2000	29200
1250	T-3	R.S.C. X	20798-5	1250T3Q/CL		208	12	*Clear(10)	C, C-8	5 3/4	10 1/16	2000	28000	
1500	T-3	R.S.C.	37806-7	1500T3Q/CL		208	12	*Clear(10)	C, C-8	6 3/4	10 1/16	2000	33000	
			37536-0	1500T3Q/CL		220	12	*Clear(10)	C, C-8	6 3/4	10 1/16	2000	33000	
			23867-5	1500T3Q/CL		240	12	*Clear(10)	C, C-8	6 3/4	10 1/16	2000	33000	
			\$\$\$ — CONSIDER 1200T3Q/CL 240 VOLT FOR ENERGY SAVINGS											
			23868-3	1500T3Q/CL		277	12	*Clear(10)	C, C-8	6 3/4	10 1/16	2000	33000	
45	T-2 1/2	R.S.C.	20580-7	6.6A/T2 1/2Q/CL	6.6A	12	*Clear	C, C-8	1 1/8	2 1/16	1000	630		
		Cartridge	36868-8	6.6A/T2 1/2Q/5CL	6.6A	12	*Clear	C, C-8	1 1/8	2 5/32	1000	630		
65	T-2 1/2	Cartridge	24112-5	6.6A/T2 1/2Q/9CL	6.6A	12	*Clear	C, C-8	1 1/8	2 5/32	1000			
200	T-4	R.S.C.	20665-6	6.6A/T4Q/CL	6.6A	12	*Clear	C, CC-8	3 5/8	2 9/16	500	4400		
		D.C. Ring	32878-1	6.6A/T4Q/DCR	6.6A	12	*Clear(68)	C, CC-6	1 1/16	2 3/8	500	5150		



Accent 1200 Halogen Display Lamps (Standard Performance MR-16)

NAED Number 04-6677-	ANSI Code	Watts	Volts	Base	M.O.L. (In.)	Filament	Approx. Color Temp. (K)	Average Center Candle-power	Approx. Beam Spread (Degrees)	Average Rated Life (Hours)
7495-9	BAB	20	12	GX5.3	1 3/4	CC-6	2925	460	36	2000
37487-6	ESX	20	12	GX5.3	1 3/4	CC-6	2925	3300	12	2000
31499-7	FJX	25	12	GX5.3	1 3/4	C-8	3050	8500	6	2000
37498-3	EXN	50	12	GX5.3	1 3/4	C-6	3050	1500	40	3000
\$\$\$ — CONSIDER 39MR-16/SQ/FL38 FOR ENERGY SAVINGS										
37496-7	EXT	50	12	GX5.3	1 3/4	C-6	3050	9150	13	3000
\$\$\$ — CONSIDER 39MR-16/SQ/SP12 FOR ENERGY SAVINGS										
37497-5	EXZ	50	12	GX5.3	1 3/4	C-6	3075	3000	24	3000
\$\$\$ — CONSIDER 39MR-16/SQ/FL24 FOR ENERGY SAVINGS										
37500-6	EYC	75	12	GX5.3	1 3/4	CC-6	3050	2000	38	3500
\$\$\$ — CONSIDER 49MR-16/SQ/FL38 FOR ENERGY SAVINGS										
37499-1	EYF	75	12	GX5.3	1 3/4	CC-6	3050	11500	14	3500
\$\$\$ — CONSIDER 49MR-16/SQ/SP12 FOR ENERGY SAVINGS										

□ Exclusive Product

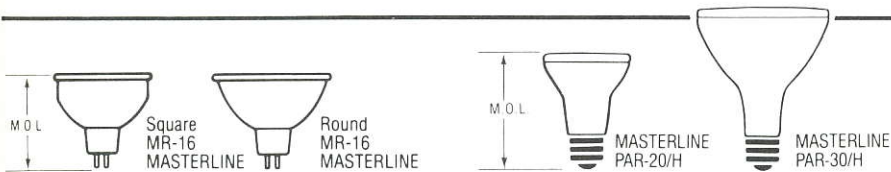
\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps

INCANDESCENT



NAED Number 04-6677-	Ordering Code	Watts	Volts	Base	M.O.L. (In.)	Approx. Color Temp. (K)	Average Center Candle- power	Approx. Beam Spread (Degrees)	Average Rated Life (Hours)
-------------------------	---------------	-------	-------	------	-----------------	----------------------------------	---------------------------------------	--	-------------------------------------

Square MR-16 MASTERLINE Halogen Display Lamps (Energy Saving)

31189-4	† □ \$\$\$ 20MR-16/SQ/SP12	20	12	GX5.3	1 3/4	3000	4500	12	3000
31190-2	† □ \$\$\$ 20MR-16/SQ/FL36	20	12	GX5.3	1 3/4	3000	700	36	3000
31178-7	† □ \$\$\$ 39MR-16/SQ/SP12	39	12	GX5.3	1 3/4	3000	9150	12	3000
31680-2	† □ \$\$\$ 39MR-16/SQ/FL24	39	12	GX5.3	1 3/4	3000	3000	24	3000
31183-7	† □ \$\$\$ 39MR-16/SQ/FL38	39	12	GX5.3	1 3/4	3000	1500	38	3000
31187-8	† □ \$\$\$ 49MR-16/SQ/SP12	49	12	GX5.3	1 3/4	3000	11500	12	3500
31185-2	† □ \$\$\$ 49MR-16/SQ/FL24	49	12	GX5.3	1 3/4	3000	4800	24	3500
31188-6	† □ \$\$\$ 49MR-16/SQ/FL38	49	12	GX5.3	1 3/4	3000	2000	38	3500

Round MR-16 MASTERLINE Halogen Display Lamps (High Output)

31869-1	† □ 20MR-16/ML/SP12	20	12	GX5.3	1 3/4	3000	3800	12	3000
31868-3	† □ 20MR-16/ML/FL36	20	12	GX5.3	1 3/4	3000	600	36	3000
31870-9	† □ 50MR-16/ML/SP12	50	12	GX5.3	1 3/4	3000	10000	12	3500
31871-7	† □ 50MR-16/ML/FL24	50	12	GX5.3	1 3/4	3000	4000	24	3500
31874-1	† □ 50MR-16/ML/FL38	50	12	GX5.3	1 3/4	3000	1750	38	3500
31876-6	† □ 75MR-16/ML/SP14	75	12	GX5.3	1 3/4	3000	12500	14	3500
31875-8	† □ 75MR-16/ML/FL38	75	12	GX5.3	1 3/4	3000	2500	38	3500

MASTERLINE PAR-20 Long Neck Halogen Lamps

32087-9	† □ \$\$\$ 50PAR-20/H/NSP9	50	120	Medium	3 1/2	Narrow Spot	6200	9	2000
32127-3	† □ \$\$\$ 50PAR-20/H/NSP9	50	130	Medium	3 1/2	Narrow Spot	6200	9	2000
31936-8	† □ \$\$\$ 50PAR-20/H/SP16	50	120	Medium	3 1/2	Spot	3200	16	2000
31937-6	† □ \$\$\$ 50PAR-20/H/SP16	50	130	Medium	3 1/2	Spot	3200	16	2000
31944-2	† □ \$\$\$ 50PAR-20/H/NFL30	50	120	Medium	3 1/2	Narrow Flood	1400	30	2000
31948-3	† □ \$\$\$ 50PAR-20/H/NFL30	50	130	Medium	3 1/2	Narrow Flood	1400	30	2000

MASTERLINE PAR-30 Long Neck Halogen Lamps

32084-6	† □ \$\$\$ 50PAR-30/H/NSP9	50	120	Medium	4 1/2	Narrow Spot	9900	9	2000
32128-1	† □ \$\$\$ 50PAR-30/H/NSP9	50	130	Medium	4 1/2	Narrow Spot	9900	9	2000
31951-7	† □ \$\$\$ 50PAR-30/H/SP16	50	120	Medium	4 1/2	Spot	4200	16	2000
31953-3	† □ \$\$\$ 50PAR-30/H/SP16	50	130	Medium	4 1/2	Spot	4200	16	2000
31954-1	† □ \$\$\$ 50PAR-30/H/NFL30	50	120	Medium	4 1/2	Narrow Flood	1900	30	2000
31957-4	† □ \$\$\$ 50PAR-30/H/NFL30	50	130	Medium	4 1/2	Narrow Flood	1900	30	2000
31958-2	† □ \$\$\$ 50PAR-30/H/FL40	50	120	Medium	4 1/2	Flood	1250	40	2000
31959-0	† □ \$\$\$ 50PAR-30/H/FL40	50	130	Medium	4 1/2	Flood	1250	40	2000
32085-3	† □ \$\$\$ 75PAR-30/H/NSP9	75	120	Medium	4 1/2	Narrow Spot	15500	9	2000
32129-9	† □ \$\$\$ 75PAR-30/H/NSP9	75	130	Medium	4 1/2	Narrow Spot	15500	9	2000
31960-8	† □ \$\$\$ 75PAR-30/H/SP16	75	120	Medium	4 1/2	Spot	6700	16	2000
31961-6	† □ \$\$\$ 75PAR-30/H/SP16	75	130	Medium	4 1/2	Spot	6700	16	2000
31962-4	† □ \$\$\$ 75PAR-30/H/NFL30	75	120	Medium	4 1/2	Narrow Flood	3400	30	2000
31962-4	† □ \$\$\$ 75PAR-30/H/NFL30	75	130	Medium	4 1/2	Narrow Flood	3400	30	2000
31966-5	† □ \$\$\$ 75PAR-30/H/FL40	75	120	Medium	4 1/2	Flood	2200	40	2000
31967-3	† □ \$\$\$ 75PAR-30/H/FL40	75	130	Medium	4 1/2	Flood	2200	40	2000

□ Exclusive Product

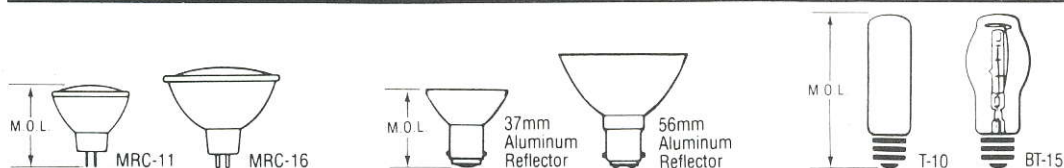
\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

HALOGEN

Incandescent Lamps



NAED Number 04-6677-	Ordering Code	ANSI Code	Watts	Volts	Base	M.O.L. (In.)	Approx. Color Temp. (K)	Average Center Candle-power	Approx. Beam Spread (Degrees)	Average Rated Life (Hours)
-------------------------	---------------	-----------	-------	-------	------	-----------------	----------------------------	-----------------------------	-------------------------------	----------------------------

MRC-16/MRC-11 Display Lamps (Closed MR-16/MR-11)

30104-4	†	20MRC-11/SP10	FTB	20	12	GZ4	1 5/8	2925	5500	10	2000
30107-7	†	20MRC-11/SP20	FTC	20	12	GZ4	1 5/8	2925	1500	20	2000
30109-3	†	20MRC-11/FL30	FTD	20	12	GZ4	1 5/8	2925	600	30	2000
30112-7	†	20MRC-11/SP7	EZX	20	12	GX5.3	1 15/16	2925	8200	7	2000
30115-0	†	20MRC-16/SP12	ESX	20	12	GX5.3	1 15/16	2925	3300	12	2000
30119-2	†	20MRC-16/FL36	BAB	20	12	GX5.3	1 15/16	2925	460	36	2000
30121-8	†	50MRC-16/SP8	FTY	50	12	GX5.3	1 15/16	3050	12000	8	3000
30122-6	†	50MRC-16/SP13	EXT	50	12	GX5.3	1 15/16	3050	9150	13	3000
30124-2	†	50MRC-16/FL24	EXZ	50	12	GX5.3	1 15/16	3050	3000	24	3000
30127-5	†	50MRC-16/FL28	ENL	50	12	GX5.3	1 15/16	3050	2500	28	3000
30128-3	†	50MRC-16/FL38	EXN	50	12	GX5.3	1 15/16	3050	1500	38	3000

Halogen Aluminum Reflector Lamps

NAED Number 04-6677-	ANSI Code	Philips Type No.	Std. Pkg.	Watts	Volts	Beam Color	Base	M.O.L. (In.)	Reflector Dia. (mm)/ Material	Avg. Life (Hours)	Luminous Intensity (cd)	Beam Spread† Degrees
32828-6	GBA	6424	50	15	6	White	B15d	1 1/2	37 Alum.	3000	5000	6
32834-4	GBB	6425	50	15	6	White	B15d	2 5/16	56 Alum.	3000	12000	4
32839-3	GBC	6426	50	15	6	White	B15d	2 5/16	56 Alum.	3000	1400	14
32840-1	GBD	6433	50	20	12	White	B15d	1 1/2	37 Alum.	3000	7000	6
32841-9	GBE	6434	50	20	12	White	B15d	1 1/2	37 Alum.	3000	1400	18
32842-7	GBF	6435	50	20	12	White	B15d	1 1/2	37 Alum.	3000	350	32
32397-2	GBG	6429	50	35	6	White	B15d	2 5/16	56 Alum.	3000	15500	6
32855-9	GBH	6430	50	35	6	White	B15d	2 5/16	56 Alum.	3000	4000	14
32826-0	GBJ	6438	50	50	12	White	B15d	2 5/16	56 Alum.	3000	11000	10
32827-8	GBK	6439	50	50	12	White	B15d	2 5/16	56 Alum.	3000	1900	25
30689-4	†GBL	6465	50	50	12	White	B15d	2 5/16	56 Alum.	3000	18000	6
30094-7	†	6480	50	20	12	Green	B15d	1 1/2	37 Alum.	3000	15000	6
30096-2	†	6481	50	20	12	Blue	B15d	1 1/2	37 Alum.	3000	500	6
30097-0	†	6482	50	20	12	Yellow	B15d	1 1/2	37 Alum.	3000	6000	6
30098-8	†	6483	50	20	12	Red	B15d	1 1/2	37 Alum.	3000	800	6
30099-6	†	6484	50	50	12	Green	B15d	2 5/16	56 Alum.	3000	4300	6
30101-0	†	6485	50	50	12	Blue	B15d	2 5/16	56 Alum.	3000	750	6
30102-8	†	6486	50	50	12	Yellow	B15d	2 5/16	56 Alum.	3000	18400	6
30103-6	†	6487	50	50	12	Red	B15d	2 5/16	56 Alum.	3000	1340	6

†Angle measured at which the luminous intensity is one-half of the center beam.

HalogenA™ Lamps

				NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.		L.C.L. (In.)	M.O.L. (In.)	Approximate Hours Life	Initial Lumens
Watts	Bulb	Base						Description				
75	T-10	Med.	†	30375-0	75T10/Q/CAP/IF	120	12	Inside Frosted	3	4½	3000	1040
	BT-15	Med.	†	30376-8	75BT15/Q/CAP/CL	120	12	Clear	3	4½	3000	1090
			†	30374-3	75BT15/Q/CAP/W	120	12	White	3	4½	3000	990
100	T-10	Med.		26892-0	100T10/Q/CAP/IF	120	12	Inside Frosted	3	4½	3000	1525
	BT-15	Med.		26893-8	100BT15/Q/CAP/CL	120	12	Clear	3	4½	3000	1600
				26895-3	100BT15/Q/CAP/W	120	12	White	3	4½	3000	1450
150	BT-15	Med.		26897-9	150BT15/Q/CAP/CL	120	12	Clear	3	4½	3000	2500
				26900-1	150BT15/Q/CAP/W	120	12	White	3	4½	3000	2100

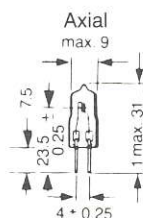
□ Exclusive Product

SSS — Energy Saving Product

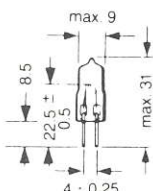
†New Since Last Printing

Halogen Capsules

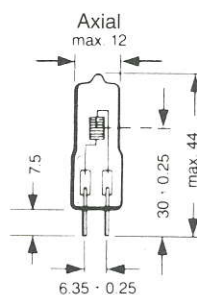
Dimensions in Millimeters



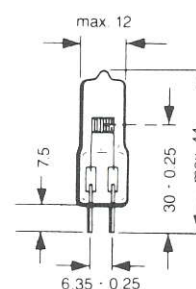
13078



13283 13091
13284 13093



13094 13101 13103
13100 13102 13104



13079 13082 13089
13083 13090

NAED Number 04-6677-	Description	Watts	Volts	Base	Lumens	L.C.L. mm	M.O.L. mm	Package Qty.	Average Rated Life (Hours)
-------------------------	-------------	-------	-------	------	--------	--------------	--------------	--------------	----------------------------

Halogen Capsules (Burners)

23256-1	13093	15	6	G4	225	22.5	31	100	2000
23259-5	13094 (Axial)	35	6	GY6.35	600	30	44	100	2000
23260-3	13283	5	12	G4	60	22.5	31	50	2000
23262-9	13284	10	12	G4	140	22.5	31	50	2000
23264-5	13078 (Axial)	20	12	G4	350	23.5	31	100	2000
23265-2	13079	50	12	GY6.35	950	30	44	100	2000
23266-0	13082	75	12	GY6.35	1600	30	44	100	2000
23268-6	13083	100	12	GY6.35	2550	33	44	100	2000
†29563-4	13100 (Axial)	100	12	GY6.35	2400	30	44	100	2000
†29555-0	13101 (Axial)	75	12	GY6.35	1575	30	44	100	2000
†29554-3	13102 (Axial)	50	12	GY6.35	975	30	44	100	2000
†29553-5	13103 (Axial)	35	12	GY6.35	630	30	44	100	2000
†29552-7	13104 (Axial)	20	12	GY6.35	340	30	44	100	2000
23270-2	13091	20	24	G4	350	22.5	31	50	1000
23273-6	13090	50	24	GY6.35	900	30	44	50	2000
23274-4	13089	100	24	GY6.35	2000	30	44	50	2000

Ordering Code Cross Reference Guide (Halogen Lamps)

ANSI	Philips	General Electric	Sylvania
ESN	100Q/CL	Q100CL/MC/2V	100Q/CL
ESR	100Q/CL/DC	Q100CL/DC/2V	100Q/CL/DC
ETG	150Q/CL	Q150CL/MC	150Q/CL/2
EHT	250Q/CL	Q250CL/MC	250Q/CL
EHM	300T3Q/CL	Q300T2½/CL	300T2½Q/CL

Trade Name Cross Reference Guide (Halogen Lamps)

Philips	General Electric	Sylvania
Accent 1200 MASTERLINE™ PAR	Precise™ Performance Plus™	Tru-Aim™ Capsylite®

☐ Exclusive Product

\$\$\$ — Energy Saving Product

† New Since Last Printing

For pricing information refer to PS-101-U

Incandescent Lamps

Tubular Quartz Infrared Lamps

Tubular quartz infrared heat lamps are designed for service other than illumination. Unless otherwise noted,

1. Tubular quartz heat lamps should not be used in equipment where the seal temperatures exceed 650°F.
2. Operating position is HORIZONTAL.
3. R.S.C. Base = Recessed Single Contact

Fig. 1

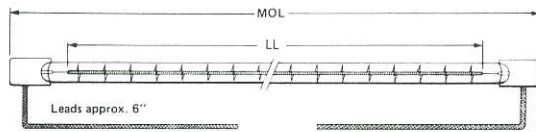


Fig. 2

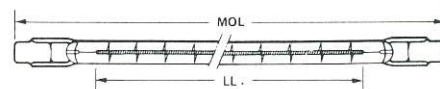


Fig. 3

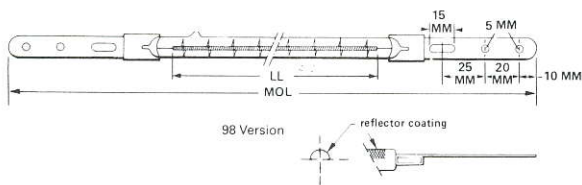


Fig. 4

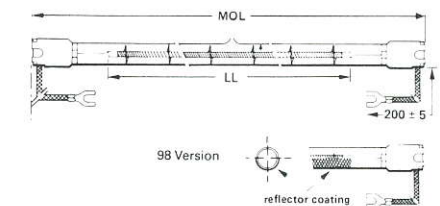


Fig. 5

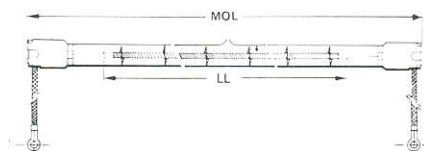


Fig. 6

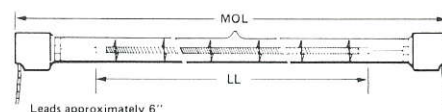
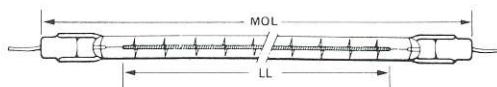


Fig. 7



Watts	Bulb	Base (Fig. No.)	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.L. (In.)	M.O.L. (In.)	Approx. Hours Life(27)
300	T-3	6	22382-6	300T3	115-125	12	Frosted(23)	C, C-8	5	8 ¹³ / ₁₆	
375	T-3	6	23842-8	375T3	115-125	12	Frosted(23)	C, C-8	5	8 ¹³ / ₁₆	
		2	36369-7	375T3/7	115-125	12	Frosted(23)	C, C-8	5	8 ⁵ / ₈	
500	T-3	6	23845-1	500T3	105	12	Frosted(23)	C, C-8	5	8 ¹³ / ₁₆	
			23850-1	500T3	115-125	12	Frosted(23)	C, C-8	5	8 ¹³ / ₁₆	
		2	23851-9	500T3/7	115-125	12	Frosted(23)	C, C-8	5	8 ⁵ / ₈	
		6	23846-9	500T3/CL	115-125	12	Clear(23)	C, C-8	5	8 ¹³ / ₁₆	
			20681-3	500T3/CL/HT	115-125	12	Clear, High Temp. Const.	C, C-8	5	8 ¹³ / ₁₆	(59)
		3	31203-3	13169X	110-130	10	Clear	C, C-8	5.5	11.68	
		1	31207-4	13169Y	110-130	10	Clear	C, C-8	5.5	7.0	
		3	31205-8	13169X/98	110-130	10	Reflector	C, C-8	5.5	11.68	
600	T-3	6	30436-0	600T3/CL/12	104	12	Clear	C, C-8	6	11 ¹⁵ / ₁₆	
800	T-3	6	29472-8	800T3	115-125	12	Frosted(23)	C, C-8	8	11 ¹⁵ / ₁₆	
900	T-3	6	30106-9	900T3/CL/16	215	12	Clear	C, C-8	9	15 ¹⁵ / ₁₆	
1000	T-3	6	23856-8	1000T3	208	12	Frosted	C, C-8	10	13 ¹³ / ₁₆	
			23859-2	1000T3	230-250	12	Frosted	C, C-8	10	13 ¹³ / ₁₆	
			23860-0	1000T3/CL	230-250	12	Clear	C, C-8	10	11 ¹⁵ / ₁₆	
			23862-6	1000T3/2CL	230-250	12	Clear	C, C-8	10	13 ¹³ / ₁₆	
		X	29474-4	1000T3/CL/HT	230-250	12	Clear, High Temp. Construction(17)(78)	C, C-8	10	11 ¹⁵ / ₁₆	(59)
		3	31213-2	13195X	220-250	10	Clear	C, C-8	10.7	16.73	
			31216-5	13195X/98	220-250	10	Reflector	C, C-8	10.7	16.73	
		1	31225-6	13195Y	220-250	10	Clear	C, C-8	10.7	13.70	
		4	37812-5	13195Z/98	220-250	10	Reflector	C, C-8	10.7	14.07	
			31267-8	13713Z/98	220-250	10	Reflector, Vertical	C, C-8	10.7	14.07	

□ Exclusive Product

\$\$\$ — Energy Saving Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Incandescent Lamps

INCANDESCENT

Watts	Bulb	Base (Fig. No.)	NAED Number 04-6677-	Ordering Code	Volts	Pkg. Qty.	Description	Class and Filament	L.L. (In.)	M.O.L. (In.)	Approx. Hours Life(27)
Tubular Quartz Infrared Lamps											
1000	T-3	3	31260-3	13713X	220-250	10	Clear, Vertical	C, C-8	10.7	16.73	
1200	T-3	5	28853-0	13561Y/00	144	10	Clear	C, C-8	6.1	8.85	
1350	T-3	7	31257-9	13381/99	115	10	Clear	C, C-8	10.2	12.68	
			31255-3	13381/99	220	10	Clear	C, C-8	10.2	12.68	
1500	T-3	6	30129-1	1500T3/CL/22	225	12	Clear	C, C-8	15	21 ¹⁵ / ₁₆	
			36574-2	1500T3/CL/HT	230-250	12	Clear, High Temp. Construction(17)(78)	C, C-8	9 ¹ / ₄	11 ¹⁵ / ₁₆	(59)
1600	T-3	5	28875-3	13568Y/00	144	10	Clear	C, C-8	5.9	8.85	
		6	23869-1	1600T3	208	12	Frosted	C, C-8	16	19 ¹³ / ₁₆	
		2	29483-5	1600T3/7	208	12	Frosted	C, C-8	16	19 ⁵ / ₈	
		6	23872-5	1600T3	230-250	12	Frosted	C, C-8	16	19 ¹³ / ₁₆	
		7	23873-3	1600T3/5	230-250	12	Frosted	C, C-8	16	19 ¹¹ / ₁₆	
		2	29478-5	1600T3/7	230-250	12	Frosted	C, C-8	16	19 ⁵ / ₈	
		6	23870-9	1600T3/CL	230-250	12	Clear	C, C-8	16	19 ¹³ / ₁₆	
			20297-8	1600T3/1CL/HT	230-250	12	Clear, High Temp. Construction(17)(78)	C, C-8	16	17 ¹⁵ / ₁₆	(59)
1600W		6	37819-0	1600T3	277	12	Frosted	C, C-8	16	19 ¹³ / ₁₆	
		2	20495-8	1600T3/7	277	12	Frosted	C, C-8	16	19 ⁵ / ₈	
2000	T-3	6	36553-6	2000T3/1CL	230-250	12	Clear(2)(17)(78)	C, C-8	9 ³ / ₄	11 ¹⁵ / ₁₆	
			20824-9	2000T3/1CL/HT	230-250	12	Clear, High Temp. Construction(17)(78)	C, C-8	9 ³ / ₄	11 ¹⁵ / ₁₆	(59)
			X 24856-7	2MT3/1CL/HT/VB	230-250	12	Clear, High Temp. Construction, Vertical (17)(78)	C, C-8	9 ³ / ₄	11 ¹⁵ / ₁₆	(59)
			26907-6	2000T3/524	230-250	6	Frosted	C, C-8	20	23 ³ / ₄	(59)
		3	31198-5	13168X	220-250	10	Clear, Vertical	C, C-8	11.0	16.73	
			† 31252-0	13245X/98	380-420	10	Reflector	C, C-8	16.2	22.17	
			† 31269-4	13765X	380-420	10	Clear	C, C-8	16.2	22.17	
		4	31200-9	13168Z/98	220-250	10	Reflector, Vertical	C, C-8	11.0	14.07	
		5	35703-8	13168V	220-250	10	Clear, Vertical	C, C-8	11.0	13.78	
		4	37811-7	13213Z/98	220-250	10	Reflector	C, C-8	11.0	14.07	
		1	21169-8	13213Y	220-250	10	Clear	C, C-8	11.0	13.70	
		3	31250-4	13245X	380-420	10	Clear	C, C-8	16.14	22.17	
2400	T-3	6	30159-8	2400T3/CL/31	460	6	Clear	C, C-8	24	30 ¹⁵ / ₁₆	
2500	T-3	6	23878-2	2500T3	460-500(60)	6	Frosted	C, C-8	25	28 ¹³ / ₁₆	
		7	23876-6	2500T3/5	460-500(60)	6	Frosted	C, C-8	25	28 ¹¹ / ₁₆	
		2	29480-1	2500T3/7	460-500(60)	6	Frosted	C, C-8	25	28 ⁵ / ₈	
		6	23874-1	2500T3/CL	460-500(60)	6	Clear	C, C-8	25	28 ¹³ / ₁₆	
			20301-8	2500T3/CL/HT	460-500(60)	6	Clear, High Temp. Construction(17)(78)	C, C-8	25	28 ¹³ / ₁₆	(59)
			20862-9	2500T3/VB	460-500(60)	6	Frosted, Vertical (57)	C, C-8	25	28 ¹³ / ₁₆	
			25671-9	2500T3/CL/VB	460-500	6	Clear, Vertical (57)	C, C-8	25	28 ¹³ / ₁₆	
3000	T-3	3	31244-7	13230X	380-420	10	Clear	C, C-8	27 ¹ / ₂	35 ³ / ₄	
3000W			23648-9	13230X/98	380-420	10	Reflector	C, C-8	27 ¹ / ₂	35 ³ / ₄	
3800	T-3	6	23881-6	3800T3	550-600(61)	6	Frosted	C, C-8	38	41 ¹³ / ₁₆	
			36552-8	3800T3/CL	550-600(61)	6	Clear	C, C-8	38	41 ¹³ / ₁₆	
			20303-4	3800T3/VB	550-600(61)	6	Frosted, Vertical (57)	C, C-8	38	41 ¹³ / ₁₆	
			21348-8	3800T3/HT	420	6	Frosted, High Temp. Construction	C, C-8	38	41 ¹³ / ₁₆	
			20490-9	3800T3/CL/VB	550-600	6	Clear, Vertical (57)	C, C-8	38	41 ¹³ / ₁₆	
4600	T-3	Special	31272-8	13136V	400	10	Clear, Epitaxial	C-8	9.29	11.73	
5000	T-3	6	36845-6	5000T3/1CL/HT	576-625(62)	6	Clear, High Temp. Construction(17)(78)	C, C-8	25	28 ¹³ / ₁₆	(59)

Exclusive Product

\$\$\$ — Energy Saving Product

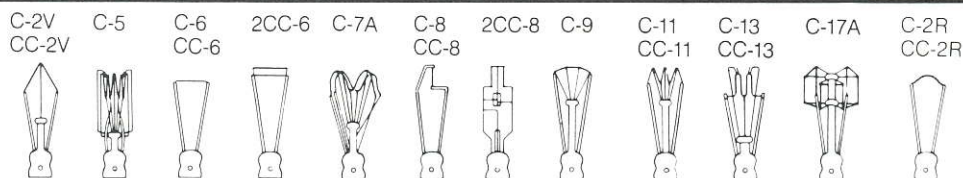
†New Since Last Printing

For pricing information refer
to PS-101-U

HALOGEN

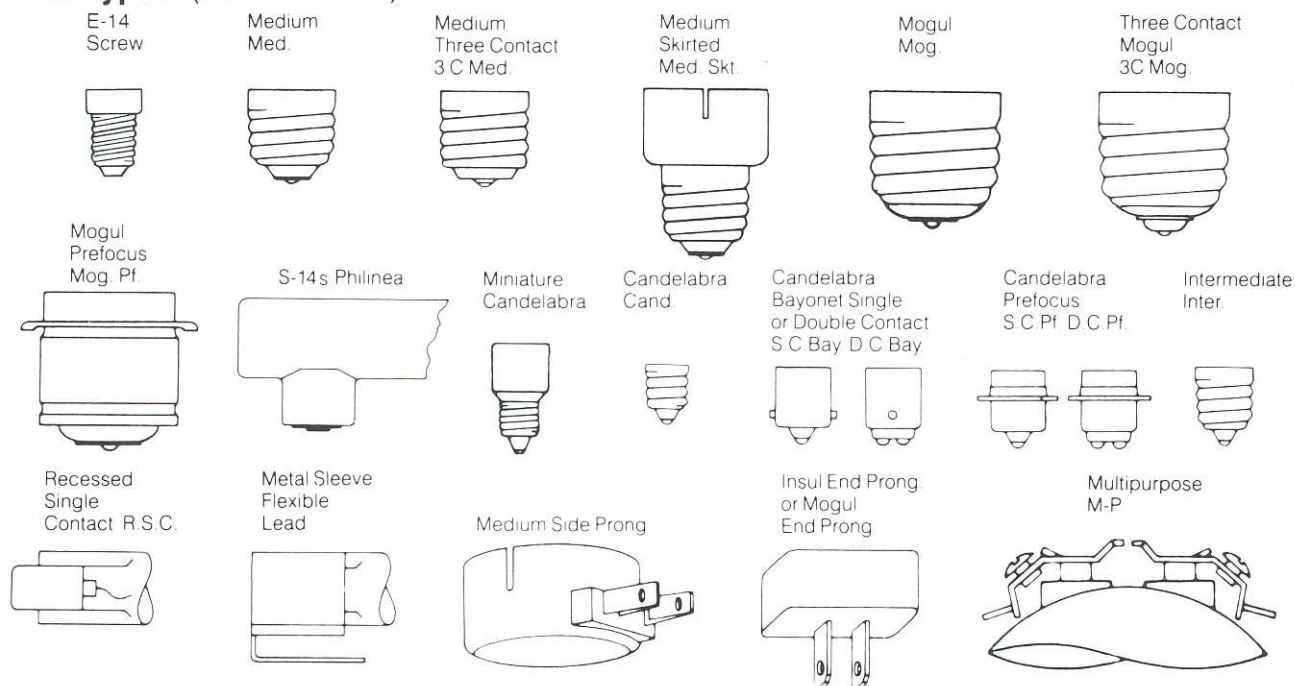
Incandescent Lamps

Filament Designations



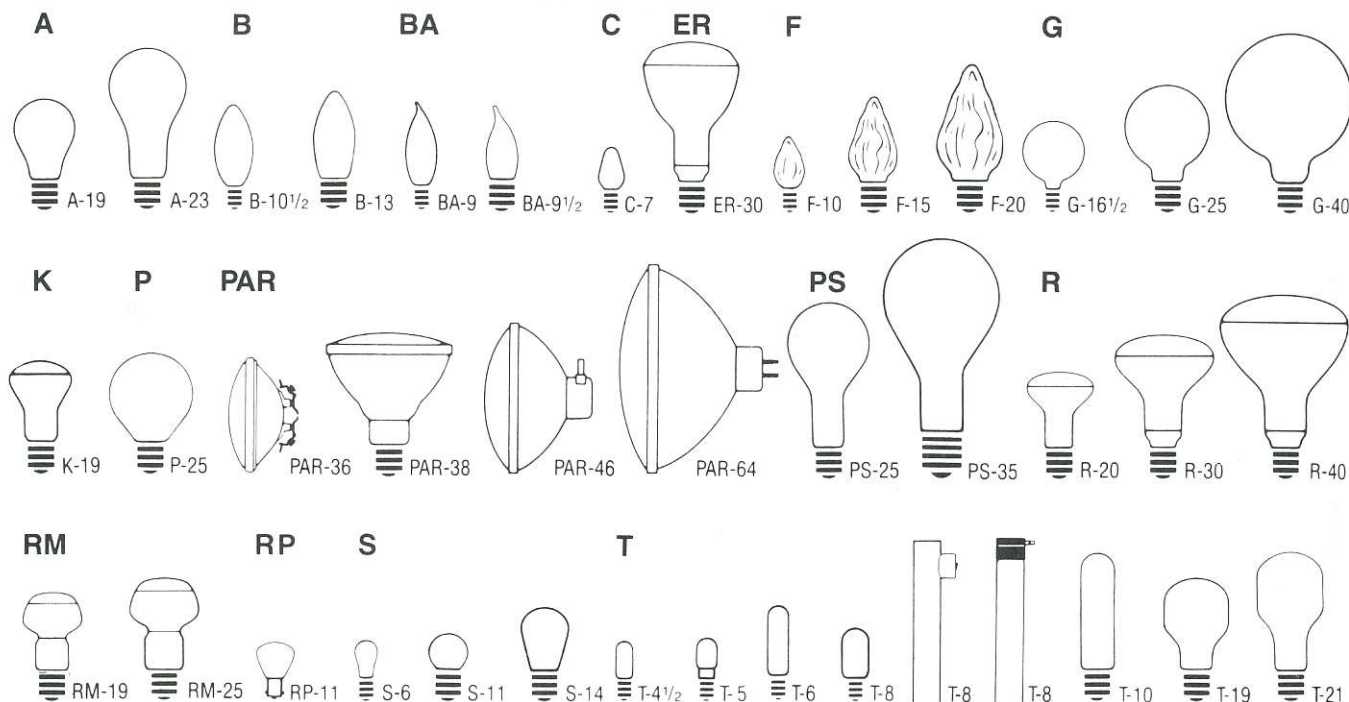
Filament Designations consist of a letter or letters to indicate how the wire is coiled, and an arbitrary number sometimes followed by a letter to indicate the arrangement of the filament on the supports. Prefix letters include C (coil) — wire is wound into a helical coil or it may be deeply fluted; CC (coiled coil) — wire is wound into a helical coil and this coiled wire again wound into a helical coil. Some of the more commonly used types of filament arrangements are illustrated.

Base Types (Not Actual Sizes)



Bulb Shapes (Not Actual Sizes)

The size and shape of a bulb is designated by a letter or letters followed by a number. The letter indicates the shape of the bulb while the number indicates the diameter of the bulb in eighths of an inch. For example, "T-10" indicates a tubular shaped bulb having a diameter of 10/8 or 1 1/4 inches. The following illustrations show some of the more popular bulb shapes and sizes.



Footnotes — Incandescent Lamps

- Quantity shown is minimum shipping container — Refer to Net Price Schedule for number of lamps to qualify as a standard case.
- * Two Lamp Carded Pack.
- ▲ Aluminum base
- Nickel plated brass base
- ★ Heat resisting glass bulb.
- (2) Although the lamp is of the highest quality in material and workmanship, it has been designed to meet certain purchase requirements which preclude a guarantee of performance.
- (3) Indefinite-long life.
- (4) Average laboratory life is 200 hours for vacuum cleaner and 600 hours for sewing machine service. Design life 1000 hours.
- (7) Average overall length.
- (8) Operate base down.
- (9) This lamp should be shielded from moisture to prevent breakage.
- (10) Operating position — horizontal.
- (11) Design volts 115.
- (12) Operate base down to horizontal.
- (13) Not recommended for horizontal burning.
- (14) Operate base up.
- (15) Operate base down. Filaments operated separately.
- (16) Flexible connector not included in maximum overall length.
- (17) Designed for use only in special equipment.
- (18) Base is medium left hand thread.
- (19) May not give satisfactory performance if any accessory equipment is attached to or touches the glass bulb.
- (21) Nominal watts. Actual watts are determined by multiplying the volts by the amperes.
- (22) Unsatisfactory lamp operation is likely to occur in operating positions between horizontal and base up, particularly between 45° from base up, and base up.
- (23) May be operated in any position.
- (25) Base pins approximately parallel to plane of filament.
- (26) Use only on circuits supplying the voltage as marked on the lamp. Do NOT use in household sockets.
- (27) Average laboratory life in excess of 5000 hours. In-service life depends upon service conditions.
- (29) Suitable for indoor and outdoor service.
- (31) Operate only in porcelain sockets.
- (32) For use only with heat resistant connector and with lamp supported by bulb rim or metal shell of base.
- (33) Operating position — plane through lamp axis and base terminals horizontal.
- (34) Operate base up to horizontal.
- (37) Should not be used in equipment where the base temperature will exceed 500°F.
- (40) Ceramic sleeve with approx. 6" flexible leads.
- (41) Avoid use at short distances on materials that are inflammable or susceptible to heat damage.
- (42) The tungsten halogen inner lamp may continue to operate if the outer (PAR-38) envelope is cracked or broken. The inner lamp is pressurized and could shatter. Replace immediately and dispose of the old bulb with care.
- (43) Unless otherwise noted, may be operated in any position but lumen maintenance is best when operated vertically base up.
- (46) Stippled, rounded cover.
- (47) Leads parallel to lamp axis. OAL does not include leads.
- (49) Should not be used in equipment where the seal temperature exceeds 750°F.
- (50) For use on 50-60 cycle A.C. circuits.
- (51) Light output is maintained best when operated within 45° of vertically base up.
- (52) For use only in a fixture with a well-ventilated back.
- (53) The bulb, though made of heat resistant glass, may break if moisture falls on it. Not recommended for use in enclosed, close-fitting housings.
- (54) Operate within 25° of vertically base up. Collector grid.
- (55) For use only with heat resistant connector and with lamp supported by bulb rim.
- (56) Recommended operating position any within 60° of vertically base up or base down but lumen maintenance is best when operated vertically base up.
- (57) When operated in a position other than horizontal, lamp end marked, "This end up" should be higher than the other end.
- (59) Life dependent upon service conditions.
- (60) Design volts 480.
- (61) Design volts 570.
- (62) Design volts 600.
- (63) Design volts 145.
- (64) For use only in equipment specially designed to maintain bulb and base temperature within safe limits.
- (65) AA tolerance 1/32", LCL tolerance 3/64".
- (66) Silicone Coating reduces lumen output from Standard Values less than 3%.
- (67) Nominal lumens.
- (68) Lighted length value refers to light center length for this lamp.
- (71) Operating Position — Prongs up or Down.
- (72) Light Center Length & axial alignment tolerance 1/64".
- (73) Both filaments in multiple.
- (74) Single contact medium bayonet base without pins having 2 or 3 pin focusing sleeve as indicated.
- (75) 23/4" diameter unsilvered spot on end of bulb.
- (76) Design Volts — 230.
- (77) Collector grid.
- (78) Intermittent operation.
- (81) LCL & Axial Alignment tolerances 1/32".
- (82) To avoid deterioration of lampholder by heat, use only in porcelain lampholders or fixtures listed by a nationally recognized electrical testing organization for use with reflector or PAR lamps.
- (83) Base does not have ceramic insulator.
- (84) Operate 45° base down to horizontal.

Ordering Code Cross Reference Guide (Incandescent Lamps)

A number of incandescent lamps manufactured by Philips are identified with different ordering codes by General Electric and Sylvania. If a Philips Ordering Code is shown, but nothing is shown for General Electric or Sylvania, it means that their ordering code is the same, or they do not make the lamp.

Use this guide particularly on decorative lamps. Refer to it for help on colored lamps, extended service lamps and numerous other individual types to provide quick identification of the Philips lamp. For example, an inquiry is received for a 250R40/10 lamp. A quick check in this guide shows that the code 250R40/10 is used by GE and Sylvania and it is comparable to the Philips 250R40/HR.

Philips	General Electric	Sylvania	Philips Volts
7½S/G ⁽¹⁾	7½S/CG	7½S/CG	115-125, 130
10S11N/G ⁽¹⁾	10S11N/CG (130)	10S11N/CG	115-125
10S14/G ⁽¹⁾	10S14/CG (120)	10S14/CG	115-125
11S14/G ⁽¹⁾	11S14/G (130)	11S14/CG	115-125, 130
15A/Colors	15A/Colors (120)	15A15/Colors	115-125
15BA9C	15CAC (120)	15B10C/BL (120-125)	120
15F10C	15FC (120)	15FC/4M (120)	120
15F10C/A	15FC/A (120)	15FC/AIC/BL (120-125)	120
15G16½C	15GC (120)	—	120
15G16½C/W	15GC/W (120)	15G16½C/W (120-125)	120
15/150T/WL	15/150	15/150A/W/RP	120
25A19/RS	25A17/RS	25A17/RS	75
25A15/1	—	25A15	115-125
25A/CL/RFL	—	25A/99CL/RFL (130)	125-130
25B10½	25BC (120)	25B10C/ST/BL (120-125)	120
25BA9C	25CAC (120)	25B10C/BL (120-125)	120
25BA9C/F	25CAC/F (120)	—	120
25BA9C/4M	25CAC/L (120)	—	120
25BA9C/4MF	25CAC/F/L (120)	—	120
25BA9½	25CAM/L (120)	—	120
25BA9½/F	25CAM/F/L (120)	25C11/BL (120-125)	120
25F10C	25FC (120)	25FC (120-125)	120
25F15	25FM (120)	25F (120-125)	120
25F15/W	25FM/W (120)	25F/W/BL (120-125)	120

(1) Other colors of this lamp follow a similar pattern, i.e., the letter designating color is preceded by a "C" in G.E. and Sylvania ordering codes.

Incandescent Lamps

Ordering Code Cross Reference Guide (Incandescent Lamps)

Philips	General Electric	Sylvania	Philips Volts
25F15/A	25FM/A (120)	25F/AIC/BL (120-125)	120
25F15/IR	25FM/AU (120)	25F/IC/BL (120-125)	120
25F15/4M	25FM/L	—	120
25F15/FT	—	25F/FT (120-125)	120
25G16½C	25GC (120)	—	120
25G16½C/W	25GC/W (120)	—	120
25G16½C/4M	25GC/L (120)	—	120
25G16½C/4MW	25GC/W/L (120)	25G16½C/W/4M	120
40A/99	—	40A/99/XL (120, 130)	120, 125-130
40A/99CL	—	40A/99/CL/XL (130)	125-130
40B10½	40BC (120)	40C9½C/BL (120-125)	120
40B10½/W	40BC/W (120)	40C9½C/W/BL (120-125)	120
40BA9C	40CAC (120)	40B10C/BL (120-125)	120
40BA9C/F	40CAC/F (120)	—	120
40BA9C/4M	40CAC/L	—	120
40BA9C/4MF	40CAC/FL	—	120
40BA9½	40CAM (120)	40C11/BL (120-125)	120-130
40BA9½/F	40CAM/F (120)	—	120
40F15	40FM (120)	40F (120-125)	120
40F15/IR	40FM/AU (120)	40F/IC/BL (120-125)	120
40F15/W	40FM/W (120)	40F/W/BL (120-125)	120
40F15/4M	40FM/L	—	120
40S11N	40S11N/1 (120)	—	115-125
40S11N/IF	40S11N/1/IF	40S11N/CF	120
50A	50A21	50A21	12, 30, 34
50A/RS/TF	50A/RS/CVG (120)	50A/RS/SL	115-125
50/150T/SW	50/150	50/150A/W	120
50/250T/SW	50/250	50/250M/W	120
60A/99	—	60A/99/XL (120, 130)	120, 125-130
60A/TF	60A/CVG (120)	60A/SL (120)	115-125
60A/AGRO	60A/PL	60A/GRO	120
60A19/Colors ⁽²⁾	60A21/Colors (120)	60A19/C Colors (120)	115-125
60B10½	60BC (120)	60B10C/ST/BL (120-125)	120
60BA9C	60CAC (120)	60B10C/BL (120-125)	120
60BA9C/4M	60CAC/L	—	120
60BA9C/F	60CAC/F (120)	—	120
60BA9½	60CAM (120)	—	120
60T10/64IF	60T10/F (120)	60T10/CF (120)	115-125
67A21/99/TS	67A21/TS (120, 125, 130)	67A21/40/8M (120, 125, 130)	120, 130
75A/99	74 A/S	75A/99/XL (120,130)	120,125-130
75R30/AGRO	75R30/PL	75R30/GRO	120
100A	100A23	—	12
100A/99	100 A/S	100A/99/XL (120, 130)	120,125-130
100A/1SB	100A21/SB (120)	—	115-125
100A21/99	—	100A21/99/XL (120, 130)	120, 125-130
100A21/SP/33	100A21/SP (120, 130)	100A21/SP (120, 125, 130)	120, 125-130
100A21/TF	100A21/CVG (120)	100A21/SL (120)	115-125
100A/RS/VS	100A/RS (120, 130)	100A/RS	120, 125-130
100A/RS/VS ⁽²⁾	100A23/VS (120, 130)	100A/VS (120, 125, 130)	120, 125-130
100A/CL/RS/VS	100A/CL/RS (120, 130)	100A/CL/RS	120, 125-130
100A/CL/RS/VS	—	100A/CL/VS (120, 125)	120, 125-130
100A/RS/TF	100A/RS/CVG (120)	100A21/RS/SL	115-125
100A/99	—	100A/99/XL (230-250)	250
100A21/99	—	100A21/99/XL (120, 130)	120, 125-130
100A23/Colors	100A/Colors	100A/Colors	115-125
100/300/W	100/300	100/300	120
110R30/RS	110R30/FL/RS (120)	110R30/FL/RS (120)	120-130

(2) Note the difference in bulb size.

Ordering Code Cross Reference Guide (Incandescent Lamps)

Philips	General Electric	Sylvania	Philips Volts
150A/Y 150A/RS/VS 150A/CL/RS/VS 150A/99 ⁽²⁾ 150A/99CL ⁽²⁾	150PS25/Y (120) 150A/RS (120, 130) — 150A23/99 (120, 130) 150A23/99CL (120, 130)	— 150A/RS 150A/CL/RS 150A/99/XL (120, 130) 150A/99CL/XL (120, 130)	115-125 120, 125-130 120, 125-130 120, 125-130 120, 125-130
150PAR/4FL 150PAR/5FL 150PAR/WFL 1950L/P25/TS	150PAR/4 150PAR/5 — —	150PAR/4 150PAR/5 150PAR38/VWFL 1950L/P25/8 (120, 130)	120-130 120-130 120, 125-130 120, 130
150PS25/99CL 150PS25/99 150PS25/99CL 150PS25/TF 150/RS/TF	150/99CL (130) 150/99 (120, 130) 150/99CL (120, 130) 150PS25/CVG (120) 150/RS/CVG (120)	— 150/99/XL (125, 130) 150/99/CL/XL (230-250) 150/SL 150/RS/SL	120, 125-130 120, 125-130 250 115-125 115-125
150R/AGRO 200A/99CL 200/TF 200PS30/RS/TF	150R40/PL 200A/99CL (125-130) 200PS30/CVG (120) 200PS30/RS/CVG (120)	150R40/GRO — 200PS30/SL 200PS30/23/SL	120 120, 125-130 115-125 115-125
200/99IF 200/99 250R40/HR 300PAR56/WFL	200/99IF (230-250) 200/99 (230-250) 250R40/10 —	200/99/IF/XL (230-250) 200/99/XL (230-250) 250R40/10 25A/PAR56/WFL	250 250 115-125 12
300M/99IF 300M/99 300/2 300/2IF 300/99IF	— — — — —	300M/IF99/XL 300M/99/XL 300AX (120, 125, 130) 300AX/IF (120, 125, 130) 300/99IF/XL	120, 125-130 120, 125-130 120-130 120-130 120, 125-130
300/99 300/99 500/99 500/99IF 500/99	— — 500/99 (120, 130) 500/99IF (120, 130) 500/99 (230-250)	300/99/XL 300/99/XL (230-250) 500/99/XL 500/99IF/XL 500/99/XL	120, 125-130 250 120, 125-130 120, 125-130 250
750/99 1000/99	— —	750/99/XL 1000/9/XL	125-130 120, 125-130

Ordering Code Cross Reference Guide (High Intensity Lamps)

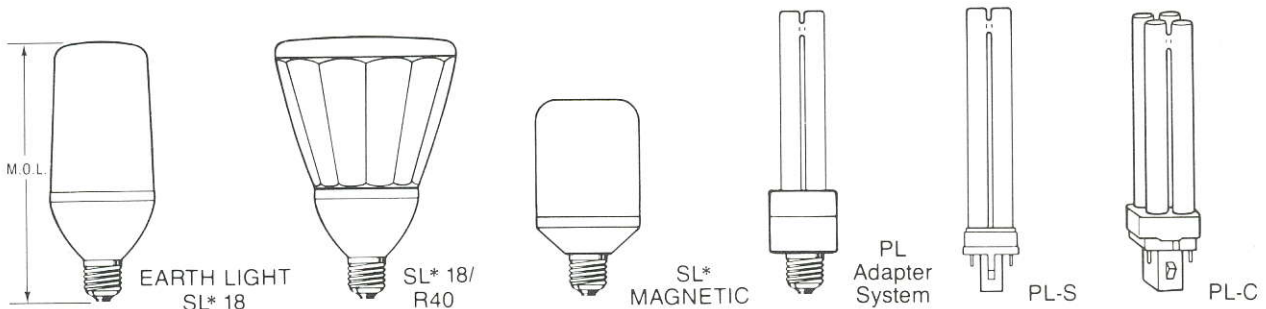
C.P.	Bulb	Volts	Philips	General Electric	Sylvania
32 C.P. 15 C.P.	RP-11 S-8	6.2 12.8	BC-1133 BC-93	24RP/1133 12S8/93T	1133/BL 93/BL

Trade Name Cross Reference Guide (Incandescent Lamps)

Generic	Philips	General Electric	Sylvania
Plant Lamp Bug Lamp Colored Lamp Energy Saving Reflector Red Heat Lamp Long Tubular Incandescent Double Reflector Shatter Resistant 3000-3500 Hour 2500 Hour Dichroic Reflector	Agro-Lite Bug-A-Way Colortone Econ-o-Par or Econ-o-watt Heat-Ray Philinea SPOTLINE Silicone Coated Industrial Service Extended Service Cool Beam	"Gro and Sho" Bug-Lite "Party-Bulb" WATT-MISER or MISER No Trade Name No Listing No Listing COV-R-GUARD Survivor Extended Service Cool-Beam	Spot-GRO Bug-lite No Trade Name Energy Pincher or SuperSaver No Trade Name No Listing No Listing Safe Line No Listing Excel-Line Cool-Lux

(2) Note the difference in bulb size.

Compact Fluorescent Lamps



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	M.O.L. (In.)	Aver. Life, Hrs. (202)	Approx. Initial(203) Lumens
SL* Lamps Screw-in Fluorescent System with integral ballast and diffusing cover. Direct replacement for incandescent, offering energy savings, high color rendering and long life. (216)									
18	SL*18	Med. Screw	31971-5	EARTH LIGHT SL*18	6	Compact 2700K	7 ³ / ₁₆	10000	1100
			ENERGY-SAVING SUBSTITUTE FOR INCANDESCENT 75 WATT LAMPS						
	R-40	Med. Screw	34297-2	SL*18/R40/27	6	Reflector 2700K	7 ¹ / ₄	10000	800
			ENERGY-SAVING SUBSTITUTE FOR INCANDESCENT 75PAR38 AND 75R/FL						
	SL* M	Med. Screw	29074-2	SL*MAGNETIC	6	Compact 2700K	5 ⁷ / ₈	9000	750
			ENERGY-SAVING SUBSTITUTE FOR INCANDESCENT 60 WATT LAMPS						

PL Adapter Systems PL lamps with screw-in adapter offer energy-saving, long life substitute for incandescent. (216) (217)									
9	PL-S	Med. Screw	26752-6	PL-S 5/27/SYS	10	PL-S 5W/27 With Adapter	5 ³ / ₄	10000	250
			ENERGY-SAVING SUBSTITUTE FOR INCANDESCENT 25 WATT LAMPS						
10	PL-S	Med. Screw	26753-4	PL-S 7/27/SYS	10	PL-S 7W/27 With Adapter	6 ⁷ / ₈	10000	400
			ENERGY-SAVING SUBSTITUTE FOR INCANDESCENT 40 WATT LAMPS						
12	PL-S	Med. Screw	26754-2	PL-S 9/27/SYS	10	PL-S 9W/27 With Adapter	8 ¹ / ₁₆	10000	550
			ENERGY-SAVING SUBSTITUTE FOR INCANDESCENT 40 WATT TO 60 WATT LAMPS						
14	PL-C	Med. Screw	31563-0	PL-C 13/27/USA/SYS	10	PL-C 13W/27/USA With Adapter	6 ⁵ / ₁₆	10000	700
			ENERGY-SAVING SUBSTITUTE FOR INCANDESCENT 60 WATT LAMPS						

PL Short Fluorescent Lamps High color rendering, high efficacy, long life lamps with integral starter. Use choke ballast. (217) (204)									
5	PL-S	G23	33233-8	PL-S 5W/27	60	2700K, Boxed	4 ¹ / ₈	10000	250
7	PL-S	G23	34256-8	PL-S 7W/27	60	2700K, Boxed	5 ¹ / ₄	10000	400
			30663-9	PL-S 7W/27	50	2700K	5 ¹ / ₄	10000	400
			36809-2	PL-S 7W/41	50	4100K	5 ¹ / ₄	10000	400
9	PL-S	G23	34257-6	PL-S 9W/27	60	2700K, Boxed	6 ¹ / ₂	10000	600
			30665-4	PL-S 9W/27	50	2700K	6 ¹ / ₂	10000	600
			36810-0	PL-S 9W/41	50	4100K	6 ¹ / ₂	10000	600
13	PL-S	GX23	34258-4	PL-S 13W/27	60	2700K, Boxed	7 ⁷ / ₁₆	10000	900
			30667-0	PL-S 13W/27	50	2700K	7 ⁷ / ₁₆	10000	900
			30783-5	PL-S 13W/41	60	4100K	7 ⁷ / ₁₆	10000	900
			36811-8	PL-S 13W/41	50	4100K	7 ⁷ / ₁₆	10000	900

PL Cluster Fluorescent Lamps — 10mm Tube Diameter

High color rendering, high efficacy lamps with integral starter. Use with auto-transformer ballast. (204)

10	PL-C	G24d-1	34944-9	PL-C 10W/27	40	Compact 2700K, Boxed	4 ⁹ / ₁₆	10000	600
13	PL-C	G24d-1	34945-6	PL-C 13W/27	40	Compact 2700K, Boxed	5 ⁷ / ₁₆	10000	900
18	PL-C	G24d-2	34947-2	PL-C 18W/27	40	Compact 2700K, Boxed	6 ¹³ / ₁₆	10000	1250
26	PL-C	G24d-3	34953-0	PL-C 26W/27	40	Compact 2700K, Boxed	7 ⁵ / ₁₆	10000	1800

PL Cluster Fluorescent Lamps — 10mm Tube Diameter — USA Base

Compact alternative to PL-S 13W uses same choke ballast and GX23 socket and features integral starter. High color rendering and high efficacy. (204)

13	PL-C	GX23-2	24546-4	PL-C 13W/27/USA	40	Compact 2700K, Boxed	4 ⁵ / ₈	10000	860
----	------	--------	---------	-----------------	----	----------------------	-------------------------------	-------	-----

PL Cluster Fluorescent Lamps — 15mm Tube Diameter

High color rendering, high efficacy lamps with integral starter. Use choke ballast. (204)

16	PL-C	GX32d-1	20473-5	PL-C 15mm/16W/27	40	Compact 2700K, Boxed	4 ⁹ / ₁₆	10000	900
22	PL-C	GX32d-2	20478-4	PL-C 15mm/22W/27	40	Compact 2700K, Boxed	5 ¹⁵ / ₁₆	10000	1200
28	PL-C	GX32d-3	20479-2	PL-C 15mm/28W/27	40	Compact 2700K, Boxed	6 ¹³ / ₁₆	10000	1600

□ Exclusive Product

† New Since Last Printing

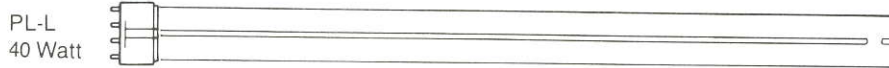
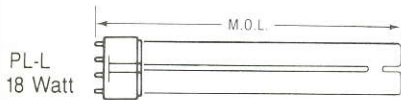
\$\$\$ — Energy Saving Product

X — Orders will be shipped until inventory is depleted; no longer manufactured.

High Color Rendering Lamps

For pricing information refer to PS-101-U

Compact Fluorescent Lamps



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	M.O.L. (In.)	Aver. Life, Hrs. (202)	Approx. Initial(203) Lumens(204)	Design Lumens (208)
PL Long Fluorescent Lamps High color rendering, high efficacy lamps feature 4-pin base for use with preheat, rapid start, electronic and dimming circuits. 15mm tube diameter.										
18	PL-L	2G11	□	34499-4	PL-L 18W/27	25	2700K	8 ¹⁵ / ₁₆	12000	1125
				34500-9	PL-L 18W/30	25	3000K	8 ¹⁵ / ₁₆	12000	1125
				34501-7	PL-L 18W/41	25	4100K	8 ¹⁵ / ₁₆	12000	1125
24	PL-L	2G11	□	34504-1	PL-L 24W/27	25	2700K	12 ¹¹ / ₁₆	12000	1620
				34505-8	PL-L 24W/30	25	3000K	12 ¹¹ / ₁₆	12000	1620
				34508-2	PL-L 24W/41	25	4100K	12 ¹¹ / ₁₆	12000	1620
36	PL-L	2G11	□	34509-0	PL-L 36W/27	25	2700K	16 ⁷ / ₁₆	12000	2610
				34511-6	PL-L 36W/30	25	3000K	16 ⁷ / ₁₆	12000	2610
				34942-3	PL-L 36W/35	25	3500K	16 ⁷ / ₁₆	12000	2610
				34513-2	PL-L 36W/41	25	4100K	16 ⁷ / ₁₆	12000	2610
38	PL-L	2G11	†	30042-6	PL-L 40W/30	25	3000K	22 ¹ / ₂	20000	2835
				30043-4	PL-L 40W/35	25	3500K	22 ¹ / ₂	20000	2835
				30044-2	PL-L 40W/41	25	4100K	22 ¹ / ₂	20000	2835

Ordering Code Cross Reference Guide (Compact Fluorescent Lamps)

Philips	General Electric	Sylvania	Osram
PL-S PL-S 5W/27 PL-S 7W/27 PL-S 7W/41 PL-S 9W/27 PL-S 9W/41 PL-S 13W/27 PL-S 13W/41	Biax F5BX/SPX27 F7BX/SPX27 — F9BX/SPX27 — F13BX/SPX27 —	Twin Tube F5TT27K F7TT27K — F9TT27K — F13TT27K —	Dulux S F5TT27K F7TT27K F7TT41K F9TT27K F9TT41K F13TT27K F13TT41K
PL-C PL-C 10W/27 PL-C 13W/27 PL-C 18W/27 PL-C 26W/27	Double Biax — F13DBXT4/SPX27 F18DBX/T4/SPX27 F26DBX/T4/SPX27	Double Twin Tube — — F18DTT27K F26DTT27K	Dulux D Dulux D 10W/27K Dulux D 13W/27K Dulux D 18W/27K Dulux D 26W/27K
PL-C/USA PL-C 13W/27/USA	Double Biax F13DBX23T4/SPX27	Double Twin Tube F13DTT27K	Double Dulux F13DTT/27K
PL-L PL-L 18W/27 PL-L 18W/30 PL-L 18W/41 PL-L 24W/27 PL-L 24W/30 PL-L 24W/41 PL-L 36W/27 PL-L 36W/30 PL-L 36W/35 PL-L 36W/41 PL-L 40W/30 PL-L 40W/35 PL-L 40W/41	Biax — F18BX/SPX30 F18BX/SPX41 — F27BX/SPX30 F27BX/SPX41 — F39BX/SPX30 F39BX/SPX35 F39BX/SPX41 F40BX/SPX30/RS F40BX/SPX35/RS F40BX/SPX41/RS	— — — — — — — — — — — — —	Dulux L — Dulux L 18W/30K Dulux L 18W/41K — Dulux L 24W/30K Dulux L 24W/41K — Dulux L 36W/30K Dulux L 36W/35K Dulux L 36W/41K Dulux L 40W/30K Dulux L 40W/35K Dulux L 40W/41K

□ Exclusive Product

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

† New Since Last Printing

FLUORESCENT

Fluorescent Lamps



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial(203) Lumens(204)	Design Lumens (208)
Preheat Fluorescent Lamps T-5 Approx 5/8" Diameter (for use in fixtures with starters or in fixtures containing starterless quick starting circuits)										
4	T-5	Min. Bipin	33236-1	F4T5/CW	25	Cool White	6	6000	135	95
			33239-5	F4T5/D	25	Daylight	6	6000	115	80
			35839-0	F4T5/BL	25	Black Light(211)	6	6000		
			35840-8	F4T5/BLB	25	Black Lt. — Integral Filter(211)	6	6000		
6	T-5	Min. Bipin	33241-1	F6T5/CW	25	Cool White	9	7500	295	230
			33242-9	F6T5/D	25	Daylight	9	7500	230	180
			X 33246-0	F6T5/W	25	White	9	7500	295	230
			35841-6	F6T5/BLB	25	Black Lt. — Integral Filter(211)	9	7500		
8	T-5	Min. Bipin	33247-8	F8T5/CW	25	Cool White	12	7500	400	300
			33249-4	F8T5/D	25	Daylight	12	7500	330	265
			X 33251-0	F8T5/W	25	White	12	7500	410	330
			33252-8	F8T5/WW	25	Warm White	12	7500	400	300
			□ 35579-2	F8T5/27U	25	2700K Ultralume	12	7500	450	360
			□ 35580-0	F8T5/41U	25	4100K Ultralume	12	7500	450	360
			35843-2	F8T5/BLB	25	Black Lt. — Integral Filter(211)	12	7500		
13	T-5	Min. Bipin	33253-6	F13T5/CW	25	Cool White	21	7500	820	655
			□ 35581-8	F13T5/27U	25	2700K Ultralume	21	7500	1000	800
			□ 35585-9	F13T5/41U	25	4100K Ultralume	21	7500	1000	800
13.5	T-8	Md. Bipin	25910-1	F13½T8/CW	24	Cool White	12	7500	500	400
			X 25913-5	F13½T8/D	24	Daylight	12	7500	390	310
15	T-8	Md. Bipin	25936-6	F15T8/CW	24	Cool White	18	7500	870	765
			20570-8	F15T8/CW	6	Cool White, Retail Pack	18	7500	870	765
			36436-4	F15T8/CW	96	Cool White, Bulk Pack	18	7500	870	765
			25944-0	F15T8/CWX	24	Deluxe Cool White	18	7500	610	490
			25952-3	F15T8/D	24	Daylight	18	7500	750	660
			37316-7	F15T8/D	6	Daylight	18	7500	750	660
			36996-7	F15T8/D	96	Daylight, Bulk Pack	18	7500	750	660
			† 25853-3	F15T8/SPEC35	24	3500K SPEC	18	7500	940	825
			36427-3	F15T8/SW	6	Soft White, Retail Pack	18	7500	610	490
			25946-5	F15T8/WW	24	Warm White	18	7500	870	740
			37184-9	F15T8/WW	96	Warm White, Bulk Pack	18	7500	870	740
			36425-7	F15T8/AGRO	6	Agro-Lite, Retail Pack	18	7500	410	330
			34286-5	F15T8/C50	24	Colortone 50	18	7500	590	500
			X 37318-3	F15T8/B	6	Blue	18	7500	330	230
			X 37319-1	F15T8/G	6	Green	18	7500	1230	860
			X 37321-7	F15T8/GO	6	Gold	18	7500	650	455
			X 37322-5	F15T8/R	6	Red	18	7500	40	30
			31436-9	F15T8/BL	6	Black Light(211)	18	7500		
			31437-7	F15T8/BLB	6	Black Lt. — Integral Filter(211)	18	7500		

Ultralume Preheat Fluorescent Lamps For the Finest Color Rendering and Efficacy.

15	T-8	Md. Bipin	31515-0	F15T8/30U	24	3000K Ultralume	18	7500	1000	910
			□ 31516-8	F15T8/41U	24	4100K Ultralume	18	7500	1000	910
			□ 31519-2	F15T8/50U	24	5000K Ultralume	18	7500	1000	910

Preheat Fluorescent Lamps

30	T-8	Md. Bipin	26050-5	F30T8/CW	24	Cool White	36	7500	2200	2000
			20589-8	F30T8/CW	6	Cool White, Retail Pack	36	7500	2200	2000

□ Exclusive Product

† New Since Last Printing

\$\$\$ — Energy Saving Product

X — Orders will be shipped until inventory is depleted; no longer manufactured.

High Color Rendering Lamps

For pricing information refer to PS-101-U

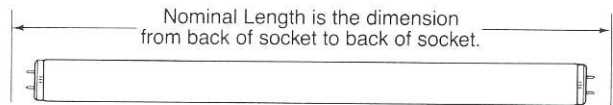
Fluorescent Lamps



T-8 Medium Bipin



T-12 Medium Bipin



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial(203) Lumens(204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	-----------------------------------	---------------------

Preheat Fluorescent Lamps

30	T-8	Md. Bipin		26056-2	F30T8/CWX	24	Deluxe Cool White	36	7500	1580	1250
			X	38899-1	F30T8/CWX	6	Deluxe Cool White	36	7500	1580	1250
				26063-8	F30T8/D	24	Daylight	36	7500	1500	1350
			X	39825-5	F30T8/D	6	Daylight	36	7500	1500	1350
				20039-4	F30T8/N	24	Natural	36	7500	1500	1230
			X	36435-6	F30T8/SW	6	Soft White, Retail Pack	36	7500	1540	1265
			X	26060-4	F30T8/W	24	White	36	7500	2200	2000
				26058-8	F30T8/WW	24	Warm White	36	7500	2260	2050
			†	25807-9	F30T8/C50	24	Colortone 50	36	7500	1600	1300
			X	39650-7	F30T8/GO	6	Gold	36	7500	1470	1180
				30117-6	F30T8/BL	6	Black Light(211)	36	7500		
			X	31438-5	F30T8/BLB	6	Black Lt. — Integral Filter(211)	36	7500		
14	T-12	Md. Bipin		25916-8	F14T12/CW	24	Cool White	15	9000	575	480
				20590-6	F14T12/CW	6	Cool White, Retail Pack	15	9000	575	480
				25926-7	F14T12/D	24	Daylight	15	9000	600	500
			X	36424-0	F14T12/SW	6	Soft White, Retail Pack	15	9000	500	380
				25921-8	F14T12/WW	24	Warm White	15	9000	720	600
15	T-12	Md. Bipin		25971-3	F15T12/CW	24	Cool White	18	9000	800	695
				20591-4	F15T12/CW	6	Cool White, Retail Pack	18	9000	800	695
				25980-4	F15T12/D	24	Daylight	18	9000	650	535
				31431-0	F15T12/D	6	Daylight	18	9000	650	535
			†	25856-6	F15T12/SPEC35	24	3500K SPEC	18	9000	820	710
			X	36429-9	F15T12/SW	6	Soft White, Retail Pack	18	9000	540	420
				25975-4	F15T12/WW	24	Warm White	18	9000	800	670
			X	23057-3	F15T12/AGRO	24	Agro-Lite	18	9000	380	315
20	T-12	Md. Bipin		31334-6	F20T12/CW	30	Cool White	24	9000	1200	1050
				20566-6	F20T12/CW	6	Cool White, Retail Pack	24	9000	1200	1050
				31382-5	F20T12/CWX	30	Deluxe Cool White	24	9000	890	760
				31385-8	F20T12/D	30	Daylight	24	9000	1075	960
				37351-4	F20T12/D	6	Daylight, Retail Pack	24	9000	1075	960
				32000-2	F20T12/N	30	Natural	24	9000	850	755
				31386-6	F20T12/SPEC30	30	3000K SPEC	24	9000	1275	1190
			†	31388-2	F20T12/SPEC35	30	3500K SPEC	24	9000	1275	1190
				36432-3	F20T12/SW	6	Soft White	24	9000	850	755
				31392-4	F20T12/WW	30	Warm White	24	9000	1250	1100
				37348-0	F20T12/WW	6	Warm White, Retail Pack	24	9000	1250	1100
				31395-7	F20T12/WWX	30	Deluxe Warm White	24	9000	850	755
				31396-5	F20T12/C50	30	Colortone 50	24	9000	850	755
				31397-3	F20T12/AGRO	30	Agro-Lite	24	9000	600	500
				36433-1	F20T12/AGRO	6	Agro-Lite, Retail Pack	24	9000	600	500
				37353-0	F20T12/B	6	Blue	24	9000	450	325
				31745-3	F20T12/BB	6	Special Blue (211)	24	9000	225	180
				37354-8	F20T12/G	6	Green	24	9000	1850	1130
				37356-3	F20T12/GO	6	Gold, Bug-A-Way	24	9000	900	650
				37355-5	F20T12/PK	6	Pink	24	9000	450	300
				37357-1	F20T12/R	6	Red	24	9000	80	45
				30118-4	F20T12/BL	6	Black Light(211)	24	9000		
				31435-1	F20T12/BLB	6	Black Light — Integral Filter	24	9000		

□ Exclusive Product

SSS — Energy Saving Product

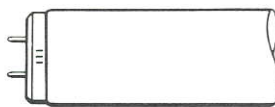
High Color Rendering Lamps

† New Since Last Printing

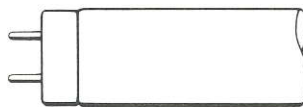
X — Orders will be shipped until inventory is depleted; no longer manufactured.

FLUORESCENT

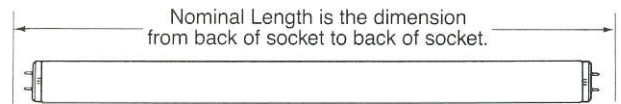
Fluorescent Lamps



T-12 Medium Bipin



T-12 Mogul Bipin



Nominal Length is the dimension from back of socket to back of socket.

Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx. Initial(203) Lumens(204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	----------------------------------	---------------------

Ultralume Preheat Fluorescent Lamps For the Finest Color Rendering and Efficacy.

20	T-12	Md. Bipin	31399-9	F20T12/30U	30	3000K Ultralume	24	9000	1350	1270
			31400-5	F20T12/35U	30	3500K Ultralume	24	9000	1350	1270
			<input type="checkbox"/> 31401-3	F20T12/41U	30	4100K Ultralume	24	9000	1350	1270
			<input type="checkbox"/> 31403-9	F20T12/50U	30	5000K Ultralume	24	9000	1340	1260

Preheat Fluorescent Lamps

25	T-12	Md. Bipin	26030-7	F25T12/CW	24	Cool White	33	7500	1900	1710
			26041-4	F25T12/D	24	Daylight	33	7500	1600	1440
			X 30125-9	F25T12/WW	6	Warm White	33	7500	1950	1775

Econ-o-watt Preheat Fluorescent Lamps Replaces F90T17 lamps. They are physically and electrically interchangeable.

84	T-12	Mog. Bipin	\$\$\$ 25106-6	F90T12/CW/60/EW	24	Cool White	60	9000	6250	5600
			\$\$\$ 28764-9	F90T12/D/60/EW	24	Daylight	60	9000	5400	4850
			X \$\$\$ 28394-5	F90T12/W/60/EW	24	White	60	9000	6400	5600

Econ-o-watt Rapid Start Fluorescent Lamps

25	T-12	Md. Bipin	\$\$\$ 31364-3	F30T12/CW/RS/EW-II	30	Cool White(209)(214)	36	18000	1950	1650
			\$\$\$ 31365-0	F30T12/WW/RS/EW-II	30	Warm White(209)(214)	36	18000	2000	1700

Rapid Start Fluorescent Lamps

30	T-12	Md. Bipin	31332-0	F30T12/CW/RS	30	Cool White	36	18000	2250	1900
			\$\$\$ — CONSIDER THE ECON-O-WATT F30T12/CW/RS/EW-II FOR ENERGY SAVINGS.							
			31366-8	F30T12/CWX/RS	30	Deluxe Cool White	36	18000	1600	1350
			31368-4	F30T12/D/RS	30	Daylight	36	18000	1950	1700
			† 32001-0	F30T12/N/RS	30	Natural	36	18000	1550	1250
			† 31369-2	F30T12/SPEC30/RS	30	3000K SPEC	36	18000	2350	2080
			31371-8	F30T12/SPEC35/RS	30	3500K SPEC	36	18000	2350	2080
			† 31372-6	F30T12/SPEC41/RS	30	4100K SPEC	36	18000	2350	2080
			31374-2	F30T12/WW/RS	30	Warm White	36	18000	2300	1950
			\$\$\$ — CONSIDER THE ECON-O-WATT F30T12/WW/RS/EW-II FOR ENERGY SAVINGS.							
			31375-9	F30T12/WWX/RS	30	Deluxe Warm White	36	18000	1600	1320
			31376-7	F30T12/C50/RS	30	Colortone 50	36	18000	1650	

Ultralume Rapid Start Fluorescent Lamps For the Finest Color Rendering and Efficacy.

30	T-12	Md. Bipin	31377-5	F30T12/30U/RS	30	3000K Ultralume	36	18000	2400	2160
			† 31379-1	F30T12/35U/RS	30	3500K Ultralume	36	18000	2400	2160
			<input type="checkbox"/> 31380-9	F30T12/41U/RS	30	4100K Ultralume	36	18000	2400	2160
			<input type="checkbox"/> 31381-7	F30T12/50U/RS	30	5000K Ultralume	36	18000	2380	2140

☐ Exclusive Product

† New Since Last Printing

\$\$\$ — Energy Saving Product

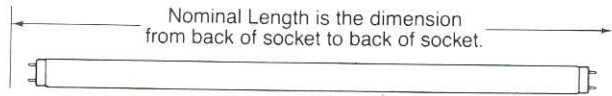
☐ High Color Rendering Lamps

X — Orders will be shipped until inventory is depleted; no longer manufactured.

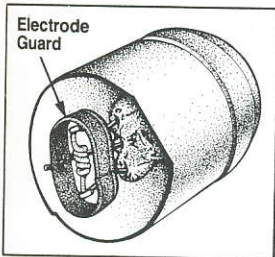
Fluorescent Lamps



T-8 Medium Bipin



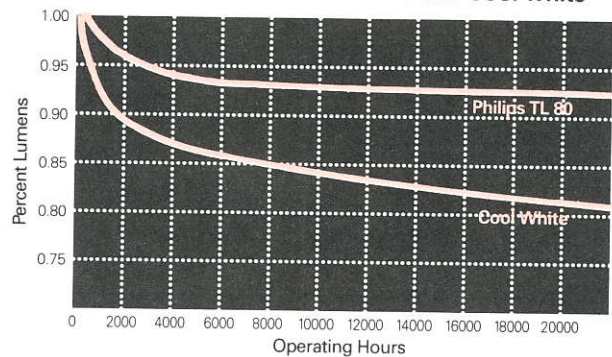
Nominal Lamp Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Pg. Qty. ●		Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial(203) Lumens(204)	Design Lumens (208)
TL 70 Fluorescent Lamps							Combining Energy Savings with Higher Efficacy and Improved Color Rendering. To be operated on T-8 Rapid Start or Electronic Ballasts.				
17	T-8	Md. Bipin	† \$\$\$	32061-4	F17T8/TL730	25	3000K TL70	24	20000	1325	1200
			† \$\$\$	32297-4	F17T8/TL735*	25	3500K TL70	24	20000	1325	1200
			† \$\$\$	32062-2	F17T8/TL741	25	4100K TL70	24	20000	1325	1200
25	T-8	Md. Bipin	† \$\$\$	32050-7	F25T8/TL730	25	3000K TL70	36	20000	2125	1925
			† \$\$\$	32298-2	F25T8/TL735*	25	3500K TL70	36	20000	2125	1925
			† \$\$\$	32051-5	F25T8/TL741	25	4100K TL70	36	20000	2125	1925
32	T-8	Md. Bipin	† \$\$\$	32052-3	F32T8/TL730	25	3000K TL70	48	20000	2850	2600
			† \$\$\$	32054-9	F32T8/TL735	25	3500K TL70	48	20000	2850	2600
			† \$\$\$	32055-6	F32T8/TL741	25	4100K TL70	48	20000	2850	2600
40	T-8	Md. Bipin	† \$\$\$	32057-2	F40T8/TL730	25	3000K TL70	60	20000	3600	3250
			† \$\$\$	32301-4	F40T8/TL735*	25	3500K TL70	60	20000	3600	3250
			† \$\$\$	32058-0	F40T8/TL741	25	4100K TL70	60	20000	3600	3250



TL 80 ELECTRODE GUARD

For maximum lumen maintenance, TL 80 Series lamps feature an "electrode guard" around each electrode to effectively reduce lamp darkening and retain a clean appearance for thousands of hours.

Lumen Maintenance TL 80 Versus Cool White



TL 80 Fluorescent Lamps

Combining Energy Savings and Higher Efficacy with the Finest Color Rendering. To be operated on T-8 Rapid Start or Electronic Ballasts.

Nominal Lamp Watts	Bulb	Base		NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial(203) Lumens(204)	Design Lumens (208)
17	T-8	Md. Bipin	† □ \$\$\$	31980-6	F17T8/TL830	25	3000K TL80	24	20000	1400	1300
			† □ \$\$\$	32304-8	F17T8/TL835*	25	3500K TL80	24	20000	1400	1300
			† □ \$\$\$	31983-0	F17T8/TL841	25	4100K TL80	24	20000	1400	1300
25	T-8	Md. Bipin	† □ \$\$\$	31984-8	F25T8/TL830	25	3000K TL80	36	20000	2250	2100
			† □ \$\$\$	25798-0	F25T8/TL835*	25	3500K TL80	36	20000	2250	2100
			† □ \$\$\$	31989-7	F25T8/TL841	25	4100K TL80	36	20000	2250	2100
32	T-8	Md. Bipin	† □ \$\$\$	31991-3	F32T8/TL830	25	3000K TL80	48	20000	3050	2850
			† □ \$\$\$	31993-9	F32T8/TL835	25	3500K TL80	48	20000	3050	2850
			† □ \$\$\$	31994-7	F32T8/TL841	25	4100K TL80	48	20000	3050	2850
40	T-8	Md. Bipin	† □ \$\$\$	31996-2	F40T8/TL830	25	3000K TL80	60	20000	3800	3550
			† □ \$\$\$	25799-8	F40T8/TL835*	25	3500K TL80	60	20000	3800	3550
			† □ \$\$\$	31998-8	F40T8/TL841	25	4100K TL80	60	20000	3800	3550

□ Exclusive Product

† New Since Last Printing

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

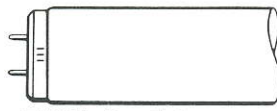
X — Orders will be shipped until inventory is depleted; no longer manufactured.

* Available 2nd Quarter, 1991.

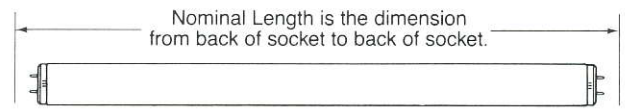
For pricing information call your Philips Sales Representative

FLUORESCENT

Fluorescent Lamps



T-12 Medium Bipin



Nominal Length is the dimension from back of socket to back of socket.

Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial(203) Lumens(204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	-----------------------------------	---------------------

Econ-o-watt Rapid Start Fluorescent Lamps

34	T-12	Md. Bipin	\$\$\$	28484-4	F40CW/RS/EW-II	30	Cool White(214)	48	20000 +	2650	2300
			\$\$\$	35786-3	F40CW/RS/EW-II	600	Cool White, Palletized(214)	48	20000 +	2650	2300
			\$\$\$	28511-4	F40CW/RS/EW-II	30	Deluxe Cool White(214)	48	20000 +	1925	1580
			\$\$\$	34736-9	F40CW/RS/EW-II	6	Cool White(214)	48	20000 +	1925	1580
			\$\$\$	28545-2	F40D/RS/EW-II	30	Daylight(214)	48	20000 +	2350	2050
			\$\$\$	28534-6	F40LW/RS/EW-II	30	Lite White(214)	48	20000 +	2750	2400
			\$\$\$	35790-5	F40LW/RS/EW-II	600	Lite White, Palletized(214)	48	20000 +	2750	2400
			\$\$\$	31553-1	F40SPEC30/RS/EW-II	30	3000K SPEC(214)	48	20000 +	2800	2520
			\$\$\$	37992-5	F40SPEC35/RS/EW-II	30	3500K SPEC(214)	48	20000 +	2800	2520
			\$\$\$	31546-5	F40SPEC41/RS/EW-II	30	4100K SPEC(214)	48	20000 +	2800	2520
			\$\$\$	28547-8	F40WW/RS/EW-II	30	Warm White(214)	48	20000 +	2700	2350
			\$\$\$	36441-4	F40WW/RS/EW-II/EM	6	Warm White, Retail Pack(214)	48	20000 +	2700	2350
			\$\$\$	35791-3	F40WW/RS/EW-II	600	Warm White, Palletized(214)	48	20000 +	2700	2350
			\$\$\$	28527-0	F40WWX/RS/EW-II	30	Deluxe Warm White(214)	48	20000 +	1925	1580

Ultralume Econ-o-watt Rapid Start Lamps

Combining the Finest Color Rendering with Energy Savings.

34	T-12	Md. Bipin	\$\$\$	31532-5	F40/30U/RS/EW-II	30	3000K Ultralume(214)	48	20000 +	2900	2600
			\$\$\$	38004-8	F40/35U/RS/EW-II	30	3500K Ultralume(214)	48	20000 +	2900	2600
			\$\$\$	31533-3	F40/41U/RS/EW-II	30	4100K Ultralume(214)	48	20000 +	2900	2600
			\$\$\$	31535-8	F40/50U/RS/EW-II	30	5000K Ultralume(214)	48	20000 +	2880	2580

Econ-o-watt Preheat Fluorescent Lamps

34	T-12	Md. Bipin	\$\$\$	28477-8	F40CW/EW-PH	30	Cool White(214)(215)	48	15000 +	2700	2350
			X \$\$\$	28476-0	F40WW/EW-PH	30	Warm White(214)(215)	48	15000 +	2750	2400

Preheat — Rapid Start Fluorescent Lamps

40	T-12	Md. Bipin	30187-9	F40CW	30	Cool White	48	20000 +	3050	2650	
			\$\$\$ — CONSIDER THE ECON-O-WATT F40CW/RS/EW-II 30 PK. FOR ENERGY SAVINGS.								
			26180-0	F40CW	6	Cool White	48	20000 +	3050	2650	
			\$\$\$ — CONSIDER THE ECON-O-WATT F40CW/RS/EW-II 6 PK. FOR ENERGY SAVINGS.								
			20568-2	F40CW	6	Cool White, Retail Pack	48	20000 +	3050	2650	
			35776-4	F40CW	600	Cool White, Palletized	48	20000 +	3050	2650	
			\$\$\$ — CONSIDER THE ECON-O-WATT F40CW/RS/EW-II 600 PK. FOR ENERGY SAVINGS.								
			30193-7	F40CWX	30	Deluxe Cool White	48	20000 +	2200	1800	
			\$\$\$ — CONSIDER THE ECON-O-WATT F40CWX/RS/EW-II FOR ENERGY SAVINGS.								
			38900-7	F40CWX	6	Deluxe Cool White	48	20000 +	2200	1800	
			30194-5	F40D	30	Daylight	48	20000 +	2600	2250	
			\$\$\$ — CONSIDER THE ECON-O-WATT F40D/RS/EW-II FOR ENERGY SAVINGS.								
			26198-2	F40D	6	Daylight	48	20000 +	2600	2250	
			†	31169-6	F40HI ACCENT	30	HI ACCENT	48	20000 +	1500	1350
			30198-6	F40N	30	Natural	48	20000 +	2100	1870	
			37924-8	F40N	6	Natural	48	20000 +	2100	1870	
			†	27251-8	F40SPEC30	30	3000K SPEC	48	20000 +	3200	2880
			\$\$\$ — CONSIDER THE ECON-O-WATT F40 SPEC30/RS/EW-II FOR ENERGY SAVINGS.								
			22116-8	F40SPEC35	30	3500K SPEC	48	20000 +	3200	2880	
			\$\$\$ — CONSIDER THE ECON-O-WATT F40 SPEC35/RS/EW-II FOR ENERGY SAVINGS.								
			†	27258-3	F40SPEC41	30	4100K SPEC	48	20000 +	3200	2880
			\$\$\$ — CONSIDER THE ECON-O-WATT F40 SPEC41/RS/EW-II FOR ENERGY SAVINGS.								
			36440-6	F40SW	6	Soft White, Retail Pack	48	20000 +	2150	1800	
			X	30197-8	F40W	30	White	48	20000 +	3050	2650

□ Exclusive Product

† New Since Last Printing

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

X — Orders will be shipped until inventory is depleted; no longer manufactured.

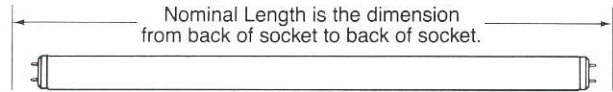
Fluorescent Lamps



T-12 Medium Bipin



T-10 Medium Bipin



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial (203) Lumens (204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	-------------------------------------	---------------------

Preheat — Rapid Start Fluorescent Lamps

40	T-12	Md. Bipin	30199-4	F40WW	30	Warm White	48	20000 +	3100	2700
			\$\$\$ — CONSIDER THE ECON-O-WATT F40WW/RS/EW-II 30 PK. FOR ENERGY SAVINGS.							
			20604-5	F40WW	6	Warm White	48	20000 +	3100	2700
			\$\$\$ — CONSIDER THE ECON-O-WATT F40WW/RS/EW-II 6 PK. FOR ENERGY SAVINGS.							
			35785-5	F40WW	600	Warm White, Palletized	48	20000 +	3100	2700
			\$\$\$ — CONSIDER THE ECON-O-WATT F40WW/RS/EW-II 600 PK. FOR ENERGY SAVINGS.							
			30201-8	F40WWX	30	Deluxe Warm White	48	20000 +	2200	1805
			\$\$\$ — CONSIDER THE ECON-O-WATT F40WWX/RS/EW-II FOR ENERGY SAVINGS.							
			26888-8	F40WWX	6	Deluxe Warm White	48	20000 +	2200	1805
			30203-4	F40C50	30	Colortone 50	48	20000 +	2200	1915
			33464-9	F40C75	30	Colortone 75	48	20000 +	2000	1720
			30204-2	F40CG	30	Cool Green	48	20000 +	2850	2350
			30205-9	F40AGRO	30	Agro-Lite	48	20000 +	1600	1360
			20597-1	F40AGRO	6	Agro-Lite, Retail Pack	48	20000 +	1600	1360
			39631-7	F40B	6	Blue	48	20000 +	1200	720
			20189-7	F40BB	6	Special Blue (211)	48	20000 +	550	385
			39632-5	F40G	6	Green	48	20000 +	4400	2200
			39635-8	F40GO	6	Gold, Bug-A-Way	48	20000 +	2400	1765
			† 24360-0	F40GO	30	Gold, Bug-A-Way	48	20000 +	2400	1765
			39633-3	F40PK	6	Pink	48	20000 +	1160	695
			39634-1	F40R	6	Red	48	20000 +	195	60
			31439-3	F40BL	6	Black Light (211)	48	20000 +		
31440-1	F40BLB	6	Black Lt. — Integral Filter(211)	48	20000 +					

Ultralume Preheat — Rapid Start Fluorescent Lamps For the Finest Color Rendering and Efficacy.

40	T-12	Md. Bipin	31537-4	F40/30U	30	3000K Ultralume	48	20000 +	3300	2970
			\$\$\$ — CONSIDER THE ECON-O-WATT F40/30U/RS/EW-II FOR ENERGY SAVINGS.							
			38003-0	F40/35U	30	3500K Ultralume	48	20000 +	3300	2970
			\$\$\$ — CONSIDER THE ECON-O-WATT F40/35U/RS/EW-II FOR ENERGY SAVINGS.							
			31538-2	F40/41U	30	4100K Ultralume	48	20000 +	3300	2970
			\$\$\$ — CONSIDER THE ECON-O-WATT F40/41U/RS/EW-II FOR ENERGY SAVINGS.							
			□ 31539-0	F40/50U	30	5000K Ultralume	48	20000 +	3280	2950
			\$\$\$ — CONSIDER THE ECON-O-WATT F40/50U/RS/EW-II FOR ENERGY SAVINGS.							

Advantage X Preheat — Rapid Start Extended Service Fluorescent Lamps

Combining 21% more light output, 20% longer life and high color rendering.

40	T-10	Md. Bipin	□ 25119-9	F40Ax30	30	3000K Advantage X	48	24000 + (205)	3700	3300
			□ 24992-0	F40Ax35	30	3500K Advantage X	48	24000 + (205)	3700	3300
			□ 24996-1	F40Ax41	30	4100K Advantage X	48	24000 + (205)	3700	3300
			†□ 30133-3	F40Ax50	30	5000K Advantage X	48	24000 + (205)	3700	3300

Preheat — Rapid Start Extended Service Fluorescent Lamps

40	T-10	Md. Bipin	□ 25009-2	F40T10/CW/99	30	Cool White, Ext. Serv.	48	24000 + (205)	3100	2650
			□ 25059-7	F40T10/D/99	30	Daylight, Ext. Serv.	48	24000 + (205)	2700	2300
			□ 25060-5	F40T10/LW-SB/99	30	Lite White, Super Bright	48	24000 + (205)	3300	2850
			X□ 25066-2	F40T10/W/99	30	White, Ext. Serv.	48	24000 + (205)	3100	2650
			□ 25070-4	F40T10/WW/99	30	Warm White, Ext. Serv.	48	24000 + (205)	3150	2700

Instant Start Fluorescent Lamps

40	T-12	Md. Bipin	30239-2	F40T12/CW/IS	30	Cool White(206)	48	7500	2950	2650
			30238-0	F40T12/D/IS	30	Daylight(206)	48	7500	2400	2150

□ Exclusive Product

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

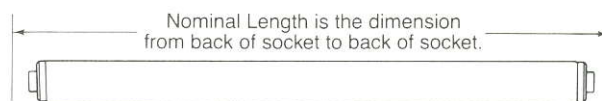
† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Fluorescent Lamps



T-12 Recessed Double Contact



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx. Initial(203) Lumens(204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	----------------------------------	---------------------

High Output Fluorescent Lamps (800 ma)

35	T-12	Recessed D.C.	26279-0	F24T12/CW/HO	24	Cool White(207)	24	9000	1650	1390
			26274-1	F24T12/D/HO	24	Daylight(207)	24	9000	1400	1160
40	T-12	Recessed D.C.	22646-4	F30T12/CW/HO	24	Cool White(207)	30	9000	2290	1900
			34334-3	F30T12/D/HO	24	Daylight(207)	30	9000	1920	1590
50	T-12	Recessed D.C.	26286-5	F36T12/CW/HO	24	Cool White(207)	36	9000	2800	2450
			26290-7	F36T12/D/HO	24	Daylight(207)	36	9000	2500	2150
55	T-12	Recessed D.C.	26304-6	F42T12/CW/HO	24	Cool White(207)	42	9000	3400	2950
			26306-1	F42T12/D/HO	24	Daylight(207)	42	9000	3000	2610
			X 27114-8	F42T12/C50/HO	24	Colortone 50(207)	42	9000	2240	1930
60	T-12	Recessed D.C.	22242-2	F48T12/CW/HO	30	Cool White(207)	48	12000	4050	3500
			22380-0	F48T12/CW/HO	10	Cool White(207)	48	12000	4050	3500
			X 35613-9	FJ48T12/CW/HO	12	Cool White, T-14½ Jacket(207)	48	12000	4050†	3500
			22384-2	F48T12/CWX/HO	10	Deluxe Cool White(207)	48	12000	2900	2400
			22272-9	F48T12/D/HO	30	Daylight(207)	48	12000	3400	3000
			27120-5	F48T12/C50/HO	30	Colortone 50(207)	48	12000	2850	2450
			† 30743-9	F48T12/SPEC30/HO	30	3000K SPEC	48	12000	4250	3830
			† 26706-2	F48T12/SPEC35/HO	30	3500K SPEC	48	12000	4250	3830
			† 30754-6	F48T12/SPEC41/HO	30	4100K SPEC	48	12000	4250	3830
			X 22280-2	F48T12/W/HO	30	White(207)	48	12000	4050	3500
			22281-0	F48T12/WW/HO	30	Warm White(207)	48	12000	4100	3550
			22283-6	F48T12/N/HO	30	Natural(207)	48	12000	2700	2350

Ultralume High Output Fluorescent Lamps

For the Finest Color Rendering and Efficacy.

60	T-12	Recessed D.C.	22284-4	F48T12/41U/HO	30	4100K Ultralume	48	12000	4400	4000
----	------	---------------	---------	---------------	----	-----------------	----	-------	------	------

High Output Fluorescent Lamps (800 ma)

75	T-12	Recessed D.C.	22285-1	F60T12/CW/HO	30	Cool White(207)	60	12000	5150	4500
			† 28992-6	F60T12/CW/HO	10	Cool White	60	12000	5150	4500
			22293-5	F60T12/D/HO	30	Daylight(207)	60	12000	4650	4050
			X 22301-6	F60T12/WW/HO	30	Warm White(207)	60	12000	5250	4600
80	T-12	Recessed D.C.	22322-2	F64T12/CW/HO	30	Cool White(207)	64	12000	5600	4850
			22323-0	F64T12/D/HO	30	Daylight(207)	64	12000	4900	4250
			X 27415-9	F64T12/C50/HO	30	Colortone 50(207)	64	12000	3850	3300
85	T-12	Recessed D.C.	21199-5	F72T12/CW/HO	15	Cool White(207)	72	12000	6350	5500
			35615-4	FJ72T12/CW/HO	8	Cool White, T-14½ Jacket(207)	72	12000	6350†	5500
			21200-1	F72T12/D/HO	15	Daylight(207)	72	12000	5600	4850
			† 27273-2	F72T12/SPEC30/HO	15	3000K SPEC	72	12000	6650	6000
			† 30001-2	F72T12/SPEC35/HO	15	3500K SPEC	72	12000	6650	6000
			† 30756-1	F72T12/SPEC41/HO	15	4100K SPEC	72	12000	6650	6000
			X 27148-6	F72T12/C50/HO	15	Colortone 50(207)	72	12000	4400	3800
			22385-9	F72T12/WW/HO	10	Warm White(207)	72	12000	6500	5700
			X 22388-3	F72T12/GO/HO	10	Gold(207)	72	12000	4400	3700
			21204-3	F72T12/N/HO	15	Natural(207)	72	12000	4200	3610

Ultralume High Output Fluorescent Lamps

For the Finest Color Rendering and Efficacy.

85	T-12	Rec. D.C.	† 27305-2	F72T12/30U/HO	15	3000K Ultralume	72	12000	6800	6200
			† 26723-7	F72T12/35U/HO	15	3500K Ultralume	72	12000	6800	6200
			21904-8	F72T12/41U/HO	15	4100K Ultralume	72	12000	6800	6200

□ Exclusive Product

SSS — Energy Saving Product

High Color Rendering Lamps

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

‡ Peak Values

FLUORESCENT

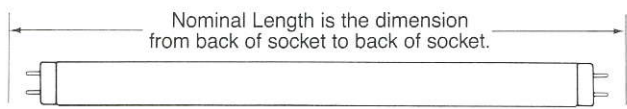
Fluorescent Lamps



T-12 Recessed Double Contact



T-12 Mogul Bipin



Nominal Length is the dimension from back of socket to back of socket.

Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial (203) Lumens (204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	-------------------------------------	---------------------

High Output Fluorescent Lamps (800 ma)

95	T-12	Recessed D.C.	21205-0	F84T12/CW/HO	15	Cool White(207)	84	12000	7800	6800
			21206-8	F84T12/D/HO	15	Daylight(207)	84	12000	6900	6000
			X 27426-6	F84T12/C50/HO	15	Colortone 50(207)	84	12000	5180	4450

Econ-o-watt High Output Fluorescent Lamps (800 ma)

95	T-12	Rec. D.C.	\$\$\$ 34214-7	F96T12/CW/HO/EW	15	Cool White(207)(214)	96	12000	8000	6950
			\$\$\$ 34215-4	F96T12/D/HO/EW	15	Daylight(207)(214)	96	12000	6750	5900
			\$\$\$ 34216-2	F96T12/LW/HO/EW	15	Lite White(207)(214)	96	12000	8300	7200
			\$\$\$ 34861-5	F96T12/SPEC30/HO/EW	15	3000K SPEC(207)(214)	96	12000	8350	7500
			\$\$\$ 22117-6	F96T12/SPEC35/HO/EW	15	3500K SPEC(207)(214)	96	12000	8350	7500
			\$\$\$ 34848-2	F96T12/SPEC41/HO/EW	15	4100K SPEC(207)(214)	96	12000	8350	7500
			X \$\$\$ 34218-8	F96T12/W/HO/EW	15	White(207)(214)	96	12000	8000	6950
			\$\$\$ 34219-6	F96T12/WW/HO/EW	15	Warm White(207)(214)	96	12000	8100	7050

Ultralume Econ-o-watt High Output Fluorescent Lamps (800 ma)

For the Finest Color Rendering and Efficacy.

95	T-12	Rec. D.C.	† \$\$\$ 27319-3	F96T12/30U/HO/EW	15	3000K Ultralume(207)(214)	96	12000	8600	7750
			□ \$\$\$ 34862-3	F96T12/41U/HO/EW	15	4100K Ultralume(207)(214)	96	12000	8600	7750

High Output Fluorescent Lamps (800 ma)

100	T-12	Mog. Bipin	X	26227-9	F100T12/CW/HO	12	Cool White, Street Ltg.	72	7500	6550	5700
110	T-12	Rec. D.C.		34220-4	F96T12/CW/HO	15	Cool White(207)	96	12000	8800	7650
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/CW/HO/EW FOR ENERGY SAVINGS.								
			35623-8	FJ96T12/CW/HO	8	Cool White, T-14½ Jacket(207)	96	12000	8800‡	7650	
			34222-0	F96T12/CWX/HO	15	Deluxe Cool White(207)	96	12000	6600	5500	
			34223-8	F96T12/D/HO	15	Daylight(207)	96	12000	7800	6800	
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/D/HO/EW FOR ENERGY SAVINGS.								
			34230-3	F96T12/N/HO	15	Natural(207)	96	12000	6250	5400	
			†	27276-5	F96T12/SPEC30/HO	15	3000K SPEC(207)	96	12000	9200	8300
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/SPEC30/HO/EW FOR ENERGY SAVINGS.								
			†	27681-6	F96T12/SPEC35/HO	15	3500K SPEC(207)	96	12000	9200	8300
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/SPEC35/HO/EW FOR ENERGY SAVINGS.								
			†	27279-9	F96T12/SPEC41/HO	15	4100K SPEC(207)	96	12000	9200	8300
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/SPEC41/HO/EW FOR ENERGY SAVINGS.								
			X	34227-9	F96T12/W/HO	15	White(207)	96	12000	8800	7650
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/W/HO/EW FOR ENERGY SAVINGS.								
			34228-7	F96T12/WW/HO	15	Warm White(207)	96	12000	8900	7750	
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/WW/HO/EW FOR ENERGY SAVINGS.								
			34247-7	F96T12/GO/HO	10	Gold(207)	96	12000	6200	5200	
			34226-1	F96T12/C50/HO	15	Colortone 50(207)	96	12000	6300	5400	

Ultralume High Output Lamps (800 ma)

For the Finest Color Rendering and Efficacy.

110	T-12	Rec. D.C.	34863-1	F96T12/30U/HO	15	3000K Ultralume(207)	96	12000	9400	8450
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/30U/HO/EW FOR ENERGY SAVINGS.							
			† 26710-4	F96T12/35U/HO	15	3500K Ultralume(207)	96	12000	9400	8450
			□ 34864-9	F96T12/41U/HO	15	4100K Ultralume(207)	96	12000	9400	8450
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/41U/HO/EW FOR ENERGY SAVINGS.							
			□ 34865-6	F96T12/50U/HO	15	5000K Ultralume(207)	96	12000	9350	8350

Very-Hi Output Fluorescent Lamps (1500 ma)

110	T-12	Rec. D.C.	22332-1	F48T12CW/VHO	30	Cool White	48	12000	7050	4950
			† 28995-9	F48T12/CW/VHO	10	Cool White	48	12000	7050	4950
			25324-5	F48T12/WW/VHO	10	Warm White	48	12000	6850	4800

□ Exclusive Product

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

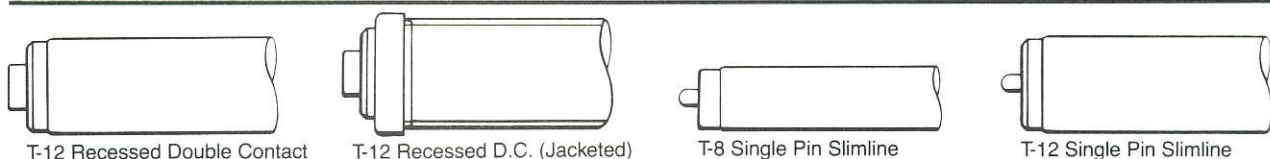
† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

‡ Peak Values

FLUORESCENT

Fluorescent Lamps



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx. Initial(203) Lumens(204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	----------------------------------	---------------------

Very-Hi Output Fluorescent Lamps (1500 ma)

135	T-12	Rec. D.C.	22335-4	F60T12/CW/VHO	30	Cool White	60	12000	9000	6300
160	T-12	Rec. D.C.	21210-0	F72T12/CW/VHO	15	Cool White	72	12000	11250	7850
			22389-1	F72T12/D/VHO	10	Daylight	72	12000	9100	6400
			X 22392-5	F72T12/WW/VHO	10	Warm White	72	12000	11450	8050

Econ-o-watt Very-Hi Output Fluorescent Lamps (1500 ma)

185	T-12	Rec. D.C.	\$\$\$ 34232-9	F96T12/CW/VHO/EW	15	Cool White(214)	96	12000	14200	9900
			\$\$\$ 34233-7	F96T12/LW/VHO/EW	15	Lite White(214)	96	12000	14400	10100

Very-Hi Output Fluorescent Lamps (1500 ma)

215	T-12	Rec. D.C.	34234-5	F96T12/CW/VHO	15	Cool White	96	12000	15200	10700
			\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/CW/VHO/EW FOR ENERGY SAVINGS.							
			34236-0	F96T12/CWX/VHO	15	Deluxe Cool White	96	12000	11000	7350
			34237-8	F96T12/D/VHO	15	Daylight	96	12000	12505	8750
			X 34224-6	F96T12/W/VHO	10	White	96	12000	15200	10700
			34242-8	F96T12/WW/VHO	15	Warm White	96	12000	15700	11200

Outdoor (1500 ma) T-12 Fluorescent Lamps

116	T-12	Recessed D.C.	22340-4	F48T12/CW/VHO-0	30	Cool White	48	10000	7000†	4900
140	T-12	Recessed D.C.	22345-3	F60T12/CW/VHO-0	30	Cool White	60	10000	8900†	6250
162	T-12	Recessed D.C.	21211-8	F72T12/CW/VHO-0	15	Cool White	72	10000	11100†	7750
212	T-12	Recessed D.C.	34243-6	F96T12/CW/VHO-0	15	Cool White	96	10000	14900†	10400

Low Temperature Lighting Jacketed Lamps (1500 ma) T14½ (1⅓¼" Dia. Jacket)

116	T-12	Recessed D.C.	28409-1	FJ48T12/CW/VHO-0	12	Cool White	48	10000	7000†	4900
140	T-12	Recessed D.C.	26471-3	FJ60T12/CW/VHO-0	12	Cool White	60	10000	8900†	6250
162	T-12	Recessed D.C.	28410-9	FJ72T12/CW/VHO-0	8	Cool White	72	10000	11100†	7750
212	T-12	Recessed D.C.	28397-8	FJ96T12/CW/VHO-0	8	Cool White	96	10000	14900†	10400

Econ-o-watt Slimline Fluorescent Lamps (Instant Start)

F42T8/EW lamps replace F42T6. F64T8/EW lamps replace F64T6. These energy saving lamps are physically and electrically interchangeable.

23	T-8	Single Pin	\$\$\$ 34355-8	F42T8/CW/EW	24	Cool White(210)(214)	42	7500	1800	1620
			X \$\$\$ 34359-0	F42T8/D/EW	24	Daylight(210)(214)	42	7500	1560	1400
			\$\$\$ 34362-4	F42T8/WW/EW	24	Warm White(210)(214)	42	7500	1800	1620
35	T-8	Single Pin	\$\$\$ 34364-0	F64T8/CW/EW	24	Cool White(210)(214)	64	7500	2850	2570
			\$\$\$ 34366-5	F64T8/WW/EW	24	Warm White(210)(214)	64	7500	2850	2570

Slimline Fluorescent Lamps (Instant Start)

37	T-8	Single Pin	26355-8	F72T8/CW	24	Cool White(210)	72	7500	2850	2550
			39829-7	F72T8/WW	6	Warm White(210)	72	7500	2850	2550
50	T-8	Single Pin	26397-0	F96T8/CW	24	Cool White(210)	96	7500	4100	3700

T-12 Approx. 1½" Diameter

20	T-12	Single Pin	26277-4	F24T12/CW	24	Cool White	24	7500	1090	960
			26281-6	F24T12/D	24	Daylight	24	7500	940	830
30	T-12	Single Pin	26284-0	F36T12/CW	24	Cool White	36	7500	1850	1630
			X 26289-9	F36T12/D	24	Daylight	36	7500	1600	1410
35	T-12	Single Pin	26303-8	F42T12/CW	24	Cool White	42	7500	2200	1920
			X 26305-3	F42T12/D	24	Daylight	42	7500	1880	1660

Ultralume Slimline Fluorescent Lamps For the Finest Color Rendering and Efficacy.

30	T-12	Single Pin	20102-0	F36T12/30U	24	3000K Ultralume	36	7500	2050	1880
-----------	------	------------	---------	------------	----	-----------------	----	------	------	------

□ Exclusive Product

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

† New Since Last Printing

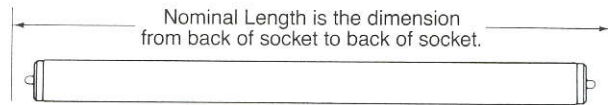
X — Orders will be shipped until inventory is depleted; no longer manufactured.

‡ Peak Values

Fluorescent Lamps



T-12 Single Pin Slimline



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial(203) Lumens(204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	-----------------------------------	---------------------

Econ-o-watt Slimline Fluorescent Lamps (Instant Start)

30	T-12	Single Pin	\$\$\$	22348-7	F48T12/CW/EW	30	Cool White(214)	48	9000	2400	2150
			\$\$\$	22352-9	F48T12/LW/EW	30	Lite White(214)	48	9000	2250	2300
			† \$\$\$	30744-7	F48T12/SPEC30/EW	30	3000K SPEC (214)	48	9000	2575	2350
			† \$\$\$	30747-0	F48T12/SPEC35/EW	30	3500K SPEC (214)	48	9000	2575	2350
			† \$\$\$	30780-1	F48T12/SPEC41/EW	30	4100K SPEC (214)	48	9000	2575	2350

Slimline Fluorescent Lamps (Instant Start)

38.5	T-12	Single Pin	X	22353-7	F48T12/CW	30	Cool White	48	9000	2900	2600
				\$\$\$ — CONSIDER THE ECON-O-WATT F48T12/CW/EW 30 PK. FOR ENERGY SAVINGS.							
				22396-6	F48T12/CW	10	Cool White	48	9000	2900	2600
				\$\$\$ — CONSIDER THE ECON-O-WATT F48T12/CW/EW 10 PK. FOR ENERGY SAVINGS.							
				22354-5	F48T12/CWX	30	Deluxe Cool White	48	9000	2100	1790
				22356-0	F48T12/D	30	Daylight	48	9000	2500	2200
				22401-4	F48T12/GO	10	Gold	48	9000	2350	2000
				22405-5	F48T12/N	10	Natural	48	9000	1900	1690
				26703-9	F48T12/SPEC35	30	3500K SPEC	48	9000	3000	2800
				\$\$\$ — CONSIDER THE ECON-O-WATT F48T12/SPEC35/EW FOR ENERGY SAVINGS.							
22359-4	F48T12/WW	30	Warm White	48	9000	2950	2650				

Ultralume Slimline Fluorescent Lamps (Instant Start) For the Finest Color Rendering and Efficacy.

38.5	T-12	Single Pin		22377-6	F48T12/30U	30	3000K Ultralume	48	9000	3150	2950
			†	22379-2	F48T12/41U	30	4100K Ultralume	48	9000	3150	2950

Slimline Fluorescent Lamps (Instant Start)

50	T-12	Single Pin		22362-8	F60T12/CW	30	Cool White	60	12000	3450	3050
				22406-3	F60T12/CW	10	Cool White	60	12000	3450	3050
				22365-1	F60T12/D	30	Daylight	60	12000	3150	2850
51	T-12	Single Pin		22369-3	F64T12/CW	30	Cool White	64	12000	3750	3300
				22370-1	F64T12/D	30	Daylight	64	12000	3200	2800
56	T-12	Single Pin		21213-4	F72T12/CW	15	Cool White	72	12000	4450	3900
				22407-1	F72T12/CW	10	Cool White	72	12000	4450	3900
				21214-2	F72T12/CWX	15	Deluxe Cool White	72	12000	3100	2700
				21218-3	F72T12/D	15	Daylight	72	12000	3800	3350
			†	31565-5	F72T12/HI ACCENT	15	HI ACCENT	72	12000	2200	2050
			X	22408-9	F72T12/N	10	Natural	72	12000	3000	2650
			†	27261-7	F72T12/SPEC30	15	3000K SPEC	72	12000	4700	4400
			†	30753-8	F72T12/SPEC35	15	3500K SPEC	72	12000	4700	4400
				21227-4	F72T12/WW	15	Warm White	72	12000	4550	4000
				22416-2	F72T12/GO	10	Gold	72	12000	3800	3250

Ultralume Slimline Fluorescent Lamps For the Finest Color Rendering and Efficacy.

56	T-12	Single Pin		21230-8	F72T12/30U	15	3000K Ultralume	72	12000	4850	4550
			†	26749-2	F72T12/35U	15	3500K Ultralume	72	12000	4850	4550
				21235-7	F72T12/41U	15	4100K Ultralume	72	12000	4850	4550
			†	32015-0	F72T12/50U	15	5000K Ultralume	72	12000	4800	4500

Slimline Fluorescent Lamps (Instant Start)

65	T-12	Single Pin		21236-5	F84T12/CW	15	Cool White	84	12000	5250	4600
			X	21237-3	F84T12/D	15	Daylight	84	12000	4400	3900

□ Exclusive Product

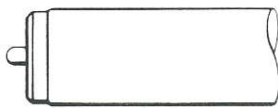
\$\$\$ — Energy Saving Product

High Color Rendering Lamps

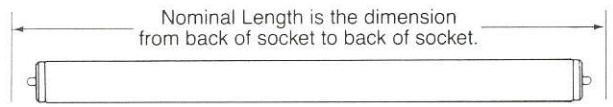
† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Fluorescent Lamps



T-12 Single Pin Slimline



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial(203) Lumens(204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	-----------------------------------	---------------------

Econ-o-watt Slimline Fluorescent Lamps (Instant Start)

60	T-12	Single Pin	\$\$\$	34189-1	F96T12/CW/EW	15	Cool White(214)	96	12000	5400	4750
			\$\$\$	34191-7	F96T12/CWX/EW	15	Deluxe Cool White(214)	96	12000	4000	3500
			\$\$\$	34192-5	F96T12/D/EW	15	Daylight(214)	96	12000	4850	4250
			\$\$\$	34193-3	F96T12/LW/EW	15	Lite White(214)	96	12000	5600	4950
			\$\$\$	34846-6	F96T12/SPEC30/EW	15	3000K SPEC(214)	96	12000	5750	5400
			\$\$\$	37998-2	F96T12/SPEC35/EW	15	3500K SPEC(214)	96	12000	5750	5400
			\$\$\$	34844-1	F96T12/SPEC41/EW	15	4100K SPEC(214)	96	12000	5750	5400
			X \$\$\$	34194-1	F96T12/W/EW	15	White(214)	96	12000	5400	4750
			\$\$\$	34195-8	F96T12/WW/EW	15	Warm White(214)	96	12000	5500	4850
			\$\$\$	34198-2	F96T12/C50/EW	15	Colortone 50(214)	96	12000	4100	3700

Ultralume Econ-o-watt Slimline Fluorescent Lamp (Instant Start)

Combining the Finest Color Fidelity with Energy Savings.

60	T-12	Single Pin	\$\$\$	34205-5	F96T12/30U/EW	15	3000K Ultralume(214)	96	12000	5900	5550
			\$\$\$	22175-4	F96T12/35U/EW	15	3500K Ultralume(214)	96	12000	5900	5550
			\$\$\$	34207-1	F96T12/41U/EW	15	4100K Ultralume(214)	96	12000	5900	5550
			□ \$\$\$	34209-7	F96T12/50U/EW	15	5000K Ultralume(214)	96	12000	5850	5500

Slimline Fluorescent Lamps (Instant Start)

75	T-12 Single Pin		34158-6	F96T12/CW	15	Cool White	96	12000	6100	5350
		\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/CW/EW FOR ENERGY SAVINGS.								
		34172-7	F96T12/CW	10	Cool White	96	12000	6100	5350	
		34161-0	F96T12/CWX	15	Deluxe Cool White	96	12000	4500	3950	
		\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/CWX/EW FOR ENERGY SAVINGS.								
		34173-5	F96T12/CWX	10	Deluxe Cool White	96	12000	4500	3950	
		34162-8	F96T12/D	15	Daylight	96	12000	5200	4550	
		\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/D/EW FOR ENERGY SAVINGS.								
		34174-3	F96T12/D	10	Daylight	96	12000	5200	4550	
		34165-1	F96T12/N	15	Natural	96	12000	4300	3850	
		X	34176-8	F96T12/N	10	Natural	96	12000	4300	3850
		†	27262-5	F96T12/SPEC30	15	3000K SPEC	96	12000	6300	5800
		\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/SPEC30/EW FOR ENERGY SAVINGS.								
		22118-4	F96T12/SPEC35	15	3500K SPEC	96	12000	6425	6050	
		\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/SPEC35/EW FOR ENERGY SAVINGS.								
		†	27265-8	F96T12/SPEC41	15	4100K SPEC	96	12000	6425	6050
		\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/SPEC41/EW FOR ENERGY SAVINGS.								
		X	34166-9	F96T12/W	15	White	96	12000	6425	6050
		\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/W/EW FOR ENERGY SAVINGS.								
		34168-5	F96T12/WW	15	Warm White	96	12000	6200	5450	
		\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/WW/EW FOR ENERGY SAVINGS.								
		34178-4	F96T12/WW	10	Warm White	96	12000	6200	5450	
		34169-3	F96T12/WWX	15	Deluxe Warm White	96	12000	4350	3850	
		34170-1	F96T12/C50	15	Colortone 50	96	12000	4650	4200	
		\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/C50/EW FOR ENERGY SAVINGS.								
		34171-9	F96T12/CG	15	Cool Green	96	12000	4750	4200	
		X	34183-4	F96T12/G	10	Green	96	12000	8800	7000
		34184-2	F96T12/GO	10	Gold	96	12000	5150	4100	
		X	34185-9	F96T12/PK	10	Pink	96	12000	2400	1920
		X	34187-5	F96T12/R	10	Red	96	12000	400	215

□ Exclusive Product

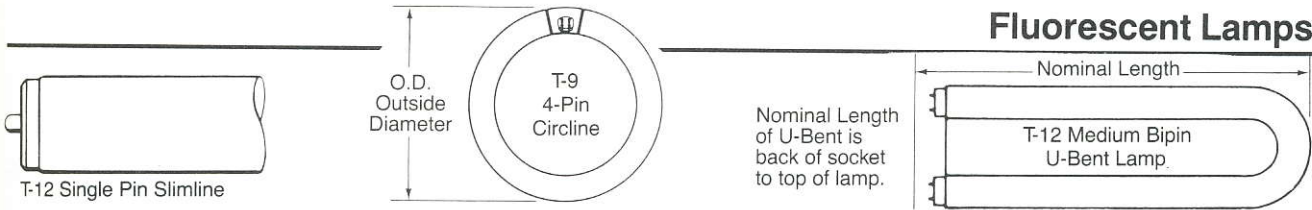
† New Since Last Printing

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Fluorescent Lamps



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial(203) Lumens(204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	-----------------------------------	---------------------

Ultralume Slimline Fluorescent Lamps (Instant Start) For the Finest Color Rendering and Efficacy.

75	T-12	Single Pin	34200-6	F96T12/30U	15	3000K Ultralume	96	12000	6600	6225
				\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/30U/EW FOR ENERGY SAVINGS.						
			38005-5	F96T12/35U	15	3500K Ultralume	96	12000	6600	6225
				\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/35U/EW FOR ENERGY SAVINGS.						
			34201-4	F96T12/41U	15	4100K Ultralume	96	12000	6600	6225
				\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/41U/EW FOR ENERGY SAVINGS.						
			34204-8	F96T12/50U	15	5000K Ultralume	96	12000	6500	6125
				\$\$\$ — CONSIDER THE ECON-O-WATT F96T12/50U/EW FOR ENERGY SAVINGS.						

Circline Fluorescent Lamps For use with Rapid Start, Trigger Start or Preheat Circuits.

20	T-9	4-Pin	24982-1	FC6T9/CW	12	Cool White	O.D. 6½	12000	800	590
			24981-3	FC6T9/WW	12	Warm White	O.D. 6½	12000	825	610
22	T-9	4-Pin	20601-1	FC8T9/CW	12	Cool White	O.D. 8¼	12000	1050	775
			26234-5	FC8T9/D	12	Daylight	O.D. 8¼	12000	910	675
			36445-5	FC8T9/SW	12	Soft White	O.D. 8¼	12000	745	550
			26243-6	FC8T9/WW	12	Warm White	O.D. 8¼	12000	1000	740

Ultralume Circline Fluorescent Lamps For the Finest Color Rendering and Efficacy.

22	T-9	4-Pin	25748-5	FC8T9/30U	12	3000K Ultralume	O.D. 8¼	12000	1100	850
----	-----	-------	---------	-----------	----	-----------------	---------	-------	------	-----

Circline Fluorescent Lamps For use with Rapid Start, Trigger Start or Preheat Circuits.

32	T-9	4-Pin	20602-9	FC12T9/CW	12	Cool White	O.D. 12	12000	1800	1495
			26260-0	FC12T9/D	12	Daylight	O.D. 12	12000	1570	1300
			36446-3	FC12T9/SW	12	Soft White	O.D. 12	12000	1300	1080
			26255-0	FC12T9/WW	12	Warm White	O.D. 12	12000	1800	1495

Ultralume Circline Fluorescent Lamps For the Finest Color Rendering and Efficacy.

32	T-9	4-Pin	25749-3	FC12T9/30U	12	3000K Ultralume	O.D. 12	12000	1885	1600
----	-----	-------	---------	------------	----	-----------------	---------	-------	------	------

Circline Fluorescent Lamps For use with Rapid Start, Trigger Start or Preheat Circuits.

40	T-9	4-Pin	36451-3	FC16T9/CW	12	Cool White	O.D. 16	12000	2500	1975
			26273-3	FC16T9/D	12	Daylight	O.D. 16	12000	2000	1580
			36452-1	FC16T9/SW	12	Soft White	O.D. 16	12000	1760	1390
			22662-1	FC16T9/WW	12	Warm White	O.D. 16	12000	2500	1975

Econ-o-watt U-Bent Fluorescent Lamps

34	T-12	Md. Bipin	29425-6	FB40CW/6/EW-II	12	Cool White(212)(214)	22⅞	12000	2400	2050
			30240-6	FB40LW/6/EW-II	12	Lite White(212)(214)	22⅞	12000	2500	2150
			29424-9	FB40WW/6/EW-II	12	Warm White(212)(214)	22⅞	12000	2400	2050

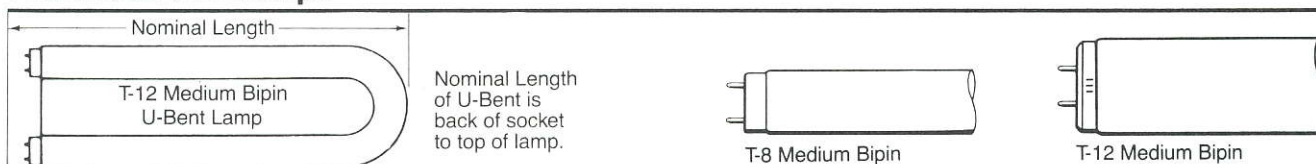
U-Bent Fluorescent Lamps

40	T-12	Md. Bipin	26812-8	FB40CW/3	12	Cool White(212)	22⅞	12000	2600	2200
			22774-4	FB40W/3	12	White(212)	22⅞	12000	2600	2200
			26811-0	FB40WW/3	12	Warm White(212)	22⅞	12000	2650	2300
			30090-5	FB40CW/6	12	Cool White(212)	22⅞	18000	2650	2300
				\$\$\$ — CONSIDER THE ECON-O-WATT FB40CW/6/EW-II FOR ENERGY SAVINGS.						
			25147-0	FB40CW/6	12	Deluxe Cool White(212)	22⅞	18000	2100	1750
			31289-2	FB40D/6	12	Daylight	22⅞	18000	2400	1990
			30746-2	FB40/SPEC30/6	12	3000K SPEC(212)	22⅞	18000	3050	2775
			23706-5	FB40/SPEC35/6	12	3500K SPEC(212)	22⅞	18000	3050	2775
			30781-9	FB40/SPEC41/6	12	4100K SPEC(212)	22⅞	18000	3050	2775
			30091-3	FB40WW/6	12	Warm White(212)	22⅞	18000	2700	2350
				\$\$\$ — CONSIDER THE ECON-O-WATT FB40WW/6/EW-II FOR ENERGY SAVINGS.						
			30242-2	FB40WW/6	12	Deluxe Warm White(212)	22⅞	18000	1950	1620

□ Exclusive Product \$\$\$ — Energy Saving Product High Color Rendering Lamps
 † New Since Last Printing X — Orders will be shipped until inventory is depleted; no longer manufactured.

FLUORESCENT

Fluorescent Lamps



Nominal Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	Pg. Qty.	Description	Nom. Length (In.)	Aver. Life, Hrs. (202)	Approx.: Initial(203) Lumens(204)	Design Lumens (208)
--------------------	------	------	----------------------	---------------	----------	-------------	-------------------	------------------------	-----------------------------------	---------------------

Ultralume U-Bent Fluorescent Lamps For the Finest Color Rendering and Efficacy.

40	T-12	Md. Bipin	35449-8	FB40/30U/6	12	3000K Ultralume(212)	22 $\frac{7}{16}$	18000	3100	2850
			22124-2	FB40/35U/6	12	3500K Ultralume(212)	22 $\frac{7}{16}$	18000	3100	2850
			34876-3	FB40/41U/6	12	4100K Ultralume(212)	22 $\frac{7}{16}$	18000	3100	2850

Appliance Fluorescent Lamps (For use with Starters)

14	T-8	Md. Bipin	25914-3	F14T8/CW/15	24	Cool White	15	7500	700	595
			25915-0	F14T8/D/15	24	Daylight	15	7500	580	495
15	T-8	Md. Bipin	25938-2	F15T8/CW/24	24	Cool White	24	7500	1175	940
16	T-8	Md. Bipin	25989-5	F16T8/CW/26	24	Cool White	26	7500	1275	1020
17	T-8	Md. Bipin	25990-3	F17T8/CW/28	24	Cool White	28	7500	1350	1080
18	T-8	Md. Bipin	25992-9	F18T8/CW/30	24	Cool White	30	7500	1400	1120
20	T-12	Md. Bipin	20450-3	F20T12/D/22	24	Daylight	22	7500	900	720
			25999-4	F20T12/CW/26	24	Cool White	26	7500	1250	1000
22	T-8	Md. Bipin	26028-1	F22T8/CW/26	24	Cool White	26	7500	1275	1020
25	T-12	Md. Bipin	26034-9	F25T12/CW/28	24	Cool White	28	7500	1600	1280
			26042-2	F25T12/D/28	24	Daylight	28	7500	1370	1095
			26033-1	F25T12/CW/30	24	Cool White	30	7500	1600	1280

□ Exclusive Product

† New Since Last Printing

\$\$\$ — Energy Saving Product

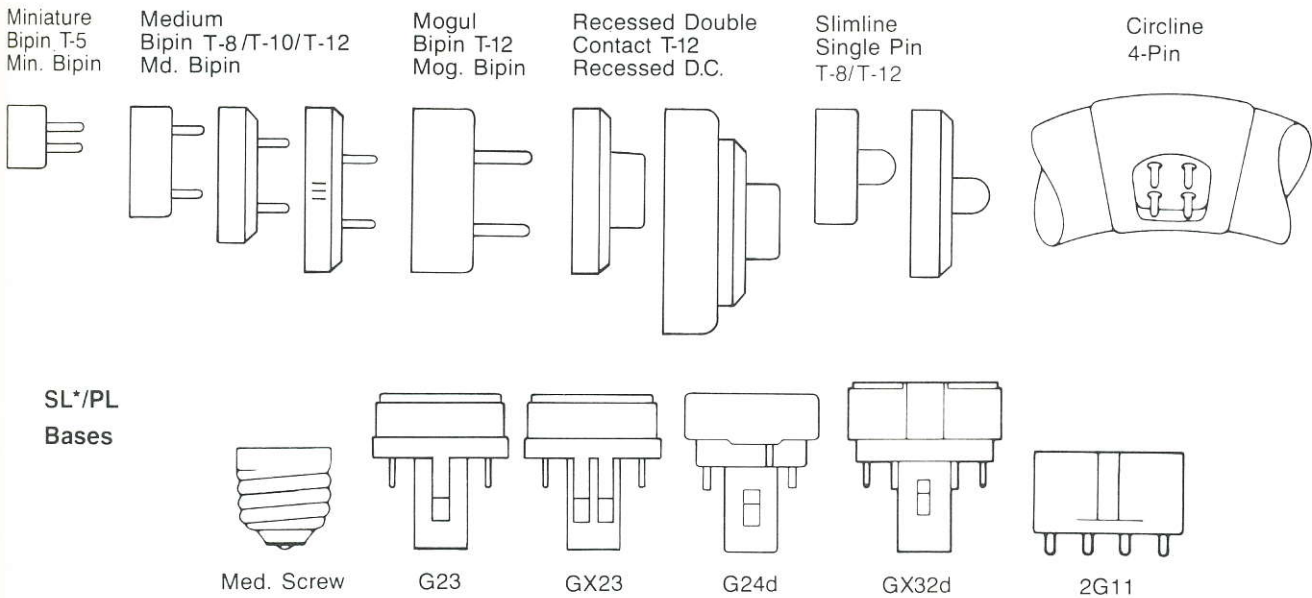
High Color Rendering Lamps

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Footnotes — Fluorescent Lamps

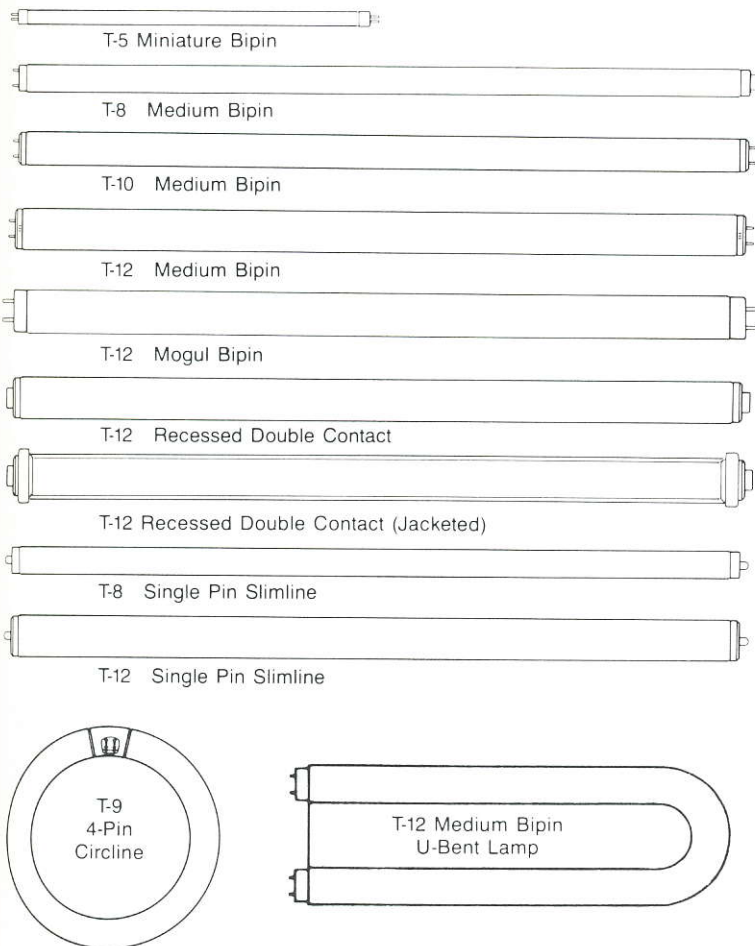
- Because of frequent improvements, the values listed may not be current ratings. For design purposes, obtain ratings from current technical bulletins.
- ‡ Peak values.
- Quantity shown is a minimum shipping container — Refer to Net Price Schedule for number of lamps to qualify as a standard case.
- (202) Average life under specified test conditions with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently.
- (203) Approximate Initial Lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions.
- (204) For expected lamp lumen output, commercial ballast manufacturers can advise the appropriate Ballast Factor for each of their ballasts when they are informed of the designated lamp. The Ballast Factor is a multiplier applied to the designated lamp lumen output.
- (205) Approximate hours of life for F40, TL70, TL80 and PL-L 40W/RS lamps operated by standard rapid start ballasts at three hours per start. When these lamps are operated on modified rapid start, preheat or instant start circuits the operating life will be reduced by approximately 25 percent. When employing dimming systems, or energy saving device systems the device manufacturer can advise of the effect of their system upon lamp life.
- (206) The pins of these lamps are short circuited inside the end caps and lamp will not operate on preheat or rapid start ballast circuits.
- (207) Approximate initial Lumens are for 800 ma. operation. For 1000 ma. operation Lumens are approximately 10% higher and watts approximately 15% higher.
- (208) Design Lumens are the approximate lamp lumen output at 40% of the lamps Rated Average Life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.
- (209) Operation on existing single lamp ballasts is not recommended because of marginal starting.
- (210) Approximate initial lumens are for operation at 200 ma.
- (211) Designed for service other than illumination.
- (212) Nominal-length measured from face of base to maximum distant outside point of U. Measurement does not include base pins. Leg spacing center to center approximately 6", for 1/6 and 3/8" for 1/3 lamps.
- (213) Unique construction maintains light output over a wide range of operating temperatures.
- (214) Econ-o-watt lamps are only recommended for use on high power factor lead, indoor ballasts that meet ANSI standards. The lamps are not recommended for use in drafty areas, or locations where the ambient temperature is less than 60°F, except as noted. Also they should not be operated on low power factor ballasts, reduced light or reduced current ballasts, dimming ballasts or emergency system inverter ballasts.
- (215) This lamp will operate on rapid start circuits provided ambient temperature is above 60°F, line voltage is 116 volts or higher and the lamps are located within 1/4" of the grounded starting aid (usually the reflector).
- (216) SL* lamps and PL Adapter systems are not for use with dimmers.
- (217) PL-S lamps have 10mm tube diameter. PL-S 5W should not be operated in sockets intended for PL-S 7W and PL-S 9W.

Base Types (Not Actual Sizes)

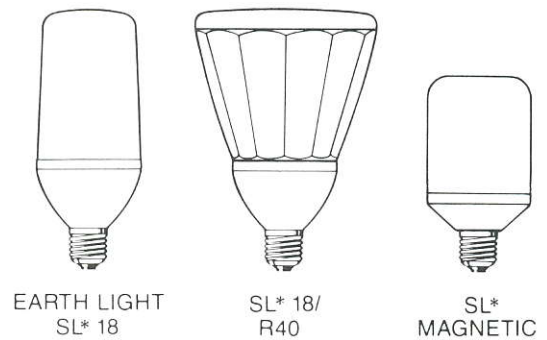


Bulb Shapes (Not Actual Sizes)

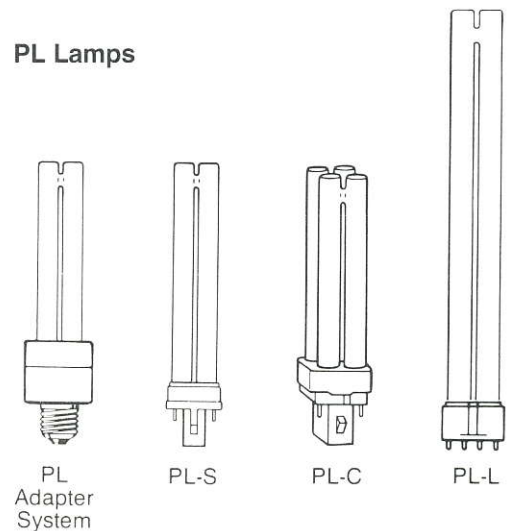
The size and shape of a bulb is designated by a letter or letters followed by a number. The letter indicates the shape of the bulb while the number indicates the diameter of the bulb in eighths of an inch. For example, "T-12" indicates a tubular shaped bulb having a diameter of 12/8 or 1½ inches. The following illustrations show some of the more popular bulb shapes and sizes.



SL* Lamps



PL Lamps



Fluorescent Lamps

Ordering Code Cross Reference Guide (Fluorescent Lamps)

Although certain fluorescent lamp types listed by Philips, General Electric and Sylvania have different ordering codes, they are physically and electrically interchangeable. For your convenience, we are listing a direct type comparison between manufacturers.

In the Econ-o-watt line only Philips makes an F40/EW-PH lamp for preheat installations.

Philips	General Electric	Sylvania
F15T8/CW/24 F16T8/CW/26 F17T8/CW/28 F18T8/CW/30 F20T12/CW (6 Pack) F25T12/CW F30T12/CW/RS/EW-II	F24'T8/CW/4 F26'T8/CW/4 F28'T8/CW/4 F30'T8/CW/4 F20T12/CW (6 Pack) F25T12/CW/33 F30T12/CW/RS/WM	F18T8/CW/K/24 F18T8/CW/K/26 F18T8/CW/K/28 F18T8/CW/K/30 F20T12/CW/6 F25T12/CW/33 F30T12/CW/RS/SS
TL 70 F17T8/TL741 F25T8/TL741 F32T8/TL741 F40T8/TL741	Trimline F17T8/SP41/RS F25T8/SP41/RS F32T8/SP41/RS F40T8/SP41/RS	Octron FO17/41K FO25/41K FO32/41K FO40/41K
F40CW/RS/EW-II F40AX41 F40LW/RS/EW-II F40/SPEC41 F40/41U F42T8/CW/EW F64T8/CW/EW F96T12/CW/EW F96T12CW/HO/EW F96T12CW/VHO/EW FB40CW/6/EW-II FB40CW/3 FB40CW/6 F90T12/CW/60/EW F48T12/CW/VHO — F72T12/CW/VHO — F96T12/CW/VHO — F48T12/CW/VHO-O — F60T12/CW/VHO-O F72T12/CW/VHO-O — F96T12/CW/VHO-O — FJ48T12/CW/VHO-O FJ60T12/CW/VHO-O FJ72T12/CW/VHO-O FJ96T12/CW/VHO-O	F40CW/RS/WM F40SPX41/XL F40LW/RS/WM-II F40/SP41 F40/SPX41 F42T6/CW F64T6/CW F96T12/CW/WM F96T12/CW/HO/WM F96PG17/CW/WM F40CW/U/6/WM FB40CW/U/3 F40CW/U/6 F90T17/CW F48T12/CW/1500 F48PG17/CW F72T12/CW/1500 F72PG17/CW F96T12/CW/1500 F96PG17/CW F48T12/CW/1500/0 — F60T10/CW F72T12/CW/1500/0 — F96T12/CW/1500/0 — F48T10J/CW F60T10J/CW F72T10J/CW F96T10J/CW	F40CW/RS/SS — F40LW/RS/SS F40/D41 F40/D841 F42T6/CW F64T6/CW F96T12/CW/SS F96T12/CW/HO/SS F96T12/CW/VHO/SS FB40CW/6/SS — FB40/CW/6" F90T17/CW F48T12/CW/VHO — F72T12/CW/VHO — F96T12/CW/VHO — F48T12/CW/VHO/LT F48T12/CW/VHO/O — F72T12/CW/VHO/LT F72T12/CW/VHO/O F96T12/CW/VHO/LT F96T12/CW/VHO/O FJ48T12/CW/VHO/LT — FJ72T12/CW/VHO/LT FJ96T12/CW/VHO/LT

Color Cross Reference Guide (Fluorescent Lamps)

Philips	General Electric	Sylvania
SPEC 30 SPEC 35 SPEC 41	SP 30 SP 35 SP 41	D 30 D 35 D 41
Ultralume 27 or 27U 30U 35U 41U	SPX 27 SPX 30 SPX 35 SPX 41	Designer 800 27K D 830 D 835 D 841
C50	C50	DSGN50

This table is to be used as a guide only. Colors may represent the nearest equivalent rather than an identical match.

High Intensity Discharge Lamps

Ceramalux™ High Pressure Sodium Lamps

Explanation of suffix in ordering code:

No suffix — Clear, Mogul Base, Std. Color

/C Comfort Color

/D Diffuse Coated

/DE Double Ended

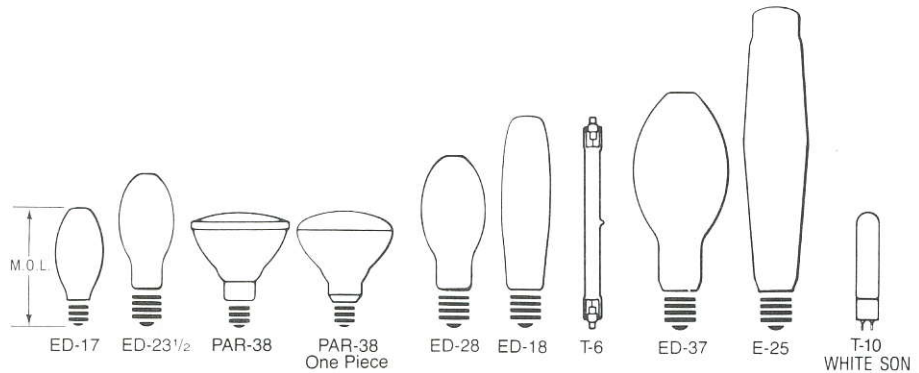
/LV Low Volt

/M Medium Base

/PAR Parabolic Reflector

/S Super Output

Operating Position — Universal



Descriptive Symbols for High Pressure Sodium Lamps

G General Lighting
S Street Lighting

W Wide Beam
VW Very Wide Beam

Lamp Watts	Bulb/Volts	Base	NAED Number 04-6677-	Ordering Code	ANSI Code	Pkg. Qty.	Description (See above)	L. C. L. (In.)	M. O. L. (In.)	Rated Aver. Life, Hrs. (351)(354)	Approximate Lumens:	
35	ED-17 52V	Med. ■	30632-4	C35S76/M	S76HA-35	12	*G(360)(373)(376)	3 1/16	5 1/16	16000	2250	2025
			30633-2	C35S76/D/M	S76HB-35	12	*G(360)(373)(376)	3 1/16	5 1/16	16000	2150	1935
50	ED-17 52V	Med. ■	30336-2	C50S68/M	S68LP-50	12	*G(360)(373)(376)	3 1/16	5 1/16	24000 +	4000	3600
			30337-0	C50S68/D/M	S68LR-50	12	*G(360)(373)(376)	3 1/16	5 1/16	24000 +	3800	3420
	ED-23 1/2 52V	Mog. ■	33153-8	C50S68	S68MS-50	12	*G.S(360)(373)(376)	5	7 3/4	24000 +	4000	3600
			33154-6	C50S68/D	S68MT-50	12	*G.S(360)(373)(376)	5	7 3/4	24000 +	3800	3420
70	ED-17 52V	Med. ■	33192-6	C70S62/M	S62LG-70	12	*G(360)(373)(376)	3 1/16	5 1/16	24000 +	6300	5670
			33214-8	C70S62/D/M	S62LH-70	12	*G(360)(373)(376)	3 1/16	5 1/16	24000 +	5860	5270
	ED-23 1/2 52V	Mog. ■	33219-7	C70S62	S62ME-70	12	*G.S(360)(373)(376)	5	7 3/4	24000 +	6300	5670
			33225-4	C70S62/D	S62MF-70	12	*G.S(360)(373)(376)	5	7 3/4	24000 +	5860	5270
	PAR-38 52V	Med. Skt. X □	24989-6	C70S62/PAR/M	S62MX-70	12	*G.VW(360)(373)		5 5/16	10000	4500	4000
		Med. X □ Side Prong	20474-3	C70S62/PAR	S62MY-70	12	*VW(360)(373)		4 5/16	7500	4500	4000
	PAR-38 ▲	Med. ■	30620-9	C70S62/RFL	S62SL-70	12	*G.VW(360)(373)		5 13/16	16000	5100	
100	ED-17 55V	Med. ■	34446-5	C100S54/M	S54SG-100	12	*G(360)(373)(376)	3 1/2	5 1/16	24000 +	9500	8550
			34448-1	C100S54/D/M	S54SH-100	12	*G(360)(373)(376)	3 1/2	5 1/16	24000 +	8800	7920
	ED-23 1/2 55V	Mog. ■	33226-2	C100S54	S54SB-100	12	*G.S(360)(373)(376)	5	7 3/4	24000 +	9500	8550
			33227-0	C100S54/D	S54MC-100	12	*G.S(360)(373)(376)	5	7 3/4	24000 +	8800	7920
150	ED-17 55V	Med. ■	30347-9	C150S55/M	S55RN-150	12	*G(360)(373)(376)	3 11/16	5 11/16	24000 +	16000	14400
			30348-7	C150S55/D/M	S55RP-150	12	*G(360)(373)(376)	3 11/16	5 11/16	24000 +	15000	13500
	ED-23 1/2 55V	Mog. ■	33183-5	C150S55	S55SC-150	12	*G.S(360)(370)(373)(376)	5	7 3/4	24000 +	16000	14400
			33228-8	C150S55/D	S55MD-150	12	*G.S(360)(370)(373)(376)	5	7 3/4	24000 +	15000	13500
	ED-28 100V	Mog. ■	33155-3	C150S56	S56SD-150	12	*G.S(360)(370)(373)(376)	5	8 5/16	24000 +	16000	14400
			X 33156-1	C150S56/D	S56SE-150	12	*G.S(360)(370)(373)(376)	5	8 5/16	24000 +	15000	13500
200	ED-18 100V	Mog. ■	33229-6	C200S66	S66MN-200	12	*G.S(360)(373)(376)	5 3/4	9 3/4	24000 +	22000	19800
250	ED-18 100V	Mog. ■	33170-2	C250S50	S50VA-250	12	*G.S(360)(373)(376)	5 3/4	9 3/4	24000 +	27500	24750
			33171-0	C250S50/S	S50VA-250/S	12	*G.S(360)(373)(376)	5 3/4	9 3/4	24000 +	30000	27000
	ED-28 100V	Mog. ■	33173-6	C250S50/D/28	S50VC-250	12	*G.S(360)(373)(376)	5	8 5/16	24000 +	26000	23400
	T-6 100V	R.S.C. X	30167-1	C250S50/DE		12	*G(360)(371)(373)(376)		10 1/16	10000	24800	22300
310	ED-18 100V	Mog. ■	20226-7	C310S67	S67MR-310	12	*G.S(360)(373)(376)	5 3/4	9 3/4	24000 +	37000	33300
400	ED-18 100V	Mog. ■	34285-7	C400S51	S51WA-400	12	*G.S(360)(373)(376)	5 3/4	9 3/4	24000 +	50000	45000

□ Exclusive Product

† New Since Last Printing

SSS — Energy Saving Product

High Color Rendering Lamps

X — Orders will be shipped until inventory is depleted; no longer manufactured.

For pricing information refer to PS-101U

HID

High Intensity Discharge Lamps

Lamp Watts	Bulb/Volts	Base	NAED Number 04-6677-	Ordering Code	ANSI Code	Pkg. Qty.	Description (See page 81)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life, Hrs. (351)(354)	Approximate Lumens: Initial	Mean(353)
------------	------------	------	----------------------	---------------	-----------	-----------	---------------------------	--------------	--------------	-----------------------------------	-----------------------------	-----------

Ceramalux™ High Pressure Sodium Lamps

400	ED-37 100V	Mog. ■		34602-3	C400S51/D	S51WB-400	6	*G,S(360)(373)(376)	7	11½	24000 +	47500	42750
	T-6 100V	R.S.C. X		26918-3	C400S51/DE	S51WF-400	12	*G(360)(371)(373)(376)		10⅞	24000	45000	40500
1000	E-25 250V	Mog. ■		20940-3	C1000S52	S52XB-1000	6	*G,S(359)(360)(362)(373)(376)	8¾	15⅞	10000 +	140000	126000

Ceramalux™ Comfort High Pressure Sodium Lamps Improved Color Rendering

70	ED-17 55V	Med. ■	†	30617-5	C70S62/C/M	S62LG-70/C	12	*G(360)(373)(376)	3⅞	5⅞	15000	4400	3960
			†	30621-7	C70S62/C/D/M	S62LH-70/C	12	*G(360)(373)(376)	3⅞	5⅞	15000	4180	3760
	ED-23½ 55V	Mog. ■	†	30615-9	C70S62/C	S62ME-70/C	12	*G(360)(373)(376)	5	7¾	15000	4400	3960
			†	30616-7	C70S62/C/D	S62MF-70/C	12	*G(360)(373)(376)	5	7¾	15000	4180	3760
100	ED-17 55V	Med. ■	†	30635-7	C100S54/C/M	S54SG-100/C	12	*G(360)(373)(376)	3⅞	5⅞	15000	7300	6570
			†	30634-0	C100S54/C/D/M	S54SH-100/C	12	*G(360)(373)(376)	3⅞	5⅞	15000	6940	6250
	ED-23½ 55V	Mog. ■	†	30637-3	C100S54/C	S54SB-100/C	12	*G(360)(373)(376)	5	7¾	15000	7300	6570
			†	30636-5	C100S54/C/D	S54MC-100/C		*G(360)(373)(376)	5	7¾	15000	6940	6250
150	ED-17 55V	Med. ■	†	30647-2	C150S55/C/M	S55RN-150/C	12	*G(360)(373)(376)	3⅞	5⅞	15000	12000	10800
			†	30644-9	C150S55/C/D/M	S55RP-150/C	12	*G(360)(373)(376)	3⅞	5⅞	15000	11000	9900
	ED-23½ 55V	Mog. ■	†	30643-1	C150S55/C	S55SC-150/C	12	*G(360)(373)(376)	5	7¾	15000	12000	10800
			†	30642-3	C150S55/C/D	S55MD-150/C	12	*G(360)(373)(376)	5	7¾	15000	11000	9900
250	ED-18 100V	Mog. ■	†	30245-5	C250S50/C	S50VA-250/C	12	*G(360)(373)(376)	5¾	9¾	15000	23000	20700
400	ED-18 100V	Mog. ■	†	30652-2	C400S51/C	S51WA-400/C	12	*G(360)(373)(376)	5¾	9¾	15000	37500	33750

WHITE SON High Pressure Sodium Lamp "Incandescent" Color Quality

35	T-10	PG-12	†	28473-7	SDW-T 35W/LV	S99AF-35	12	*(360)(373)(376)	3⅞	5⅞	10000	1250	1000
50	T-10	PG-12	†	30229-9	SDW-T 50W/LV	S104AF-50	12	*(360)(373)(376)	3⅞	5⅞	10000	2300	1725
100	T-10	PG-12	†	30228-1	SDW-T 100W/LV	S105NZ-100	12	*(360)(373)(376)	3⅞	5⅞	10000	4700	3520
50	ED-17	Med. ■	†	31344-5	SDW-50W/LV/D	S104	12	*(360)(373)(376)	3⅞	5⅞	10000	2190	1750
100	ED-17	Med. ■	†	31346-0	SDW-100W/CU/D	S105	12	*(360)(373)(376)	3⅞	5⅞	10000	4470	3570

Instant Restrike High Pressure Sodium Lamps For applications where momentary power interruptions occur.

70	ED-23½ 52V	Mog. ■		26541-3	C70S62/2		12	*G,S(360)(373)(376)(390)	5	7¾	24000 +	5600	5050
100	ED-23½ 55V	Mog. ■		26560-3	C100S54/2		12	*G,S(360)(373)(376)(390)	5	7¾	24000 +	9100	8190
150	ED-23½ 55V	Mog. ■		26561-1	C150S55/2		12	*G,S(360)(373)(376)(390)	5	7¾	24000 +	15600	14000
250	ED-18 100V	Mog. ■		37717-6	C250S50/2	S50VJ-250	12	*G(360)(373)(376)(390)	5¾	9¾	24000 +	27500	24750
400	ED-18 100V	Mog. ■		37688-9	C400S51/2	S51WG-400	12	*G(360)(373)(376)(390)	5¾	9¾	24000 +	50000	45000

SON AGRO High Pressure Sodium Lamp Plant Grow

430	ED-18 115V	Mog. ■	†	31710-7	SON AGRO 430W		12	*AGRO(360)(373)(389)	5¾	9¾	10000	53000	47700
------------	------------	--------	---	---------	----------------------	--	----	----------------------	----	----	-------	-------	-------

"Econolux" High Pressure Sodium Lamps

For operation on mercury lag type autotransformer ballasts or 240-277 volt reactors. Will operate on most mercury series circuits. Operating Position — Universal.

150W retrofits 175 watt Mercury
215W retrofits 250 watt Mercury
360W retrofits 400 watt Mercury

150	ED-28	Mog. ■	\$\$\$	33672-7	C150S63/EL	S63MG-150	12	*G,S(376)	5	8⅞	24000	15000	11700
			X\$\$\$	26898-7	C150S63/D/EL	S63MH-150	12	*G,S, Diffuse (376)	5	8⅞	24000	12000	10800
215	ED-28	Mog. ■	\$\$\$	20262-2	C215S65/EL	S65ML-215	12	*G,S(376)	5	8⅞	12000	20000	18000
360	ED-37	Mog. ■	\$\$\$	24984-7	C360S64/EL	S64MJ-360	6	*G,S(376)	7	11½	16000	38000	34960

□ Exclusive Product

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

High Intensity Discharge Lamps

Lamp Watts	Bulb/Volts	Base	NAED Number 04-6677-	Ordering Code	ANSI Code	Pkg. Qty.	Description (See page 81)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life, Hrs. (351)(354)	Approximate Lumens: Initial Mean(353)	
------------	------------	------	-------------------------	---------------	-----------	-----------	------------------------------	-----------------	-----------------	---	---	--

Ceramalux™ RETRO LUX High Pressure Sodium Lamps

For operation on all mercury vapor ballasts of similar wattage.
Operating Position — Universal.

150W retrofits 175 watt Mercury
215W retrofits 250 watt Mercury
360W retrofits 400 watt Mercury

150	ED-28	Mog. ■	†SSS	31142-3	C150S63/Retrolux	—	12	*G, S	5	8 $\frac{1}{16}$	24000	15000	13500
215	ED-28	Mog. ■	†SSS	31144-9	C150S65/Retrolux	—	12	*G, S	5	8 $\frac{1}{16}$	24000	23000	20700
360	ED-37	Mog. ■	†SSS	31145-6	C360S64/Retrolux	—	6	*G, S	7	11 $\frac{1}{2}$	24000	45000	40500

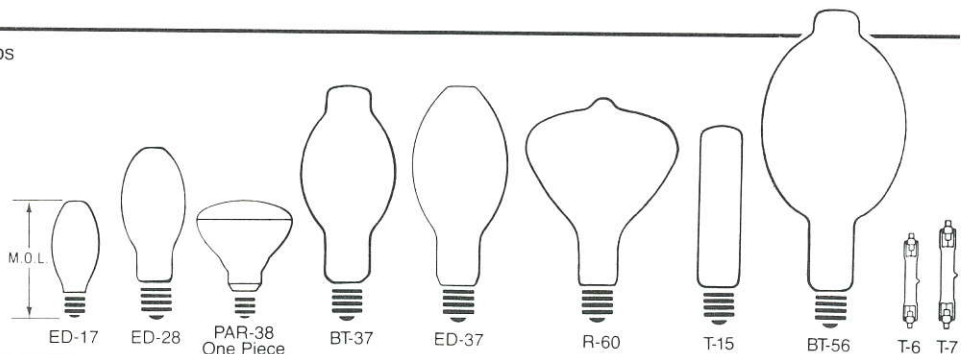
Low Pressure Sodium Lamps — SOX



18	T-17	D.C. Bay	□	23404-7	SOX-E18	L69RA-18	12	Clear BU ± 110°	—	8 $\frac{1}{2}$	14000	1800	1800
35	T-17	D.C. Bay	□	32781-7	SOX35	L70RB-35	12	Clear BU ± 110°	—	12 $\frac{3}{16}$	18000	4800	4800
55	T-17	D.C. Bay	□	32151-3	SOX55	L71RC-55	12	Clear BU ± 110°	—	16 $\frac{1}{4}$	18000	8000	8000
90	T-21	D.C. Bay	□	32152-1	SOX90	L72RD-90	12	Clear Horiz. ± 20°	—	20 $\frac{3}{4}$	18000	13500	13500
135	T-21	D.C. Bay	□	32153-9	SOX135	L73RE-135	12	Clear Horiz. ± 20°	—	30 $\frac{1}{2}$	18000	22500	22500
180	T-21	D.C. Bay	□	32799-9	SOX180	L74RF-180	9	Clear Horiz. ± 20°	—	44 $\frac{1}{8}$	18000	33000	33000

Metal Halide Lamps

See Safety Lifeguard Metal Halide Lamps for those applications where the lamps are to be used in open luminaires to light areas where activities are conducted that can result in the outer envelope being broken or punctured and where prolonged exposure of a population confined to the area can occur.



“WARNING: These lamps can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.”

Operating Instructions

WARNING: The arc tubes of metal halide lamps are designed to operate under high pressure and at temperatures up to 900°C. If the arc tube ruptures for any reason, the outer bulb might break and pieces of extremely hot glass might be discharged into the surrounding environment, with an associated risk of property damage or personal injury. The following **GOOD LAMP PRACTICES** must be followed to reduce the possibility of arc tube rupture.

1. **TURN LAMPS OFF AT LEAST ONCE PER WEEK FOR AT LEAST 15 MINUTES**, in systems which are otherwise operating on a continuous basis (24 hours/day — 7 days/week).
2. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing such lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
3. **OPERATE LAMP ONLY IN ITS RECOMMENDED POSITION.**
4. **OPERATE LAMP WITH PROPER CIRCUITS AND AUXILIARY EQUIPMENT.**

Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	ANSI Code	Pkg. Qty.	Description (Operating Position — Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life Hrs. (351)	Approximate Lumens(352): Initial Mean(353)	
70 (Enclosed fixtures only) Operate on ANSI specified “M98” Metal Halide Ballasts.	ED-17	Med.	† 28658-3	MH70/U/M	M98SJ-70	12	*G, CL, 4300K(372)(377)	3 $\frac{7}{16}$	5 $\frac{7}{16}$	5000	5000	4000
			† 30325-5	MH70/C/U/M	M98	12	*G, Ph. Coat. 4100K(372)(377)	3 $\frac{7}{16}$	5 $\frac{7}{16}$	5000	5000	3850
100 (Enclosed fixtures only) Operate on ANSI specified “M90” Metal Halide Ballasts.	ED-17	Med.	† 28434-9	MS100/BU/ BD/M/3K	M90SJ-100/3K	12	*G, Vert. ± 15° Clear 3200K (372)(374)(377)	3 $\frac{7}{16}$	5 $\frac{7}{16}$	10000	8500	6800
			† 30735-5	MS100/C/BU/ BD/M/3K	M90SK-100/3K	12	*G, Vert. ± 15° Ph. Coat. 3200K (372)(374)(377)	3 $\frac{7}{16}$	5 $\frac{7}{16}$	10000	8500	6400
			† 28657-5	MH100/U/M	M90SJ-100	12	*G, Clear, 4300K(372)(374)(377)	3 $\frac{7}{16}$	5 $\frac{7}{16}$	10000	7800	5850
			† 30326-3	MH100/C/U/M	M90SK-100	12	*G, Ph. Coat. 4100K (372)(374)(377)	3 $\frac{7}{16}$	5 $\frac{7}{16}$	10000	7800	5600
175 (Enclosed fixtures only) Operate on ANSI specified “M57” Metal Halide Ballasts.	ED-17	Med.	† 31358-5	MH175/U/M	M57	12	*G, Clear, 4300K(372)(377)	3 $\frac{7}{16}$	5 $\frac{7}{16}$	10000 (385)	14000	10500
			† 31359-3	MH175/C/U/M	M57	12	*G, Ph. Coat. 4100K(372)(377)	3 $\frac{7}{16}$	5 $\frac{7}{16}$	10000 (385)	14000	10100

□ Exclusive Product

SSS — Energy Saving Product

High Color Rendering Lamps

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

High Intensity Discharge Lamps

Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	ANSI Code	Pkg. Qty.	Description (Operating Position — Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life Hrs. (351)	Approximate Lumens(352):	
											Initial	Mean(353)
Metal Halide Lamps												
175 (Enclosed fixtures only) Operate on ANSI specified "M90" Metal Halide Ballasts.	ED-28 Mog.	X	23288-4	MH175/4	M57PE-175	12	*Gen. & St. Ltg., Clear Vert. ± 15° (372)(377)(374)	5	8 ⁵ / ₁₆	10000	14000	10800
			23291-8	MH175/C	M57PF-175	12	*Gen. & St. Ltg., Vert. ± 15° Phosphor Coat. (372)(377)(374)	5	8 ⁵ / ₁₆	10000	14000	10200
			28733-4	MH175/U	M57PE-175	12	*Gen. & St. Ltg., Clear (372)(377)(385)	5	8 ⁵ / ₁₆	10000 (385)	13000	10350
			28728-4	MH175/C/U	M57PF-175		*Gen. & St. Ltg., Phosphor Coat. (372)(377)(385)	5	8 ⁵ / ₁₆	10000 (385)	13000	9500
			31287-6	MH175/3K/BU	M57	12	*G. Vert. ± 15° Ph. Coat. 3200K (372)(374)(377)		8 ¹ / ₄	10000	12000	9000
			28649-2	MS175/HOR	M57	12	*G. S. HOR. ± 45° Clear 4100K (372)(374)(377)	5	8 ¹ / ₄	7500	15000	12000
			28650-0	MS175/C/HOR	M57	12	*G. HOR. ± 45° Phosphor Coat. 4100K (372)(374)(377)		8 ¹ / ₄	7500	15000	11300
	PAR-38 ▲	†	30858-5	MH175/RLP	M57	6	*G. Clear, 4100K(372)(377) 50° Beam		5 ¹³ / ₁₆	7500	11000	
			31513-5	MH175/RSP	M57	6	*G. Clear, 4100K(372)(377) 16° Beam		5 ¹³ / ₁₆	7500	11000	
250 (Enclosed fixtures only) Operate on ANSI specified "M58" Metal Halide Ballasts.	ED-28 Mog.	X	27484-5	MH250/U	M58PG-250	12	*Gen. & St. Ltg., Clear(372)(377)	5	8 ⁵ / ₁₆	10000	20500	17000
			29169-0	MH250/C/U	M58PH-250	12	*Gen. & St. Ltg., Phosphor Coat. (372)(377)	5	8 ⁵ / ₁₆	10000	20500	16000
			31137-3	MH250/3K/BU	M58PH-250/3K/BU	12	*G. BU ± 45° Phosphor Coat. 3200K(372)(374)(377)	5	8 ¹ / ₄	10000	18000	14200
			28652-6	MS250/HOR	M58PG-250/HOR	12	*G. S. Hor. ± 45° Clear 4100K(372)(374)(377)	5	8 ¹ / ₄	10000	23000	18000
			28654-2	MS250/C/HOR	M58PH-250/HOR	12	*G. Hor. ± 45° Phosphor Coat. 3800K(372)(374)(377)	5	8 ¹ / ₄	10000	23000	17000
300 Operate on ANSI specified "M59" Metal Halide Ballasts.	BT-37 Mog.	X \$\$\$	23312-2	MH300/4	Econ-o-watt	6	*Gen. & St. Ltg., Clear (372)(377)	7	11 ¹ / ₂	10000	24000	18000
			23313-0	MH300/C	Econ-o-watt	6	*Gen. & St. Ltg., Phosphor Coat. (372)(377)	7	11 ¹ / ₂	10000	24000	16800
400 ED-28 Mog. ED-37 Mog.	ED-28 Mog. ED-37 Mog.	†	27862-2	MH400/U/ED28		12	*Gen., Clear(372)(377)	5	8 ⁵ / ₁₆	12000	36000	28800
			34415-0	MH400/U	M59PJ-400/U	6	*Gen. & St. Ltg., Clear(372)(377)	7	11 ¹ / ₂	20000 (364)	36000	28800
			34416-8	MH400/C/U	M59PK-400/U	6	*Gen. & St. Ltg., Phosphor Coat. (372)(377)	7	11 ¹ / ₂	20000 (364)	36000	27700
			31285-0	MH400/3K/U	M59PK-400/3K/U	6	*G. BU ± 15° Phosphor Coat. 3200K(372)(374)(377)	7	11 ¹ / ₂	20000 (364)	33000	25000
			30170-5	MS400/BU	M59PJ-400/BU	6	*High Efficacy, Base Up ± 15° Clear(372)(374)(377)	7	11 ¹ / ₂	20000	40000	32000
			30172-1	MS400/C/BU	M59PK-400/BU	6	*High Efficacy, Base Up ± 15° Phosphor Coat. (372)(374)(377)	7	11 ¹ / ₂	20000	40000	31000
			31135-7	MS400/3K/BU	M59PK-400/3K/BU	6	*G. BU ± 15° Phosphor Coat. 3200K(372)(374)(377)	7	11 ¹ / ₂	20000	36000	27000
			28655-9	MS400/HOR	M59PJ-400/3K/HOR	6	*G. S. Hor. ± 45° Clear 4100K(372)(374)(377)	7	11 ¹ / ₂	20000	40000	32000
			28656-7	MS400/C/HOR	M59PK-400/3K/HOR	6	*G. Hor. ± 45° Phosphor Coat. 3800K(372)(374)(377)	7	11 ¹ / ₂	20000	40000	31000
			31973-1	MH400/RSP	M59	6	*G. Clear, 3900K(372)(377)		10 ⁷ / ₁₆	15000	30000	
			23127-4	MH400/E	M59PL-400	12	*Gen., Clear(372)(374)(377)	5 ³ / ₄	9 ³ / ₄	10000	36000	27700
(Enclosed fixtures only)	R-60	†	31973-1	MH400/RSP	M59	6	*G. Clear, 3900K(372)(377)		10 ⁷ / ₁₆	15000	30000	
	T-15 Mog.	□	23127-4	MH400/E	M59PL-400	12	*Gen., Clear(372)(374)(377)	5 ³ / ₄	9 ³ / ₄	10000	36000	27700
750 (Enclosed fixtures only) Operate on ANSI specified "M89" Metal Halide ballasts	ED-37 Mog.	X	28450-5	MH750/BU	M89NJ-750	6	*Gen., Clear, Base Up ± 15° (372)(374)(377)	7	11 ¹ / ₂	5000	82500	66000
1000 Operate on ANSI specified "M47" Metal Halide Ballasts.	BT-56 Mog.		29826-5	MH1000/U	M47PA-1000/U	6	*Gen. & St. Ltg. Clear (359)(372)(377)	9 ¹ / ₂	15 ³ / ₈	12000	110000	88000
			29827-3	MH1000/C/U	M47PB-1000/U	6	*Gen. & St. Ltg. Phos. Coated (359)(372)(377)	9 ¹ / ₂	15 ³ / ₈	12000	110000	83000
			25093-6	MS1000/BU	M47PA-1000/BU/S	6	*High Efficiency, Base Up ± 15° Clear(372)(374)(377)	9 ¹ / ₂	15 ³ / ₈	10000	125000	100000

□ Exclusive Product

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

High Intensity Discharge Lamps

Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	ANSI Code	Pkg. Qty.	Description (Operating Position — Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life Hrs.(351)	Approximate Lumens(352):	
											Initial	Mean(353)

Metal Halide Lamps

1000 BT-56 Mog. Operate on ANSI specified "M47" Metal Halide Ballasts.	25130-6	MS1000/BD	M47PA-1000/BD/S	6	*High Efficiency, Base Down $\pm 15^\circ$ Clear(372)(374)(377)	9½	15%	10000	125000	100000
	25137-1	MS1000/C/BU	M47PB-1000/BU/S	6	*High Efficiency, Base Up $\pm 15^\circ$ Phos. Coated(372)(374)(377)	9½	15%	10000	125000	95800
	25136-3	MS1000/C/BD	M47PB-1000/BD/S	6	*High Efficiency, Base Down $\pm 15^\circ$ Phos. Coated(372)(374)(377)	9½	15%	10000	125000	95800
1500 BT-56 Mog. (Enclosed fixtures only) Operate on ANSI specified "M48" Metal Halide Ballasts.	23028-4	MH1500BU	M48PC-1500/BU	6	*Gen. & St. Ltg. Base-up to Hor. (359)(372)(374)(375)(377)	9½	15%	3000	155000	142000
	23020-1	MH1500BD	M48PC-1500/BD	6	*Gen. & St. Ltg. Base-down to Hor. (359)(372)(374)(375)(377)	9½	15%	3000	155000	142000

MHN-TD Double-Ended Metal Halide Lamps High Color Rendering

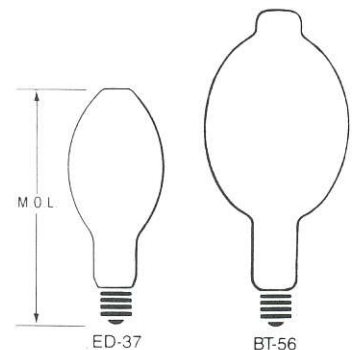
70 T-6 R7s † (Enclosed Fixtures using UV filter glass ONLY) Operate on ANSI specified "M85" Metal Halide Ballasts.	30350-3	MHN-TD 70W	M85PX-70	12	*G, Hor. $\pm 15^\circ$ 4200K (368)(372)(374)(387)		4½	6000	5500	4400
150 T-7 R7s † (Enclosed Fixtures using UV filter glass ONLY) Operate on ANSI specified "M81" Metal Halide Ballasts.	30355-2	MHN-TD 150W	M81PS-150	12	*G, Hor. $\pm 15^\circ$ 4200K (368)(372)(374)(387)		5½	10000	11250	10000

Safety Lifeguard Metal Halide Lamps

Safety Lifeguard lamps are designed to reduce the danger of possible injury from shortwave ultraviolet radiation. The lamp will self-extinguish automatically within 15 minutes after the outer envelope is broken by any means, accidental or intentional.

These lamps are particularly suited for use in open luminaires where the outer envelope is vulnerable to breakage, and the risk of exposure to ultraviolet radiation is present. However, the lamp's ability to self-extinguish does not protect against the danger of breakage itself. Accordingly, the users are advised to follow the good lamping practices noted in the Operating Instructions for Metal Halide Lamps.

In case of lamp failure, for safety and to preserve ballast life, turn off electric power and replace lamp promptly.



Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	ANSI Code	Pkg. Qty.	Description (Operating Position — Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life Hrs.(351)	Approximate Lumens(352):	
											Initial	Mean(353)
400 Operate on ANSI specified "M59" Metal Halide Ballasts.	ED-37	Mog.	34598-3	MHT400/U	M59PJ-T400/U	6	*Gen. & St. Ltg. Clear (372)(377)	7	11½	20000 (364)	34200	27400
			34601-5	MHT400/C/U	M59PK-T400/U	6	*Gen. & St. Ltg. Phos. Coated (372)(377)	7	11½	20000 (364)	34200	26300
1000 Operate on ANSI specified "M47" Metal Halide Ballasts.	BT-56	Mog.	23358-5	MHT1000/U	M47PA-T1000/U	6	*Gen. & St. Ltg. Clear (359)(372)(377)	9½	15%	12000	104500	83600
			23369-2	MHT1000/C/U	M47PB-T1000/U	6	*Gen. & St. Ltg. Phos. Coated (359)(372)(377)	9½	15%	12000	104500	79000

□ Exclusive Product

SSS — Energy Saving Product

High Color Rendering Lamps

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

H
I
D

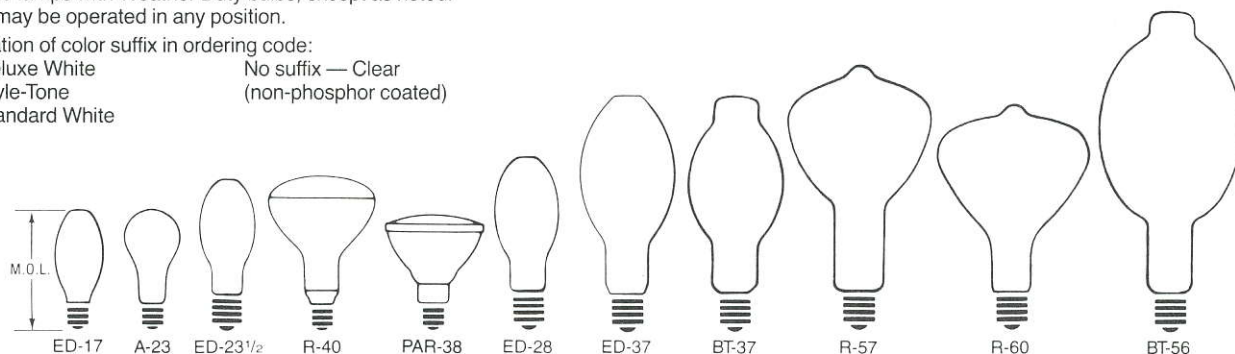
High Intensity Discharge Lamps

Mercury Vapor Lamps

Lifeguard lamps with Weather Duty bulbs, except as noted.
Lamps may be operated in any position.

Explanation of color suffix in ordering code:

/DX Deluxe White
/N Style-Tone
/C Standard White
No suffix — Clear
(non-phosphor coated)



Operating Instructions

WARNING: The following **GOOD LAMP PRACTICES** are recommended to reduce the possibility of an arc tube rupture and the associated risk of property damage or personal injury.

- TURN LAMPS OFF AT LEAST ONCE PER WEEK FOR AT LEAST 15 MINUTES**, in systems which are otherwise operating on a continuous basis (24 hours/day — 7 days/week).
- RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE**. Allowing such lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
- OPERATE LAMP WITH PROPER CIRCUITS AND AUXILIARY EQUIPMENT**.

“WARNING: These lamps can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.”

See Safety Lifeguard Mercury Vapor Lamps for those applications where the lamps are to be used in open luminaires to light areas where activities are conducted that can result in the outer envelope being broken or punctured and where prolonged exposure of a population confined to the area can occur.

Descriptive Symbols for Mercury Vapor Lamps

B Black Light
FF Frosted Face
G General Lighting

K Kleen-Beam
RF Reflector Flood
RS Reflector Spot

S Street Lighting
SR Semi Reflector

VW Very Wide Beam
W Wide Beam

Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code(363) (See above)	Former Code(363) or Trade Name	Pkg. Qty.	Description (See above)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life, Hrs.(351)	Approximate: Lumens(352)
50	ED-17	Med.	35664-2	H46DL-40-50/DX	H46DL/DX	12	*G(379)(384)	3 1/8	5 1/8	24000 +	1580 1260
75	ED-17	Med.	27524-8	H43AV-75/DX		12	*G,S(379)	3 1/16	5 7/16	24000 +	2800 2250
			X 27525-5	H43AV-75/N	Style-Tone	12	*G(379)	3 1/16	5 7/16	24000 +	2050 1600
100	A-23	Med.	35658-4	H38MP-100/DX	H38-4MP/DX	24	*G(379)	3 1/2	5 7/16	24000 +	4300 3400
			X 25458-1	H38MP-100/N	Style-Tone	24	*G(379)	3 1/2	5 7/16	24000 +	3600 2800
	ED-23 1/2	Mog.	31949-1	H38HT-100	H38-4HT	24	*G,S,B(355)	5	7 1/2	24000 +	4100 3450
			24802-1	H38JA-100/DX	H38-4JA/DX	24	*G,S(379)	5	7 1/2	24000 +	4400 3400
			X 25456-5	H38JA-100/N	Style-Tone	24	*G,S(379)	5	7 1/2	24000 +	3750 2800
	R-40	Med.	X 20464-4	H38BM-100		12	*RF,FF,W(355)		7 1/2	24000 +	2850 2280
			31947-5	H38BP-100/DX	H38BP/DX	12	*RF,FF,VW(379)		7 1/2	24000 +	2850 2300
			25457-3	H38BP-100/N	Style-Tone	12	*RF,FF,VW(379)		7 1/2	24000 +	2450 1950
	PAR-38	Med.Skt.	26866-4	H44GS-100/M		12	*PS,B(355)(356)(357)		5 1/16	16000 +	2800 1800
		Admed.Skt.	25163-7	H44GS-100	H38-4GS	12	*PS,B(355)(356)(357)		5 1/16	16000 +	2800 1800
			X 25209-8	H44JM-100	H38-4JM	12	*PF,B(355)(356)(357)		5 1/16	16000 +	2800 1800
175	ED-28	Mog.	31965-7	H39KB-175	H39-22KB	12	*G,S,B(355)	5	8 1/16	24000 +	7900 7400
			24805-4	H39KC-175/DX	H39-22KC/DX	12	*G,S(379)	5	8 1/16	24000 +	8500 7600
			28659-1	H39KC-175/DX	H39-22KC/DX	6	*G,S(379)	5	8 1/16	24000 +	8500 7600
			24049-9	H39KC-175/N	Style-Tone	12	*G(379)	5	8 1/16	24000 +	7000 6000
	R-40	Med.	32258-6	H39BM-175	H39-22BM	12	*RF,FF,W		7 1/2	24000 +	6100 5150
			30105-1	H39BP-175/DX	H39-22BP/DX	12	*RF,FF,VW(379)		7 1/2	24000 +	5750 4800
			X 25461-5	H39BP-175/N	Style-Tone	12	*RF,FF,VW(379)		7 1/2	24000 +	4600 3650
		Mog.	X 30713-2	H39BS-175	H39-22BS	12	*RF,FF,W		7 1/2	24000 +	6100 5150
			X 30751-2	H39BV-175/DX	H39-22BV/DX	12	*RF,FF,VW(379)		7 1/2	24000 +	5750 4800
250	ED-28	Mog.	31985-5	H37KB-250	H37-5KB	12	*G,S,B(355)	5	8 1/16	24000 +	12100 10500
			24814-6	H37KC-250/DX	H37-5KC/DX	12	*G,S(379)	5	8 1/16	24000 +	13000 10700
			24031-7	H37KC-250/N	Style-Tone	12	*G,S(379)	5	8 1/16	24000 +	11000 8400

□ Exclusive Product

† New Since Last Printing

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

X — Orders will be shipped until inventory is depleted; no longer manufactured.

High Intensity Discharge Lamps

Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code(363) (See page 86)	Former Code(363) or Trade Name	Pkg. Qty.	Description (See below)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life, Hrs. (351)	Approximate: Lumens(352)	
											Initial	Mean(353)

Mercury Vapor Lamps

400	ED-37	Mog.	25205-6	H33CD-400	H33-1-CD	6	*G,S,B(355)	7	11½	24000 +	21000	18900
			24842-7	H33GL-400/DX	H33-1-GL/DX	6	*G,S(379)	7	11½	24000 +	23000	19100
			22760-3	H33GL-400/N	Style-Tone	6	*G,S(379)	7	11½	24000 +	19500	16000
	BT-37	Mog.	X 25216-3	H33GL-400/C		6	*G,S(379)	7	11½	24000 +	20500	17400
			37718-4	H33GL-400/DX/BT		6	*G,S(379)	7	11½	24000 +	23000	19100
			35660-0	H33DN-400/DX	H33-1-DN/DX	6	*G,SR(379)		12¾	24000 +	23000	19100
700	R-57	Mog.										
	R-60	Mog.	X 25092-8	H33LN-400	H33-1-LN	6	*K,FF,RS(355)		10⅞	24000 +	17200	15000
			35661-8	H33FS-400/DX	H33-1-FS/DX	6	*K,FF,RF(379)		10⅞	24000 +	15500	12400
1000	BT-56	Mog.	35662-6	H35ND-700/DX	H35-18ND/DX	6	*G,S(379)	9½	14½	24000 +	43000	33600
			35659-2	H34GW-1000/DX	H34-12GW/DX	6	*G(359)(379)	9½	15¾	16000 +	60000	45000

Note — H34 Types are used INDOORS at 50°F or higher (and outdoors only in very mild climates). They are not electrically interchangeable with H36 lamps.

Note — H36 Types are used both OUTDOORS and INDOORS. They are not electrically interchangeable with H34 lamps.

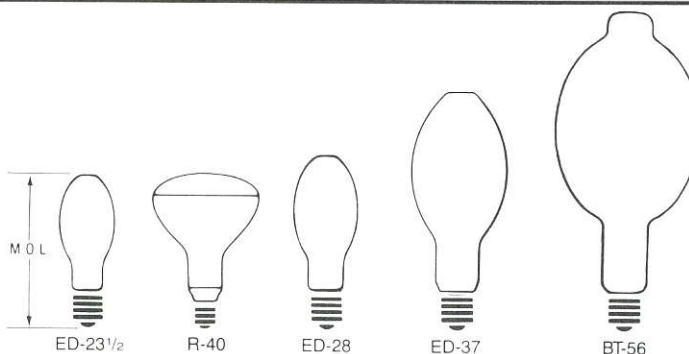
			25107-4	H36GV-1000	H36-15GV	6	*G,S,B(355)(359)	9½	15¾	24000 +	57500	48400
			39707-5	H36GW-1000/DX	H36-15GW/DX	6	*G,S(359)(361)(379)	9½	15¾	24000 +	63000	47500
			X 25452-4	H36GW-1000/N	Style-Tone	6	*G,S(359)(361)(379)	9½	15¾	24000 +	53500	38000

Safety Lifeguard Mercury Vapor Lamps

Safety Lifeguard lamps are designed to reduce the danger of possible injury from shortwave ultraviolet radiation. The lamp will self-extinguish automatically within 15 minutes after the outer envelope is broken by any means, accidental or intentional.

These lamps are particularly suited for use in open luminaires where the outer envelope is vulnerable to breakage, and the risk of exposure to ultraviolet radiation is present. However, the lamp's ability to self-extinguish does not protect against the danger of breakage itself. Accordingly, the users are advised to follow the good lamping practices noted on page 86 in the Operating Instructions for Mercury Vapor Lamps.

In case of lamp failure, for safety and to preserve ballast life, turn off electrical power and replace lamp promptly.



Descriptive Symbols for Safety Lifeguard Mercury Vapor Lamps

B Black Light
FF Frosted Face
G General Lighting

K Kleen-Beam
RF Reflector Flood
RS Reflector Spot

S Street Lighting
SR Semi Reflector

VW Very Wide Beam
W Wide Beam

Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code(363) (See above)	Former Code(363) or Trade Name	Pkg. Qty.	Description (See above)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life, Hrs. (351)	Approximate: Lumens(352)	
											Initial	Mean(353)
100	ED-23½	Mog.	20180-6	H38JA-T100/DX		24	*G,S(379)	5	7½	24000 +	3950	3060
	R-40	Med.	X 23068-0	H38BP-T100/DX		12	*RF,FF,VW(379)		7½	24000 +	2550	2070
175	ED-28	Mog.	25269-2	H39KC-T175/DX		12	*G,S(379)	5	8⅞	24000 +	7700	6850
	R-40	Med.	X 23093-8	H39BP-T175/DX		12	*RF,FF,VW(379)		7½	24000 +	5200	4300
250	ED-28	Mog.	X 38657-3	H37KB-T250		12	*G,S,B(355)	5	8⅞	24000 +	10900	9450
			38663-1	H37KC-T250/DX		12	*G,S(379)	5	8⅞	24000 +	11700	9650
400	ED-37	Mog.	25292-4	H33GL-T400/DX		6	*G,S(379)	7	11½	24000 +	20700	17200
1000	BT-56	Mog.	20742-3	H36GW-T1000/DX		6	*G,S(359)(361)(379)	9½	15¾	24000 +	56700	42800

□ Exclusive Product

\$\$\$ — Energy Saving Product

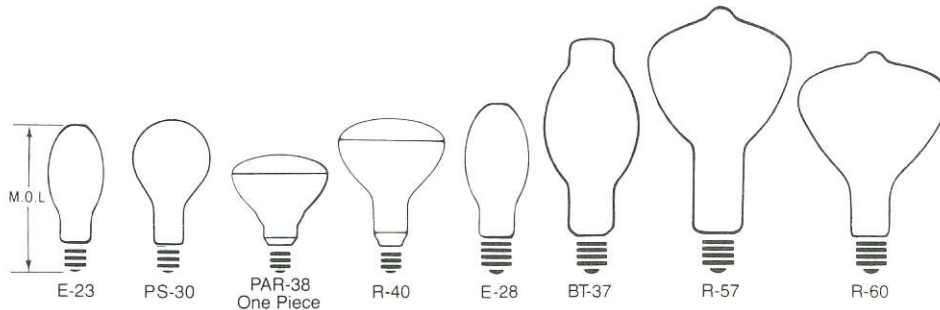
High Color Rendering Lamps

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

High Intensity Discharge Lamps

Self-Ballasted Mercury Vapor Lamps



Lamp Watts	Bulb	Base	NAED Number 04-6677-	Ordering Code	ANSI Code	Pkg. Qty.	Description (Operating Position — Universal unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Aver. Life, Hrs. (351)	Approximate Lumens:	
											Initial	Mean(353)
160	E-23	Med. <input type="checkbox"/>	32059-8	S160E23/DX	B87YL-160	12	General Ltg. 120V Deluxe White(368)(382)	4 ⁹ / ₁₆	7	12000	2800	2250
	PS-30	Med. X	34987-8	S160PS30/DX	B87YN-160	24	General Ltg. 120V Deluxe White(362)(368)(369)	5 ⁵ / ₁₆	7 ⁷ / ₁₆	16000	2200	1800
	PAR-38	Med. <input checked="" type="checkbox"/>	33890-5	S160R38/FL	B87YP-160	12	*Reflector Flood, 120V (368)(382)(383)		5 ¹³ / ₁₆	12000	1850	
	R-40	Med. <input type="checkbox"/>	33891-3	S160R/FL	B87YS-160	12	*Reflector Flood, 120V (368)(382)(383)		7	12000	1970	
250	E-28	Med. <input type="checkbox"/>	33894-7	S250E28/DX/M		12	*General Ltg. 120V Deluxe White(368)(382)(383)	5 ³ / ₄	8 ¹ / ₂	12000	5990	
		Mog. <input type="checkbox"/>	33899-6	S250E28/DX		12	*General Ltg. 120V Deluxe White(368)(382)(383)	5 ³ / ₄	8 ⁵ / ₁₆	12000	5990	
	R-40	Med. <input checked="" type="checkbox"/>	33912-7	S250R/FL/M	B94HY-250	12	*Reflector Flood, 120V (368)(382)(383)		7	12000	3810	
		Mog. <input type="checkbox"/>	33913-5	S250R/FL	B94HZ-250	12	*Reflector Flood, 120V (368)(382)(383)		7 ⁷ / ₈	12000	3540	
450	BT-37	Mog. X	30466-7	S450BT37		6	*General Ltg. 120V Clear Base-up ± 75°(368)(369)	7	11 ¹ / ₂	16000	9100	8280
		X <input type="checkbox"/>	39578-0	S450BT37		6	*General Ltg. 208V Clear(365)(366)	7	11 ¹ / ₂	16000	11300	9700
		X <input type="checkbox"/>	36860-5	S450BT37		6	*General Ltg. 230V Clear(365)(367)	7	11 ¹ / ₂	16000	10500	9500
		X <input type="checkbox"/>	20044-4	S450BT37		6	*General Ltg. 250V Clear(365)(367)	7	11 ¹ / ₂	16000	9850	9050
		X <input type="checkbox"/>	39579-8	S450BT37/C		6	*General Ltg. 208V Std. White(365)(366)	7	11 ¹ / ₂	16000	10500	8500
		<input type="checkbox"/>	38516-1	S450BT37/C		6	*General Ltg. 230V Std. White(365)(367)	7	11 ¹ / ₂	16000	9700	8300
		X <input type="checkbox"/>	20042-8	S450BT37/C		6	*General Ltg. 250V Std. White(365)(367)	7	11 ¹ / ₂	16000	9200	8000
		X <input type="checkbox"/>	33756-8	S450BT37/C		6	*General Ltg. 270V Std. White(365)(367)	7	11 ¹ / ₂	16000	8900	7750
750	R-57	Mog. X	29620-2	S750R57	B78YE-750	6	*General Ltg. 120V — Refl. I.F. Base-up ± 75°(368)(369)		12 ³ / ₄	16000	14000	11200
		X <input type="checkbox"/>	39269-6	S750R57/C		6	*General Ltg. Semi-Ref. 208V — Std. White(365)(366)		12 ³ / ₄	16000	18200	14600
		X <input type="checkbox"/>	36861-3	S750R57/C		6	*General Ltg. Semi-Ref. 230V — Std. White(365)(367)		12 ³ / ₄	16000	17800	15100
		X <input type="checkbox"/>	36864-7	S750R57/C		6	*General Ltg. Semi-Ref. 250V — Std. White(365)(367)		12 ³ / ₄	16000	17300	15400
		X <input type="checkbox"/>	30206-7	S750R57/C		6	*General Ltg. Semi-Ref. 270V — Std. White(365)(367)		12 ³ / ₄	16000	16500	14400
	R-60	Mog. <input checked="" type="checkbox"/>	32171-1	S750R60		6	*General Ltg. 250V — Refl. I.F. (365)(367)		10 ⁷ / ₈	16000	15000	

☐ Exclusive Product

† New Since Last Printing

\$\$\$ — Energy Saving Product

High Color Rendering Lamps

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Footnotes — (HID Lamps)

Because of frequent improvements, the values listed may not be current ratings. For design purposes, obtain ratings from current technical bulletins.

- Quantity shown is minimum shipping container — Refer to Net Price Schedule for number of lamps to qualify as a standard case.

* Heat resisting glass bulb.

▲ PAR-38 (One Piece)

■ Nickel plated brass base.

- (351) Rated average life is the life obtained, on the average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps and allows for individual lamps, or groups of lamps, to vary considerably from the average. For lamps with a rated average life of 24000+ hours, life is based on survival of 67% of the lamps.
- (352) Values for vertical operation of lamp.
- (353) Average lumens over 16000 operating hours or rated life whichever is shorter.
- (355) Separate filter is required for black light application.
- (356) Opaque coating on reflecting section of bulb.
- (357) Protect bulb from moisture when used in base down position. Non Weather Duty bulb.
- (358) For indoor use only — the fixture, holder, or shield should provide adequate ventilation near the socket and base of the lamp.
- (359) Electrically insulated support for bulb may be required, especially in horizontal and nearly horizontal operating positions.
- (360) Follow fixture manufacturer's recommendations regarding proximity of ballast to bulb.
- (362) This lamp should be shielded from moisture to prevent breakage.
- (363) These ordering codes generally conform to the designation system of the American National Standards Institute, which has been changed to include lamp wattage. Other High Intensity Discharge lamps will be changed as ANSI codes are developed.
- (364) Rated life: Vertical $\pm 30^\circ$ 20000 hours
Other positions 15000 hours

- (365) Supply voltage must be held to ± 10 volts of rated lamp voltage.
- (366) Lamps will start down to 15°F .
- (367) Lamps will start down to -10°F .
- (368) Supply voltage must be held to ± 5 volts of rated lamp voltage.
- (369) Lamps will start down to 0°F .
- (370) C150S55 and C150S56 lamps are not electrically interchangeable. Different ballasts are required for the proper operation of each lamp type. ANSI type S55 ballast is for the 55-volt (nominal) lamp and the ANSI type S56 ballast is for the 100 volt (nominal) lamp.
- (371) For use in luminaires facing down to facing horizontal.
- (372) Color characteristics may vary somewhat from one lamp type to another. Time should be allowed for the lamp to stabilize in color when it is turned on for the first time or if for any reason its operating position is changed. This may require several hours' operation, with more than one start. Lamp color and output may change temporarily if the lamp is subjected to excess vibration or shock. Lamp color characteristics may change after long accumulated operating time.
- (373) Fixtures should be designed so that sockets and wiring withstand starting pulse up to 5000 volts for 1000 watts and WHITE SON types and 4000 volts for other sizes.
- (374) Performance may not be satisfactory unless operated within specified operating positions.
- (375) If specified operating position is base up or base down to horizontal, this permits 15 degrees beyond the horizontal.
- (376) For use in fixtures which do not redirect a substantial portion of the energy toward the arc tube; otherwise very early failure is anticipated.
- (377) Requires a ballast specified or approved for Philips metal halide lamps, or one that is designed to operate all popular brands of metal halide lamps. 1000W types will operate from H36 conventional lag type ballast for Mercury Vapor lamps at ambient temperatures of 50°F or higher. 1000W types must not be operated at 1500W.

- (378) ECON-O-WATT lamps are identified with the H33 ANSI group for convenience but differ slightly in electrical characteristics. Ratings apply for operation on "regulated output" or similar H33 ballasts, on series type H33 isolating transformers, or on lead-peaked ballasts for 400W metal halide lamps. Operation on other ballast types is not recommended, as ballast life expectancy may be reduced substantially. It is advisable to check with the luminaire or ballast manufacturer.
- (379) It is a characteristic of phosphor-coated vapor lamps to require a few hundred hours of operation to gradually reach normal characteristic color. New lamps may have a slight pink appearance during this initial operating period.
- (382) Though made of heat-resistant glass, breakage may result if moisture falls on bulb. Use in well ventilated housing.
- (383) For indoor and outdoor use: if outdoors, in base down operation, lamp should be protected by a fully enclosed fixture, adequately ventilated. In base up operation, lamp can be used in open face fixture, 40° below horizontal. All fixtures should protect the lamp and wiring from water and corrosive atmospheric gases. The fixture, holder or shield should provide adequate ventilation near the socket and base of the lamp.
- (384) For 40-watt operation use H45 ballast
- | Ordering Code | Approx. Lumens Initial | Mean |
|----------------|------------------------|------|
| H46DL-40-50/DX | 1140 | 910 |
| H46DL-40-50/N | 800 | 580 |
- (385) Rated life: Vertical $\pm 15^\circ$ 10000 hours
Other positions 7500 hours
- (387) This lamp can cause serious skin burns and eye inflammation from shortwave ultraviolet radiation and must be fully enclosed in a fixture with an appropriate UV filter. To protect against possible risk of property damage or personal injury due to an arc tube rupture, the fixture enclosure must be capable of withstanding particles of glass having temperatures up to 1000°C . DO NOT USE THIS LAMP IF THE UV FILTER IS MISSING.
- (389) Operates at rated output on ANSI 400W S51 ballasts
- (390) Where instant restrike is not required, rated lamp life is 40,000+ hours.

H
I
D

High Intensity Discharge Lamp Information

Ceramelux™ High Pressure Sodium, Metal Halide, Mercury Vapor and Self-Ballasted Mercury Lamps are all high intensity electric discharge lamps. Except for self-ballasted lamps, auxiliary equipment such as ballasts and starters must be provided for proper starting and operation of each type, in accordance with American National Standards Institute (ANSI) specifications.

Low Pressure Sodium lamps, although technically not high intensity discharge lamps, are used in many similar applications. As with HID lamps they require auxiliary equipment for proper starting and operation. These lamps which have efficacies up to 200L/W have a mixture of neon and argon gas plus sodium metal in the arc tube and an evacuated outer bulb. When voltage is applied to the lamp the arc discharge is through the neon and argon gas. As the sodium metal in the arc tube heats up and vaporizes, the characteristic yellow amber color of sodium is achieved.

Nominal Wattage of Ceramelux Lamps

Lamp wattage varies during life, because of ballast and lamp characteristics. Ballast data should be reviewed for actual wattage levels.

Voltage Control

An interruption in the power supply or a sudden voltage drop may extinguish the arc. Before the lamp will relight, it must cool

sufficiently, reducing the vapor pressure to a point where the arc will restrike with available voltage. Instant restrike Ceramelux lamps restrike immediately with the resumption of power providing approximately 5% of steady state lumens and a rapid warm-up. All other Ceramelux lamps require approximately one minute cooling before relighting. Other HID types take 3 to 20 minutes, depending on type of lamp and luminaire.

Lamp Designations

Philips uses the ANSI designation for mercury vapor lamp ordering codes. The number following the letter "H" in the designation indicates the electrical characteristics and includes the identification of ballast type for proper lamp operation. For High Pressure Sodium lamps, the letter C (Ceramelux) coupled with the wattage and ballast designation are used (C100S54). For Metal Halide lamps the letters MH or MS are used together with the wattage and allowable operating positions.

Emission Material

Ceramelux lamps use a special emission material in the electrodes which provide voltage stability throughout the life of the lamp, thus providing long life and excellent lumen maintenance. Mercury Vapor lamps use a metallic oxide emission material in the

electrodes which provides good lumen maintenance throughout a long life. Metal Halide lamps do not contain emission material.

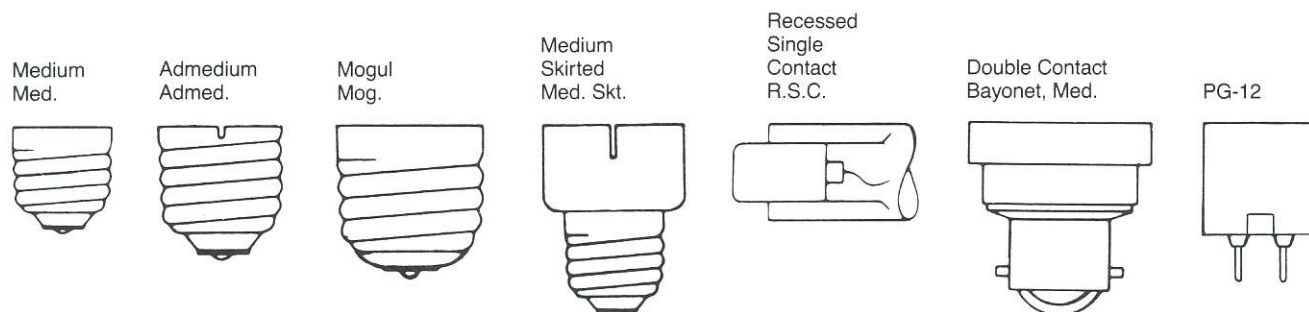
The WEATHER DUTY outer bulb is made of heat-resistant glass, making the lamp suitable for service outdoors and in applications with unfavorable atmospheric conditions. These bulbs will resist thermal shock, as from water striking the hot bulb, and may be exposed to most common industrial fumes without danger of crazing or cracking (however, lamp bases, sockets and wiring may need protection).

Lamp Bases

All Philips HID lamps with mogul screw bases feature date-code markings on the base. This enables users to record the date an individual lamp is placed in service and to keep a systematic record of lamp performance. Appropriate symbols denote the month and year, and may be checked off easily with any sharp instrument. All Ceramelux High Pressure Sodium lamps have a nickel-plated brass base which minimizes base-to-socket seizure which can occur with long-lived lamps. For other HID lamps a brass base is used and a graphite coating is applied to the base to give protection for corrosion and to ensure easy removal from the socket.

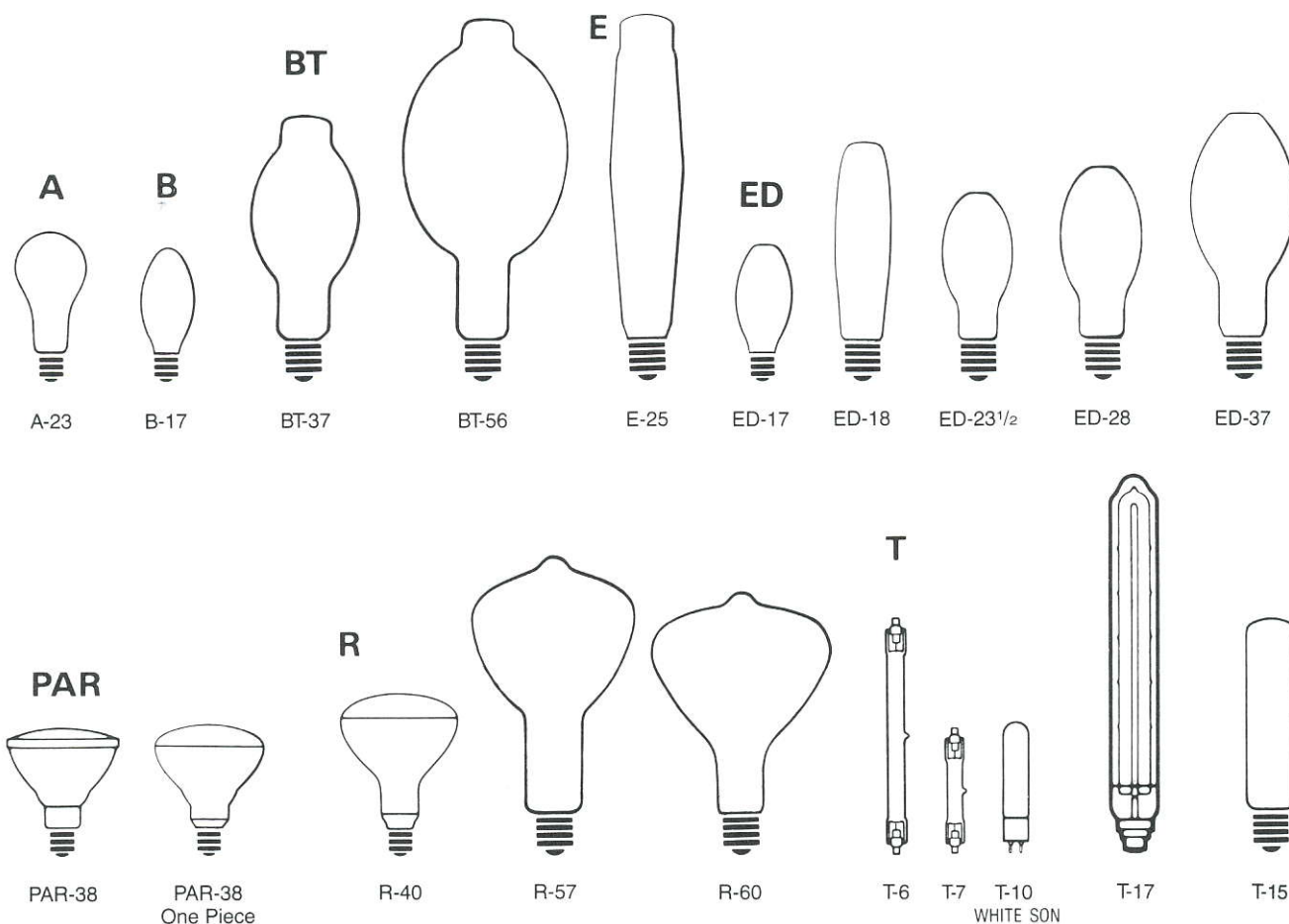
High Intensity Discharge Lamps

Base Types (Not Actual Sizes)



Bulb Shapes (Not Actual Sizes)

The size and shape of a bulb is designated by a letter or letters followed by a number. The letter indicates the shape of the bulb while the number indicates the diameter of the bulb in eighths of an inch. For example, "T-17" indicates a tubular shaped bulb having a diameter of 17/8 or 2 1/8 inches. The following illustrations show some of the more popular bulb shapes and sizes.



High Intensity Discharge Lamps

Ordering Code Cross Reference Guide (HID Lamps)

Ceramalux™ High Pressure Sodium Lamps

Philips	General Electric	Sylvania	ANSI
Ceramalux	Lucalox	Lumalux	
C35S76/M	LU35MED	LU35/MED	S76HA-35
C35S76/D/M	LU35/D/MED	LU35/D/MED	S76HB-35
—	LU35/T10/MED	—	—
—	LU35/RFL	—	S76SM-35
C50S68/M	LU50/MED	LU50/MED	S68LP-50
C50S68/D/M	LU50/D/MED	LU50/D/MED	S68LR-50
C50S68	LU50	LU50	S68MS-50
C50S68/D	LU50/D	LU50/D	S68MT-50
—	LU50/T10/MED	—	—
C70S62/M	LU70/MED	LU70/MED	S62LG-70
C70S62/D/M	LU70/D/MED	LU70/D/MED	S62LH-70
C70S62	LU70	LU70	S62ME-70
C70S62/D	LU70/D	LU70/D	S62MF-70
—	LU70/T10/MED	—	—
C70S62/PAR/M	—	—	S62MX-70
C70S62/PAR	—	—	S62MY-70
C70S62/RFL	LU70/RFL	—	S62SL-70
C100S54/M	LU100/MED	LU100/MED	S54SG-100
C100S54/D/M	LU100/D/MED	LU100/D/MED	S54SH-100
C100S54	LU100	LU100	S54SB-100
C100S54/D	LU100/D	LU100/D	S54MC-100
C150S55/M	LU150/MED	LU150/MED	S55RN-150
C150S55/D/M	LU150/D/MED	LU150/D/MED	S55RP-150
C150S55	LU150/55	LU150/55	S55SC-150
C150S55/D	LU150/55/D	LU150/55/D	S55MD-150
C150S56	LU150/100	LU150/100	S56SD-150
C150S56/D	—	—	S56SE-150
C200S66	LU200	LU200	S66MN-200
C250S50	LU250	LU250	S50VA-250
C250S50/S	LU250/S	—	S50VA-250/S
C250S50/D/28	LU250/D	LU250/D	S50VC-250
C250S50/DE	—	LU250T7/RSC	S50VH-250
C310S67	LU310	LU310	S67MR-310
C400S51	LU400	LU400	S51WA-400
C400S51/D	LU400/D	LU400/D	S51WB-400
C400S51/DE	—	LU400/T7/RSC	S51WF-400
C1000S52	LU1000	LU1000	S52XB-1000

H
I
D

Ceramalux™ Comfort High Pressure Sodium Lamps

Philips	General Electric	Sylvania	ANSI
Ceramalux	Lucalox		
C70S62/C/M	LU70/DX/MED	—	S62LG-70/C
C70S62/C/D/M	LU70/DX/D/MED	—	S62LH-70/C
C70S62/C	—	—	S62ME-70/C
C70S62/C/D	—	—	S62MF-70/C
—	LU70/DX/RFL	—	S62SL-70/DX
C100S54/C/M	—	—	S54SG-100/C
C100S54/C/D/M	—	—	S54MF-100/C
C100S54/C	—	—	S54SB-100/C
C100S54/C/D	—	—	S54MC-100/C
C150S55/C/M	LU150/DX/MED	—	S55RN-150/C
C150S55/C/D/M	LU150/DX/D/MED	—	S55RP-150/C
C150S55/C	LU150/55/DX	—	S55SC-150/C
C150S55/C/D	LU150/55/DX/D	—	S55MD-150/C
C250S50/C	LU250/DX	—	S50VA-250/C
—	LU250/DX/D	—	S50VC-250/C
C400S400/C	LU400/DX	—	S51WF-400/C
—	LU400/DX/D	—	S51WB-400/D

High Intensity Discharge Lamps

Ordering Code Cross Reference Guide (HID Lamps)

WHITE SON High Pressure Sodium Lamps

Philips	General Electric	Sylvania	ANSI
WHITE SON SDW-T 35W/LV SDW-T 50W/LV SDW-T 100W/LV SDW-50W/LV/D SDW-100W/LV/D	— — — — —	— — — — —	S99AF-35 S104AF-50 S105NZ-100 S104 S105

Instant Restrike High Pressure Sodium Lamps

Philips	General Electric	Sylvania	ANSI
Ceramalux C70S62/2 C100S54/2 C150S55/2 C250S50/2 C400S51/2 —	Lucalox LU70/SBY LU100/SBY LU150/55/SBY LU250/SBY LU400/SBY —	Lumalux — — — LU250/SBY LU400/SBY LU1000/SBY	— — — S50VJ-250 S51WG-400 —

SON AGRO High Pressure Sodium Lamps

Philips	General Electric	Sylvania	ANSI
SON AGRO 430	—	—	—

Econolux High Pressure Sodium Lamps

Philips	General Electric	Sylvania	ANSI
Econolux C150S63/EL C150S63/D/EL C215S65/EL C360S64/EL — —	E-Z Lux LUH150/EZ — LUH215/EZ — — —	Unalux ULX150 ULX150/D ULX215 ULX360 ULX360/D ULX880	S63MG-150 S63MH-150 S65ML-215 S64MJ-360 S64MK-360 —

Ceramalux™ RETRO LUX High Pressure Sodium Lamps

Philips	General Electric	Sylvania	ANSI
C150S63 RETRO LUX C215S65 RETRO LUX C360S64 RETRO LUX	— — —	— — —	— — —

Metal Halide Lamps

Philips	General Electric	Sylvania	Venture	ANSI
Metal Halide — MH70/U/M MH70/C/U/M — — — MS100/BU/BD/M/3K MS100/C/BU/BD/M/3K MH100/U/M MH100/C/U/M — — — —	Multi-Vapor MXR32C/VBU — — — — MXR100/BU/BD MXR100/C/BU/BD — — — — — — —	Metalarc — — — M75/BU M75/C/BU M70/DE M100/U M100/C/U — — M100/DE M150/U M150/C/U M150/DE	— MH70/U/MED MH70/C/U/MED — — MH-DE70 — MS100/C/BU/MED/W MH100/U/MED MH100/C/U/MED MH-DE100 — MH150/C/BU/MED/W/LV MH-DE150	— M98SJ-70 M98 M101 M101 M85 M90 M90 — — M91 M102 M102 M81

High Intensity Discharge Lamps

Ordering Code Cross Reference Guide (HID LAMPS)

Metal Halide Lamps (continued)

Philips	General Electric	Sylvania	Venture	ANSI
Metal Halide	Multi-Vapor	Metalarc		
MH175/U/M	—	—	MH175/U/MED	M57
MH175/C/U/M	—	—	MH175/C/U/MED	M57
MH175/U	MVR175/U	—	MH175/U	M57PE-175
MH175/C/U	MVR175/C/U	—	MH175/C/U	M57PF-175
MH175/4	—	M175/BU/BD-Only	—	M57PE-175
MH175/C	—	M175/C/BU/BD-Only	—	M57PF-175
MH175/3K/BU	—	M175/3K/BU-Only	MS175/C/HOR/W	M57PF-175/3K
—	MVR175/SP30/U	—	—	M57PF-175/SP30
MS175/HOR	MVR175/HOR	MS175/HOR	MS175/HOR	M57PE-175/HOR
MS175/C/HOR	MVR175/C/HOR	MS175/C/HOR	MS175/C/HOR	M57PF-175/HOR
—	—	MS175/3K/HOR	MS175/C/HOR/W	M57PF-175/3K/HOR
—	MXR175/BU	—	—	—
—	MXR175/C/BU	—	—	—
—	MXR175/BD	—	—	—
—	MYR175/C/BD	—	—	—
MH175/RLP	—	—	MH175/R38/FL	—
MH175/RSP	—	—	—	—
MH250/U	MVR250/U	M250/U	MH250/U	M58PG-250
MH250/C/U	MVR250/C/U	M250/C/U	MH250/C/U	M58PH-250
MH250/3K/BU	—	M250/3K/BU	MS250/C/BU/U	M58PH-250/3K/BU
—	MVR250/SP30/U	—	—	M58PH-250/SP30/U
MS250/HOR	MVR250/HOR	MS250/HOR	MS250/HOR	M57PE-250/HOR
MS250/C/HOR	MVR250/C/HOR	MS250/C/HOR	MS200/C/HOR	M58PF-250/HOR
—	—	MS250/3K/HOR	MS250/C/HOR/U	M58PE-250/3K/HOR
—	MVR325/1/U/WM	—	—	—
—	MVR325/C/U/WM	—	—	—
MH400/U/ED28	—	—	MH400/U/ED28	—
MH400/U	MVR400/U	M400/U	MH400/U	M59PJ-400/U
MH400/C/U	MVR400/C/U	M400/C/U	MH400/C/U	M59PK-400/U
MH400/3K/U	MVR400/SP30/U	—	—	M59PK-400/3K/U
MH400/E	—	—	—	—
MS400/BU	MVR400/VBU	MS400/BU-Only	MS400/BU	M59PJ-400/BU
—	MVR400/VBD	MS400/BD-Only	—	M59PJ-400/BD
MS400/C/BU	MVR400/C/VBU	MS400/C/BU-Only	MS400/C/BU	M59PK-400/BU
—	MVR400/C/VBD	MS400/C/BD-Only	—	M59PK-400/BD
MS400/3K/BU	—	MS400/3K/BU-Only	MS400/C/BU/W	M59PK-400/3K/BU
MS400/HOR	MVR400/HOR	MS400/HOR	MS400/HOR	M59PJ-400/HOR
MS400/C/HOR	MVR400/C/HOR	MS400/C/HOR	MS400/C/HOR	M59PK-400/HOR
—	—	MS400/3K/HOR	—	M59PK-400/3K/HOR
—	MPR400/OBU	MP400/BU-Only	—	—
—	—	MP400/C/BU-Only	—	—
—	—	MP400/3K/BU-Only	—	—
—	MVR400/I/U	—	—	—
—	MVR400/C/I/U	—	—	—
MH400/RSP	—	—	—	—
MH750BU	—	M750/BU-Only	—	—
—	MVR950/I/VBU	—	—	—
—	MVR950/I/VBD	—	—	—
MH1000/U	MVR1000/U	M1000/U	MH1000/U	M47PA-1000/U
MH1000/C/U	MVR1000/C/U	M1000/C/U	MH1000/C/U	M47PB-1000/U
MS1000/BU	MVR1000/VBU	MS1000/BU-Only	MS1000/BU	M47PA-1000/VBU
MS1000/BD	MVR1000/VBD	MS1000/BD-Only	MS1000/BD	M47PA-1000/VBD
MS1000/C/BU	—	MS1000/C/BU-Only	MS1000/C/BU	M47PB-1000/VBU
MS1000/C/BD	—	MS1000/C/BD-Only	—	M47PB-1000/VBD
—	—	MP1000/BU	—	—
—	—	MP1000/C/BU	—	—
MH1500BU	MVR1500/HBU/E	M1500/BU-HOR	MH1500/HBU	M48PC-1500/HBU
MH1500BD	MVR1500/HBD/E	M1500/BD	MH1500/HBD	M48PC-1500/HBD
—	—	MW1500/T7/7H	—	—

H
I
D

MHN-TD Lamps

Philips	General Electric	Sylvania	Venture	ANSI
MHN-TD70W	MQI/70/T6/30/(3200K)	—	—	—
MHN-TD150W	MQI/150/T7/43	—	—	—

High Intensity Discharge Lamps

Ordering Code Cross Reference Guide (HID Lamps)

Safety Metal Halide Lamps

Philips	General Electric	Sylvania	Venture	ANSI
—	MVT325/I/U/WM	—	—	—
—	MVT325/C/I/U/WM	—	—	—
MHT400/U	—	—	—	M59PJ-T400/U
MHT400/C/U	—	—	—	M59PK-T400/U
—	MVT400/VBU	MPT400/BU	—	M59PJ-T400/BU
—	MVT400/C/VBU	MPT400/C/BU	—	M59PK-T400/BU
—	MVT400/I/U	—	—	—
—	MVT400/C/I/U	—	—	—
MHT1000/U	—	—	—	M47PA-T1000/U
MHT1000/C/U	—	—	—	M47PB-T1000/U
—	MVT1000/VBU	MPT1000/BU	—	M47PA-T1000/BU
—	—	MPT1000/C/BU	—	M47PB-T1000/C/BD

Mercury Vapor Lamps

Philips	General Electric	Sylvania	ANSI
H46DL-40-50/DX	HR40/50DX45-46	H45/46DL-40/50/DX	H46DL-50/DX
H43AV-75/DX	HR75DX43	H43AV-75/DX	H43AV-75/DX
H43AV-75/N	—	H43AV-75/N	H43AV-75/N
—	HR75/100PFL43-44	H43/44-75/100/PFL	H43KL-75
—	H85A3	—	H3FG-85
—	H85A3/UV	—	H3FE-85
—	HR100DX38/E17	—	—
—	HR100A38/A23	—	H38LL-100
H38MP-100/DX	HR100DX38/A23	H38AV-100/DX	H38MP-100/DX
H38MP-100/N	—	H38AV-100/N	H38MP-100/N
H38HT-100	HR100A38	H38HT-100	H38HT-100
H38JA-100/DX	HR100DX38	H38JA-100/DX	H38JA-100/DX
H38JA-T100/DX	HT100DX38	H38JA-T100/DX	H38JA-T100/DX
H38JA-100/N	HR100WDX38	H38JA-100/N	H38JA-100/N
H38BM-100	HR100RFL38	—	H38BM-100
H38BP-100/DX	HR100RDXFL38	H38BP-100/DX	H38BP-100/DX
H38BP-T100/DX	—	—	—
H38BP-100/N	—	—	H38BP-100/N
H44GS-100	HR100PSP44	H44GS-100	H44GS-100
H44GS-100/M	—	H44GS-100/MDSK	—
H44JM-100	HR100PFL44	H44JM-100	H44JM-100
—	H100A4/T	—	H44AB-100
H39KB-175	HR175A39	H39KB-175	H39KB-175
—	—	—	H39KB-T175
H39KC-175/DX	HR175DX39	H39KC-175/DX	H39KC-175/DX
H39KC-T175/DX	HT175DX39	H39KC-T175/DX	H39KC-T175/DX
H39KC-175/N	HR175WDX39	H39KC-175/N	H39KC-175/N
H39BM-175	HR175RFL39	—	H39BM-175
H39BP-175/DX	HR175RDXFL39	H39BP-175/DX	H39BP-175/DX
H39BP-T175/DX	—	—	—
H39BP-175/N	—	—	H39BP-175/N
H39BS-175	HR175RFL39/M	—	H39BS-175
H39BV-175/DX	—	—	H39BV-175/DX
H37KB-250	HR250A37	H37KB-250	H37KB-250
H37KB-T250	—	—	H37KB-T250
H37KC-250/DX	HR250DX37	H37KC-250/DX	H37KC-250/DX
H37KC-T250/DX	HT250DX37	H37KC-T250/DX	H37KC-T250/DX

High Intensity Discharge Lamps

Ordering Code Cross Reference Guide (HID Lamps)

Mercury Vapor Lamps (continued)

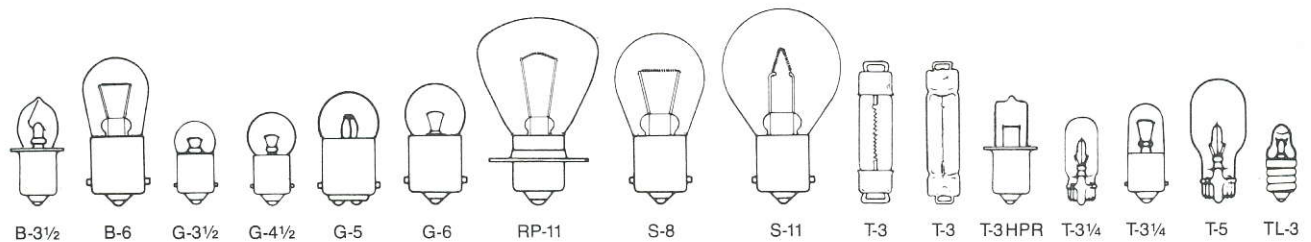
Philips	General Electric	Sylvania	ANSI
H37KC-250/N	HR250WDX37	H37KC-250/N	H37KC-250/N
H33CD-400	HR400A33	H33CD-400	H33CD-400
H33GL-400/DX	HR400DX33	H33GL-400/DX	H33GL-400/DX
H33GL-400/DX/BT	HR400DX33/BT	—	—
H33GL-T400/DX	HT400DX33	H33GL-T400/DX	H33GL-T400/DX
H33GL-400/N	HR400WDX33	H33GL-400/N	H33GL-400/N
—	—	—	H33GL-T400/N
H33GL-400/C	—	—	H33GL-400/C
—	HR400R33	—	H33FY-400
H33DN-400/DX	HR400RDX33	—	H33DN-400/DX
H33LN-400	—	—	H33LN-400
H33FS-400/DX	HR400RDXFL33	—	H33FS-400/DX
—	HR400RSP33	—	H33FP-400
—	HR400A33/T16	H33AR-400	H33AR-400
—	HR700A35	—	H35NA-700
H35ND-700/DX	HR700DX35	—	H35ND-700/DX
—	HR1000A34	H34GV-1000	H34GV-1000
H34GW-1000/DX	HR1000DX34	H34GW-1000/DX	H34GW-1000/DX
H36GV-1000	HR1000A36	H36GV-1000	H36GV-1000
H36GW-1000/DX	HR1000DX36	H36GW-1000/DX	H36GW-1000/DX
H36GW-T1000/DX	HT1000DX36	H36GW-T1000/DX	H36GW-T1000/DX
H36GW-1000/N	HR1000WDX36	—	H36GW-1000/N
—	HR1000RDX36	—	H36KY-1000/DX
—	HR1000RFL36	—	H36FB-1000
—	HR1000RDXFL36	—	H36FA-1000/DX
—	HR1000RSDX36	—	—

H
I
D

Self-Ballasted Mercury Vapor Lamps

S160E23/DX	—	—	B87YL-160
S160PS30/DX	HSB160/PS30/M	—	B87YM-160
S160R38/FL	—	—	B87YP-160
S160RFL	—	—	B87YS-160
S250E28/DX	HSB250	—	B94HP-250
S250E28/DX/M	HSB250/M	—	B94HM-250
S250R/FL/M	—	—	B94HY-250
S250R/FL	—	—	B94HZ-250
S450BT37 120V	—	—	—
S450BT37 230V	—	—	—
S450BT37 250V	—	—	—
S450BT37/C 120V	HSB450	—	—
S450BT37 208V	—	—	—
S450BT37/C 208V	—	—	—
S450BT37/C 230V	—	—	—
S450BT37/C 250V	—	—	—
S450BT37/C 270V	—	—	—
S750R57 120V	—	—	B78YE-750
—	HSB750R/120	—	B78YF-750
S750R57/C 208V	—	—	—
S750R57/C 230V	HSB750R/240	—	—
S750R57/C 250V	HSB750R/240	—	—
S750R57/C 270V	—	—	—
S750R60 250V	—	—	—

Miniature Lamps



Lamp Trade No.	Unit Pack NAED Number 04-6677-	Bulb	Service and Special Description	Vac(B) or Gas(C)	Design Volts	Design Amps.	Design Watts	Approx. Mean Spherical Candela (MSCd)	Rated Avg. Life (Hours)	Base	Filament Designation	Light Center Length		Max. Overall Length	
												In.	mm	In.	mm
X PR1	26570-2	B-3 1/2	Flashlight	B	2.00	.95	1.90	1.00	40	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
PR2	27228-6	B-3 1/2	Flashlight-2 D Cells	B	2.38	.50	1.19	.80	15	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
PR3	27241-9	B-3 1/2	Flashlight-3 D Cells	B	3.57	.50	1.79	1.50	15	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
PR4	27253-4	B-3 1/2	Flashlight-2 C Cells	B	2.33	.27	.63	.40	10	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
PR6	27264-1	B-3 1/2	Flashlight-2 D Ind. Cells	B	2.47	.30	.74	.45	30	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
PR7	27270-8	B-3 1/2	Flashlight-3 D Ind. Cells	B	3.70	.30	1.11	.90	30	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
PR12	27277-3	B-3 1/2	Flashlight-5 D Cells	C	5.95	.50	3.00	3.10	15	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
PR13	27285-6	B-3 1/2	Hand Lantern-4 F Cells	C	4.75	.50	2.38	2.20	15	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
PR15	27292-2	B-3 1/2	Hand Lantern-6 Volt Battery	C	4.82	.50	2.41	2.00	30	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
PR18	27296-3	B-3 1/2	Flashlight-6 D Cells	C	7.20	.55	3.96	4.80	3	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
X PR20	27301-1	B-3 1/2	Flashlight-7 D Cells	C	8.63	.50	4.32	5.00	15	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	32
KPR102	37826-5	B-3 1/2	Flashlight-Krypton 2 D Cells	C	2.40	.70	1.68	1.30	15	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	31
X KPR103	37827-3	B-3 1/2	Flashlight-Krypton 3 D Cells	C	3.60	.75	2.70	2.70	20	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	31
X KPR113	37828-1	B-3 1/2	Flashlight-Krypton 4 F Cells	C	4.80	.75	3.60	4.06	20	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	31
X KPR118	37829-9	B-3 1/2	Flashlight-Krypton 6 D Cells	C	7.20	.55	3.96	5.23	15	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	31
X KPR131	37830-7	B-3 1/2	Flashlight-Krypton 2 D Cells	C	2.40	.835	2.00	1.47	15	S.C. Min. Flg.	C-2R	1/4	6.4	1 1/4	31
HPR36	34419-2	T-3	Flashlight-Halogen	C	5.50	1.00	5.50	7.95	40	S.C. Min. Flg.	C-6	1/4	6.4	1 1/4	31
HPR40	21183-9	T-3	Flashlight-Halogen	C	6.0	.67	4.02	6.0	50	S.C. Min. Flg.	C-6	1/4	6.4	1 1/4	31
HPR41	21181-3	T-3	Flashlight-Halogen	C	3.75	.75	2.81	3.1	100	S.C. Min. Flg.	C-6	1/4	6.4	1 1/4	31
HPR50	38059-2	T-3	Flashlight-Halogen 4 D Cells	C	5.20	.85	4.42	6.76	25	S.C. Min. Flg.	C-6	1/4	6.4	1 1/4	31
HPR51	38060-0	T-3	Flashlight-Halogen	C	6.50	.70	4.55	7.16	25	S.C. Min. Flg.	C-6	1/4	6.4	1 1/4	31
HPR52	38061-8	T-3	Flashlight-Halogen 2 D Cells	C	2.80	.85	2.38	2.78	10	S.C. Min. Flg.	C-6	1/4	6.4	1 1/4	31
HPR53	38062-6	T-3	Flashlight-Halogen	C	4.00	.85	3.40	4.77	25	S.C. Min. Flg.	C-6	1/4	6.4	1 1/4	31
S HMO3	43603-0	T-3	Flashlight-Halogen	C	6.0	.67	4.0	6.05	50	Wedge	C-6	—	8.5	—	25
X 6	24320-4	S-8	Sewing Machine	C	6.40	3.00	19.20	23.00	500	D.C. Bay	C-2R	1 1/4	31.8	2	51
13	27317-7	G-3 1/2	Flashlight-3 D Cells	B	3.70	.30	1.11	1.00	15	Min. Sc.	C-2R	23/32	18.2	1 5/16	24
14	27325-0	G-3 1/2	Flashlight-2 D Cells	B	2.47	.30	.74	.50	15	Min. Sc.	C-2R	23/32	18.2	1 5/16	24
† 24	31274-4	T-2 1/2	Auto	B	14.0	.24	3.36	2	1500	Wedge	C2V	.44	11	.87	21.9
† 24NA	31278-5	T-2 1/2	Auto	B	14.0	.24	3.36	2	1500	Wedge	C2V	7/16	11	7/8	21.9
27	27347-4	G-4 1/2	Hand Lantern-4 F Cells	B	4.90	.30	1.47	1.40	30	Min. Sc.	C-2R	23/32	18.2	1 1/16	27
31	27353-2	G-4 1/2	Flashlight-5 D Cells	B	6.15	.30	1.85	2.00	15	Min. Sc.	C-2R	23/32	18.2	1 1/16	27
† 37	26642-9	T-1 3/4	Auto	B	14.0	.09	1.26	0.5	1500	Wedge	C2F	.40	10	.80	20.3
40	27362-3	T-3 1/4	Radio	B	6.30	.15	.95	.50	3000	Min. Sc.	C-2R	7/8	22.6	1 3/16	31
41	27370-6	T-3 1/4	Radio and Indicator	B	2.50	.50	1.25	.50	3000	Min. Sc.	C-2R	31/32	24.6	1 3/16	31
43	27377-1	T-3 1/4	Indicator	B	2.50	.50	1.25	.50	3000	Min. Bay.	C-2R	25/32	19.8	1 3/16	31
44	27382-1	T-3 1/2	Radio, TV and Indicator	B	6.30	.25	1.58	.90	3000	Min. Bay.	C-2R	1 1/16	18.0	1 3/16	31
45	27391-2	T-3 1/4	Radio	B	3.20	.35	1.12	.50	3000	Min. Bay.	C-2R	1 1/16	18.0	1 3/16	31
46	27393-8	T-3 1/4	Radio, TV and Indicator	B	6.30	.25	1.58	.90	3000	Min. Sc.	C-2R	7/8	22.8	1 3/16	31
47	27399-5	T-3 1/4	Radio, TV and Indicator	B	6.30	.15	.95	.52	3000	Min. Bay.	C-2R	1 1/16	18.0	1 3/16	31
51	27431-6	G-3 1/2	Auto and Indicator	B	7.50	.22	1.65	1.00	1000	Min. Bay.	C-2R	1/2	12.7	1 5/16	24
52	27438-1	G-3 1/2	Indicator	B	14.40	.12	1.73	.75	1000	Min. Sc.	C-2V	9/16	15.9	1 5/16	24
53	27445-6	G-3 1/2	Auto and Indicator	B	14.40	.12	1.73	1.00	1000	Min. Bay.	C-2V	1/2	12.7	1 5/16	24
53X	27452-2	G-3 1/2	Auto	B	14.40	.12	1.73	1.00	1000	Min. Bay.	C-2F	1/2	12.7	1 5/16	24
55	27457-1	G-4 1/2	Auto	C	7.00	.41	2.80	2.00	500	Min. Bay.	C-2R	9/16	14.2	1 1/16	27
57	27472-0	G-4 1/2	Auto	B	14.00	.24	3.36	2.00	500	Min. Bay.	C-2V	9/16	14.2	1 1/16	27

†New Since Last Printing.

S—Check Customer Service For Availability.

X—Orders will be shipped until inventory is depleted; no longer manufactured.

Miniature Lamps

Lamp Trade No.	Unit Pack NAED Number 04-6677-	Bulb	Service and Special Description	Vac(B) or Gas(C)	Design Volts	Design Amps.	Design Watts	Approx. Mean Spherical Candela (MSCd)	Rated Avg. Life (Hours)	Base	Filament Designation	Light Center Length		Max. Overall Length	
												In.	mm	In.	mm
57X	27478-7	G-4½	Auto	B	14.00	.24	3.36	2.00	500	Min. Bay.	C-2F	9/16	14.2	1½/16	27
63	27487-8	G-6	Auto, Aviation and Coin Machine	C	7.00	.63	4.41	3.00	1000	S.C. Bay.	C-2R	¾	19.0	17/16	37
64	27499-3	G-6	Auto, Aviation and Coin Machine	C	7.00	.63	4.41	3.00	1000	D.C. Bay.	C-2R	¾	19.0	17/16	37
67	27508-1	G-6	Auto	C	13.50	.59	7.97	4.00	5000* [9]	S.C. Bay.	C-2R	13/16	20.6	17/16	37
68	27523-0	G-6	Auto and Marine	C	13.50	.59	7.97	4.00	5000* [9]	D.C. Bay.	C-2R	13/16	20.6	17/16	37
72	27539-6	G-6	Special Service	B	22.00	.18	3.96	3.00	200	D.C. Bay.	C-2V	¾	19.0	17/16	37
† 73	26653-6	T-1¾	Auto	B	14.00	.08	1.12	0.3	15,000	Wedge	C2F	.40	10	.80	20.3
† 74	36368-9	T-1¾	Auto	B	14.00	.10	1.40	0.7	500	Wedge	C2F	.40	10	.80	20.3
X 81	27545-3	G-6	Auto, Aviation and Coin Machine	C	6.50	1.02	6.63	6.00	500	S.C. Bay.	C-2R	¾	19.0	17/16	37
82	27551-1	G-6	Auto and Marine	C	6.50	1.02	6.63	6.00	500	D.C. Bay.	C-2R	¾	19.0	17/16	37
89	27567-7	G-6	Auto	C	13.00	.58	7.50	6.00	750	S.C. Bay.	C-2R	¾	19.0	17/16	37
90	27575-0	G-6	Auto and Marine	C	13.00	.58	7.50	6.00	750	D.C. Bay.	C-2R	¾	19.0	17/16	37
93	20393-5	S-8	Auto [1]	C	12.80	1.04	13.31	15.00	700	S.C. Bay.	C-6	1½	28.6	2	51
94	20394-3	S-8	Auto and Marine [1]	C	12.80	1.04	13.31	15.00	700	D.C. Bay.	C-6	1½	28.6	2	51
96	36251-7	G-6	Auto	C	13.50	.69	9.32	4.00	5000* [9]	D.C. Bay.	C-2V	13/16	20.6	17/16	37
97	20518-7	G-6	Auto	C	13.50	.69	9.32	4.00	5000* [9]	S.C. Bay.	C-2V	13/16	20.6	17/16	37
97A	35802-8	G-6	Auto Outside Coated Translucent Amber	C	13.50	.69	9.32	-	5000* [9]	S.C. Bay.	C-2V	-	-	17/16	37
98	36253-3	G-6	Auto	C	13.00	.62	8.06	6.00	1300	S.C. Bay.	C-2V	¾	19.0	17/16	37
99	36255-8	G-6	Auto	C	13.00	.62	8.06	6.00	1300	D.C. Bay.	C-2V	¾	19.0	17/16	37
104	37505-5	B-6	Auto	C	12.80	1.00	12.80	12.00	1200	D.C. Bay.	C-6	1½/16	26.9	1¾	45
105	38154-1	B-6	Auto	C	12.80	1.00	12.80	12.00	1200	S.C. Bay.	C-6	1½/16	26.9	1¾	45
X 112	27600-6	TL-3	Flashlight-1 AA Cell [2]	B	1.20	.22	.26	-	5	Min. Sc.	S-2	-	-	15/16	24
123	27607-1	G-3½	Flashlight-1 D Cell	B	1.25	.30	.38	.10	10	Min. Sc.	S-2	23/32	18.2	15/16	24
131	27611-3	G-3½	Bicycle-1 D Cell	B	1.30	.10	.13	.03	50	Min. Sc.	C-2R	23/32	18.2	15/16	24
158	27616-2	T-3¼	Auto	B	14.00	.24	3.36	2.00	500	Wedge	C-2V	9/16	14.2	1½/16	27
X 159	27620-4	T-3¼	Indicator	B	6.30	.15	.95	.34	10,000	Wedge	C-2R	9/16	14.2	1½/16	27
161	27622-0	T-3¼	Auto	B	14.00	.19	2.66	1.00	4000	Wedge	C-2F	9/16	14.2	1½/16	27
168	39520-2	T-3¼	Auto	B	14.00	.35	4.90	3.00	1500	Wedge	C-2F	9/16	14.2	1½/16	27
182	39401-5	G-3½	Auto	B	14.40	.18	2.59	1.00	2000	Min. Bay.	C-2F	½	12.7	15/16	24
184	38200-2	T-3¼	Auto	B	14.40	.24	3.46	1.10	7000	Wedge	C-2F	9/16	14.2	1½/16	27
192	22462-6	T-3¼	Auto	B	13.00	.33	4.29	3.00	1000	Wedge	C-2V	9/16	14.2	1½/16	27
193	37457-9	T-3¼	Auto	B	14.00	.33	4.62	2.00	75,000	Wedge	C-2F	9/16	14.2	1½/16	27
194	36213-7	T-3¼	Auto	B	14.00	.27	3.78	2.00	3500	Wedge	C-2F	9/16	14.2	1½/16	27
194A	39993-1	T-3¼	Auto Outside Coated Translucent Amber	B	14.00	.27	3.78	-	3500	Wedge	C-2F	-	-	1½/16	27
198	37435-5	S-8	Auto [1]	C	12.80 14.00	2.25 .68	28.80 9.52	32.00 3.00	1500 5000*	D.C. Index	C-6 C-6	1¼	31.8	2	51
199	38240-8	S-8	Auto [1]	C	12.80	2.25	28.80	32.00	1500	S.C. Bay.	C-6	1¼	31.8	2	51
X 209	20395-0	B-6	Auto	C	6.50	1.78	11.57	15.00	100	S.C. Bay.	C-6	1½/16	26.9	1¾	45
X 210	20396-8	B-6	Auto and Marine	C	6.50	1.78	11.57	15.00	100	D.C. Bay.	C-6	1½/16	26.9	1¾	45
211-2	25360-9	T-3	Auto	C	12.80	.97	12.42	12.00	1000	Dbl. End Cap	C-8	-	-	123/32	44
212-2	27079-3	T-3	Auto	C	13.50	.74	10.00	6.00	5000	Dbl. End Cap	C-8	-	-	123/32	44
214-2	27080-1	T-3	Auto	C	13.50	.52	7.02	4.00	2000	Dbl. End Cap	C-8	-	-	123/32	44
222	27640-2	TL-3	Flashlight-2 AA Cells [2]	B	2.25	.25	.56	-	5	Min. Sc.	C-2R	-	-	15/16	24
† 222D		TL-3	Flashlight-2 AA Cells [2]	B	2.25	.25	.56	-	5	Wire Leads	C2R	-	-	-	-
233	27660-0	G-3½	Flashlight-2 C Cells	B	2.33	.27	.63	.42	10	Min. Sc.	C-2R	23/32	18.2	15/16	24
X 243	27668-3	TL-3	Flashlight-2 C Cells [2]	B	2.33	.27	.63	-	10	Min. Sc.	C-2R	-	-	15/16	24
S 256	36582-5	T-3¼	Auto. Flasher	B	14.0	.27	3.78	1.6	500	Min. Bay.	C-2R	.63	16	1.19	30.23
257	33457-3	G-4½	Auto. Flasher	B	14.00	.27	3.78	3.10	500 [5]	Min. Bay.	C-2R	5/8	15.9	1½/16	27
293	36939-7	G-4½	Auto	B	14.00	.33	4.62	2.00	7500	Min. Bay.	C-2F	9/16	14.2	1½/16	27

[1] Base pins approximately at right angles to plane of filament. [2] Lens end. [9] At 14.0 volts. *5000 plus Hours. †New Since Last Printing.
 S—Check Customer Service For Availability. X—Orders will be shipped until inventory is depleted; no longer manufactured.

MIN. & SEALED BEAM

Miniature Lamps

Lamp Trade No.	Unit Pack NAED Number 04-6677-	Bulb	Service and Special Description	Vac(B) or Gas(C)	Design Volts	Design Amps.	Design Watts	Approx. Mean Spherical Candela (MSCd)	Rated Avg. Life (Hours)	Base	Filament Designation	Light Center Length		Max. Overall Length	
												In.	mm	In.	mm
302	27684-0	G-5	Aviation [1]	B	28.00	.17	4.76	3.00	500	D.C. Bay.	C-2F	1 1/16	17.5	1 3/8	35
303	27686-5	G-6	Aviation [1]	B	28.00	.30	8.40	6.00	500	S.C. Bay.	C-2F	3/4	19.0	1 7/16	37
304	27692-3	G-6	Aviation [1]	B	28.00	.30	8.40	6.00	500	D.C. Bay.	C-2F	3/4	19.0	1 7/16	37
X 305	27695-6	S-8	Aviation [1]	C	28.00	.51	14.28	15.00	300	S.C. Bay.	C-2V	1 1/8	28.6	2	51
X 306	27699-8	S-8	Aviation [1]	C	28.00	.51	14.28	15.00	300	D.C. Bay.	C-2V	1 1/8	28.6	2	51
307	27701-2	S-8	Aviation [1]	C	28.00	.67	18.48	21.00	300	S.C. Bay.	C-2V	1 1/8	28.6	2	51
308	27707-9	S-8	Aviation [1]	C	28.00	.67	18.48	21.00	300	D.C. Bay.	C-2V	1 1/8	28.6	2	51
309	35583-4	S-11	Aviation [1]	C	28.00	.90	25.20	32.00	300	S.C. Bay.	C-2V	1 1/4	31.8	2 3/8	61
311	39987-3	S-11	Aviation [1]	C	28.00	1.29	36.12	50.00	300	S.C. Bay.	C-2V	1 1/4	31.8	2 3/8	61
S 312	27722-8	S-11	Aviation [1]	C	28.00	1.29	36.12	50.00	300	D.C. Bay.	C-2V	1 1/4	31.8	2 3/8	61
313	27726-9	T-3 1/4	Aviation	B	28.00	.17	4.76	3.50	500	Min. Bay.	C-2F	5/8	15.9	1 3/16	31
356	27757-4	G-3 1/2	Aviation	B	28.00	.17	4.76	3.50	500	Min. Bay.	C-2V	1/2	12.7	1 5/16	24
407	27770-7	G-4 1/2	Hand Lantern Flasher-4 F Cells	B	4.90	.30	1.47	1.40	50 [5]	Min. Sc.	C-2R	1 3/16	20.6	1 1/16	27
425	27779-8	G-4 1/2	Hand Lantern-4 F Cells	C	5.00	.50	2.50	2.30	15	Min. Sc.	C-2R	2 3/32	18.2	1 1/16	27
X 432	27794-7	G-4 1/2	Toy	B	18.00	.25	4.50	3.50	250	Min. Sc.	C-2V	2 3/32	18.2	1 1/16	27
502	27811-9	G-4 1/2	Hand Lantern-4 F Cells	B	5.10	.15	.77	.60	100	Min. Sc.	C-2R	2 3/32	18.2	1 1/16	27
509K	27821-8	G-6	Indicator	B	24.00	.18	4.32	2.80	1000	Cand. Sc.	C-2V	1 5/16	23.8	1 3/8	35
† 555	27118-9	T-3 1/4	Coin Machine	B	6.3	.25	1.60	.9	3000	Wedge	C-2R	2 1/32	16.5	1 1/4	32
561	22298-4	T-3	Auto	C	12.80	.97	12.41	12.00	1000	Double Wedge	C-8	-	-	1 23/32	44
562	27084-3	T-3	Auto	C	13.50	.74	10.00	6.00	2000 [9]	Double Wedge	C-8	-	-	1 23/32	44
563	27088-4	T-3	Auto	C	13.50	.52	7.02	4.00	1000 [9]	Double Wedge	C-8	-	-	1 23/32	44
605	27838-2	G-4 1/2	Flashlight-5 D Cells	C	6.15	.50	3.08	3.40	15	Min. Sc.	C-2R	2 3/32	18.2	1 1/16	27
623	27842-4	G-6	Auto. Two Identical Fil. in Series	B	28.00	.37	10.36	6.00	1000	S.C. Bay.	2C-2V	3/4	19.0	1 7/16	37
624	24734-6	G-6	Auto. Marine. Two Identical Fil. in Series	B	28.00	.37	10.36	6.00	1000	D.C. Bay.	2C-2V	3/4	19.0	1 7/16	37
631	27844-0	G-6	Auto. Two Identical Fil. in Series	C	14.00	.63	8.82	6.00	1000	S.C. Bay.	2C-2R	3/4	19.0	1 7/16	37
755	37693-9	T-3 1/4	Indicator	B	6.30	.15	.95	.33	20,000	Min. Bay.	C-2R	1 1/16	18.0	1 3/16	31
904	27785-5	T-5	Auto	C	13.50	.69	9.32	4.00	5000 * [9]	Wedge	C-2F	1 3/16	20.6	1 1/2	38
906	27790-5	T-5	Auto	C	13.00	.69	9.00	6.00	1000	Wedge	C-2F	1 3/16	20.6	1 1/2	38
908	20291-1	T-5	Emergency Lighting	C	6.00	1.50	9.00	12.00	50	Wedge	C-2R	1 3/16	20.6	1 1/2	39
912	27807-7	T-5	Auto	C	12.80	1.00	12.80	12.00	1000	Wedge	C-2R	1 3/16	20.6	1 1/2	38
914	20292-9	T-5	Emergency Lighting	C	4.00	.90	3.60	3.50	50	Wedge	C-6	1 3/16	20.6	1 1/2	39
916	20293-7	T-5	Auto	C	13.50	.54	7.30	2.00	10,000	Wedge	C-2F	1 3/16	20.6	1 1/2	39
921	20294-5	T-5	Auto	C	12.80	1.40	18.00	21.00	1000	Wedge	C-2R	1 3/16	20.6	1 1/2	39
922	20295-2	T-5	Auto	C	12.80	.98	12.55	15.00	200	Wedge	C-2R	1 3/16	20.6	1 1/2	39
923	20296-0	T-5	Auto	C	12.80	.90	12.50	12.50	500	Wedge	C-2R	1 3/16	20.6	1 1/2	39
1003	20397-6	B-6	Auto	C	12.80	.94	12.03	15.00	200	S.C. Bay.	C-6	1 1/16	26.9	1 3/4	45
1004	20398-4	B-6	Auto and Marine	C	12.80	.94	12.03	15.00	200	D.C. Bay.	C-6	1 1/16	26.9	1 3/4	45
X 1016	20399-2	S-8	Auto [1]	C	12.80 14.00	1.34 .59	17.15 8.26	21.00 6.00	300 1500	D.C. Index	C-6 C-6	1 1/4	31.8	2	51
1034	29678-0	S-8	Auto [1]	C	12.80 14.00	1.80 .59	23.04 8.26	32.00 3.00	200 5000	D.C. Index	C-6 C-6	1 1/4	31.8	2	51
1054	27935-6	RP-11	Marine [1]	C	32.00	.74	23.68	32.00	100	D.C. Bay.	C-2V	1 1/4	31.8	2 1/4	58
1061	30852-8	B-6	Indicator [1]	C	6.70	1.80	12.10	13.00	400	D.C. Bay.	C-6	1 1/16	26.9	1 3/4	4
1073	20402-4	S-8	Auto [1]	C	12.80	1.80	23.04	32.00	200	S.C. Bay.	C-6	1 1/4	31.8	2	51
1076	36280-6	S-8	Auto [1]	C	12.80	1.80	23.04	32.00	200	D.C. Bay.	C-6	1 1/4	31.8	2	51
1093	39590-5	S-8	Auto [1]	C	12.80	1.19	15.23	15.00	1000	S.C. Bay.	C-2R	1 1/4	31.8	2	51
1129	20403-2	S-8	Auto [1]	C	6.40	2.63	16.83	21.00	200	S.C. Bay.	C-6	1 1/4	31.8	2	51
1133	37304-3	RP-11	Auto [1]	C	6.20	3.91	24.24	32.00	200	S.C. Bay.	C-2R	1 1/4	31.8	2 1/4	58

[1] Base pins approximately at right angles to plane of filament.

[5] Average useful life.

[9] At 14.0 volts.

* 5000 plus Hours.

† New Since Last Printing.

S — Check Customer Service For Availability.

X — Orders will be shipped until inventory is depleted; no longer manufactured.

MIN. & SEALED BEAM

Miniature Lamps

Lamp Trade No.	Unit Pack NAED Number 04-6677-	Bulb	Service and Special Description	Vac(B) or Gas(C)	Design Volts	Design Amps.	Design Watts	Approx. Mean Spherical Candela (MSCd)	Rated Avg. Life (Hours)	Base	Filament Designation	Light Center Length		Max. Overall Length	
												In.	mm	In.	mm
1141	20405-7	S-8	Auto [1]	C	12.80	1.44	18.43	21.00	1000	S.C. Bay.	C-6	1 1/4	31.8	2	51
1142	20406-5	S-8	Auto [1]	C	12.80	1.44	18.43	21.00	1000	D.C. Bay.	C-6	1 1/4	31.8	2	51
1143	27991-9	RP-11	Auto [1]	C	12.50	2.00	25.00	32.00	400	S.C. Bay.	C-2R	1 1/4	31.8	2 1/4	58
1144	27992-7	RP-11	Auto [1]	C	12.50	2.00	25.00	32.00	400	D.C. Bay.	C-2R	1 1/4	31.8	2 1/4	58
1154	20407-3	S-8	Auto [1]	C	6.40 7.00	2.63 .75	16.83 5.25	21.00 3.00	200 1000	D.C. Index	C-6 C-6	1 1/4	31.8	2	51
X 1155	28008-1	G-6	Auto	C	13.50	.59	7.97	4.00	5000* [9]	S.C. Bay.	2C-2R	1 3/16	20.6	1 7/16	37
1156	35630-3	S-8	Auto [1]	C	12.80	2.10	26.88	32.00	1200	S.C. Bay.	C-6	1 1/4	31.8	2	51
1157	29656-6	S-8	Auto [1]	C	12.80 14.00	2.10 .59	26.88 8.26	32.00 3.00	1200 5000*	D.C. Index	C6 C-6	1 1/4	31.8	2	51
1157A	29655-7	S-8	Auto. Outside Coated Translucent Amber [1]	C	12.80 14.00	2.10 .59	26.88 8.26	- -	1200 5000*	D.C. Index	C-6 C-6	1 1/4	31.8	2	51
1157NA	29673-1	S-8	Auto. Amber (Natural) [1]	C	12.80 14.00	2.10 .59	26.88 8.26	24.00 2.20	1200 5000*	D.C. Index	C-6 C-6	1 1/4	31.8	2	51
X 1158	20410-7	S-8	Auto [10]	C	6.40 7.00	2.63 .75	16.83 5.25	21.00 3.00	200 1000	D.C. Bay.	C-6 C-6	1 1/4	31.8	2	51
1159	39190-4	S-8	Auto [1]	C	12.80	1.60	20.48	21.00	500	S.C. Bay.	C-6	1 1/4	31.8	2	51
1176	20411-5	S-8	Auto [10]	C	12.80 14.00	1.34 .59	17.15 8.26	21.00 6.00	300 1500	D.C. Bay.	C-6 C-6	1 1/4	31.8	2	51
1183	28030-5	RP-11	Auto [1]	C	5.50	6.25	34.98	50.00	100	S.C. Bay.	C-2V	1 1/4	31.8	2 1/4	58
1184	28031-3	RP-11	Auto [1]	C	5.50	6.25	34.98	50.00	100	D.C. Bay.	C-2V	1 1/4	31.8	2 1/4	58
1195	28036-2	RP-11	Auto [1]	C	12.50	3.00	37.50	50.00	300	S.C. Bay.	C-2R	1 1/4	31.8	2 1/4	58
1196	39639-0	RP-11	Auto [1]	C	12.50	3.00	37.50	50.00	300	D.C. Bay.	C-2R	1 1/4	31.8	2 1/4	58
1203	28040-4	S-8	Auto [1]	C	28.00	.71	19.60	21.00	400	S.C. Bay.	C-2V	1 1/4	31.8	2	51
1209	28045-3	RP-11	Auto	C	6.10	4.00	23.97	32.00	125	S.C. Pref. [8]	C-6	7/8	22.2	2 1/4	58
1224	28047-9	G-6	Marine [1]	B	32.00	.16	5.12	3.80	500	D.C. Bay.	C-2V	1 1/16	17.5	1 7/16	37
1224K	28051-1	G-6	Indicator	B	32.00	.16	5.12	3.80	500	Cand. Sc.	C-2V	7/8	22.2	1 3/8	35
1228	28056-0	S-8	Marine [10]	C	32.00	.45	14.40	15.00	250	D.C. Bay.	C-2V	1 1/8	28.6	2	51
1251	28065-1	G-6	Auto. Two Identical Supported Fil. in Series	B	28.00	.23	6.44	3.00	2000	S.C. Bay.	2C-2V	3/4	19.0	1 1/16	37
1252	28066-9	G-6	Auto. Two Identical Supported Fil. in Series	B	28.00	.23	6.44	3.00	2000	D.C. Bay.	2C-2V	3/4	19.0	1 1/16	37
1295	29731-7	S-8	Auto	C	12.5	3.0	37.50	50.0	200	S.C. Bay.	C-2R	1.25	31.75	2.00	50.80
† 1309	28069-3	B-6	Aviation, Two Identical Fil. in Series	C	28.0	.52	14.56	15.0	300	S.C. Bay.	2C-2R	1 1/16	26.9	1 3/4	45
S 1408	23387-4	T-3 1/4	Signal	B	10.00	.13	1.30	.80	250	Min. Bay.	C-2V	5/8	15.9	1 1/16	31
1445	28088-3	G-3 1/2	Auto	B	14.40	.18	1.94	.70	2000	Min. Bay.	C-2V	1/2	12.7	1 5/16	24
1449	28107-1	G-3 1/2	Toy	B	14.00	.20	2.80	2.00	250	Min. Sc.	C-2V	23/32	18.2	1 5/16	24
1450	28113-9	G-3 1/2	Indicator	B	24.00	.035	.84	.30	3000	Min. Bay.	C-2V	1/2	12.7	1 5/16	24
1460	32271-9	S-8	Instrument. Medical	C	6.50	2.75	17.88	23.00	100	D.C. Pref. [11]	C-6	1 1/4	31.8	2	51
1460X	20161-6	S-8	Microscope. Silver Contacts	C	6.50	2.75	17.88	23.00	100	D.C. Pref.	C-6	1 1/4	31.8	2	51
1487	28145-1	T-3 1/4	Coin Machine	B	14.00	.20	2.80	1.50	3000	Min. Sc.	C-2V	1 5/16	23.8	1 1/16	31
X 1490	28155-0	T-3 1/4	Radio	B	3.20	.16	.51	.20	3000	Min. Bay.	C-2R	1 1/16	18.0	1 1/16	31
1493	28160-0	S-8	Instrument. Microscope Illuminator [12] [10]	C	6.50	2.75	17.88	23.00	100	D.C. Bay.	C-6	1 1/8	28.6	2	51
1630	28179-0	S-8	Instrument. Microscope Illuminator [12]	C	6.50	2.75	17.88	23.00	100	D.C. Pref. [11]	C-6	1	25.4	2	51
S 1631X	32923-5	S-8	Instrument. Colorimeter. Silver Plated Brass Contact Soldered to Each Brass Eyelet. Selected Bulb Top. High Temp. Collar Solder. Nickel Plated Base	C	6.50	2.75	17.88	23.00	100	D.C. Pref. [11]	C-6	1	25.4	2	51
1638	24483-0	S-8	Marine. Two Identical Filaments in Series	C	28.00	1.02	28.56	32.00	500	D.C. Bay.	2C-6	1 1/4	31.8	2	51

[1] Base pins approximately at right angles to plane of filament.

[8] Dimension, bottom of base contact to the bottom of the collar is .562.

*5000 plus Hours. †New Since Last Printing.

S—Check Customer Service For Availability.

X—Orders will be shipped until inventory is depleted; no longer manufactured.

[9] At 14.0 volts.

[10] Base pins approximately parallel to plane of filament.

[11] Dimension, bottom of base contact to the bottom of the collar is .406.

[12] Bulb top selected for minimum glass imperfection.

MIN. & SEALED BEAM

Miniature Lamps

Lamp Trade No.	Unit Pack NAED Number 04-6677-	Bulb	Service and Special Description	Vac(B) or Gas(C)	Design Volts	Design Amps.	Design Watts	Approx. Mean Spherical Candela (MSCd)	Rated Avg. Life (Hours)	Base	Filament Designation	Light Center Length		Max. Overall Length	
												In.	mm	In.	mm
1651	28184-0	S-8	Hand Lantern-4 F Cells or 8 F Cells in Series Parallel [1]	C	5.00	.60	3.00	3.00	20	S.C. Bay.	C-6	1 1/8	28.6	2	51
1662	36555-1	S-8	Construction Equipment [1] [3]	C	28.00	.93 .34	26.00 9.50	32.00 6.00	400 1000	D.C. Index	CC-6 C-2V	1 1/4	38.1	2	51
S 1665	32902-9	S-8	Aircraft	C	28.00	.80	22.40	21.00	1000	S.C. Bay.	C-2V	1 1/8	28.6	2	51
X 1666	28188-1	S-8	Aviation. Both Fil. Offset [1]	C	28.00	.63 .63	17.64 17.64	21.00 21.00	300 300	D.C. Bay.	CC-6 CC-6	1 1/4	31.8	2	51
S 1676	28191-5	S-8	Indicator. Subway Door	B	45.50	.22	10.00	7.60	1000	D.C. Bay.	C-13	1 1/8	28.6	2	51
1683	28194-9	S-8	Auto and Aviation. Two Identical Fil. in Series. Base Down to Horiz. [1]	C	28.00	1.02	28.56	32.00	500	S.C. Bay.	2C-2R	1 1/4	31.8	2	51
1691	28197-2	S-8	Auto. Two Identical Fil. in Series [1]	C	28.00	.61	17.08	15.00	1000	S.C. Bay.	2C-2R	1 1/8	28.6	2	51
1692	28198-0	S-8	Marine. Two Identical Fil. in Series [1]	C	28.00	.61	17.08	15.00	1000	D.C. Bay.	2C-2R	1 1/8	28.6	2	51
1724	28204-6	S-11	Indicator. Base Down to Horiz. [1]	C	6.20	4.50	27.90	32.00	400	D.C. Bay.	C-6	1 1/4	31.8	2 3/8	61
1813	28233-5	T-3 1/4	Radio	B	14.40	.10	1.44	.86	1000	Min. Bay.	C-2V	5/8	15.9	1 1/8	31
1815	28237-6	T-3 1/4	Indicator	B	14.00	.20	2.80	1.40	3000	Min. Bay.	C-2V	1 1/8	18.0	1 1/8	31
1816	28241-8	T-3 1/4	Aviation and Auto	B	13.00	.33	4.29	3.00	1000	Min. Bay.	C-2V	5/8	15.9	1 1/8	31
1819	28247-5	T-3 1/4	Aviation and Indicator	B	28.00	.04	1.12	.34	4000	Min. Bay.	C-2V	5/8	15.9	1 1/8	31
1820	28252-5	T-3 1/4	Aviation	B	28.00	.10	2.80	1.60	1000	Min. Bay.	C-2F	5/8	15.9	1 1/8	31
S 1821	28255-8	T-3 1/4	Indicator	B	28.00	.17	4.76	3.40	500	Min. Sc.	C-2F	1 3/8	20.6	1 1/8	31
1822	28257-4	T-3 1/4	Indicator	B	36.00	.10	3.60	2.10	1000	Min. Bay.	C-2F	5/8	15.9	1 1/8	31
1828	28265-7	T-3 1/4	Indicator	B	37.50	.05	1.88	.65	3000	Min. Bay.	C-2F	5/8	15.9	1 1/8	31
1829	28267-3	T-3 1/4	Coin Machine and Indicator	B	28.00	.07	1.96	1.00	1000	Min. Bay.	C-2F	5/8	15.9	1 1/8	31
1835	28278-0	T-3 1/4	Indicator	B	55.00	.05	2.75	1.10	5000	Min. Bay.	C-5	5/8	15.9	1 1/8	31
1847	28284-8	T-3 1/4	Radio, TV and Indicator	B	6.30	.15	.95	.38	15,000	Min. Bay.	C-2R	1 1/8	18.0	1 1/8	31
1850	28288-9	T-3 1/4	Signal	B	5.00	.09	.45	.25	1500	Min. Bay.	C-6	5/8	15.9	1 1/8	31
1864	36214-5	T-3 1/4	Aviation	B	28.00	.17	4.76	3.00	1500	Min. Bay.	C-2F	5/8	15.9	1 1/8	31
1866	28294-7	T-3 1/4	Radio, TV and Indicator	B	6.30	.25	1.58	.65	5000	Min. Bay.	C-2R	1 1/8	18.0	1 1/8	31
1889	28302-8	T-3 1/4	Auto	B	14.00	.27	3.78	2.00	3500	Min. Bay.	C-2F	5/8	14.2	1 1/8	31
1891	28304-4	T-3 1/4	Auto Radio and Indicator	B	14.00	.24	3.36	2.10	500	Min. Bay.	C-2F	5/8	14.2	1 1/8	31
1892	28307-7	T-3 1/4	Auto. Radio	B	14.40	.12	1.73	.75	1000	Min. Bay.	C-2F	5/8	15.9	1 1/8	31
1893	28310-1	T-3 1/4	Radio	B	14.00	.33	4.62	2.00	7500	Min. Bay.	C-2F	5/8	15.9	1 1/8	31
1895	28313-5	G-4 1/2	Auto	B	14.00	.27	3.78	2.00	3500	Min. Bay.	C-2F	5/8	14.2	1 1/8	27
S 1895A	28996-7	G-4 1/2	Auto. Outside Coated Translucent Amber	B	14.00	.27	3.78	-	3500	Min. Bay.	C-2F	-	-	1 1/8	27
1895R	32261-0	G-4 1/2	Auto. Outside Coated Translucent Red	B	14.00	.27	3.78	-	3500	Min. Bay.	C-2F	-	-	1 1/8	27
1896	28315-0	G-4 1/2	Auto	B	7.00	.50	3.50	2.20	3000	Min. Bay.	C-2R	5/8	14.2	1 1/8	27
1906	43802-8	T-3 1/4	Signal	B	5.00	.07	.35	.19	1000	Min. Bay.	C-6	5/8	15.9	1 1/8	31
2057	25775-8	S-8	Auto [1]	C	12.80 14.00	2.10 .48	26.88 6.72	32.00 2.00	1200 5000	D.C. Index	C-6/ C-6	1 1/4	31.8	2	51
2057NA	26638-7	S-8	Auto [1]	C	12.80 14.00	2.10 .48	26.88 6.72	24.00 1.50	1200 5000	D.C. Index	C-6/ C-6	1 1/4	31.8	2	51
2232	32906-0	S-8	Aircraft. Spiral Lead	C	28.00	.64	18.00	18.00	2000	S.C. Bay.	CC-8	1 3/8	30.1	2	51
2355			See 3155												
2356			See 3156												
2357	39570-7	S-8	Auto [1]	C	12.80 14.00	2.23 .59	28.54 8.26	40.00 3.00	600 5000*	D.C. Index	C-6 C-6	1 1/4	31.8	2	51
2357NA	22826-2	S-8	Auto. Amber (Natural)	C	12.80 14.00	2.23 .59	28.54 8.26	28.00 2.20	600 5000*	D.C. Index	C-6 C-6	1 1/4	31.8	2	51
2358			See 3057												
2358NA			See 3057NA												

[1] Base pins approximately at right angles to plane of filament.

[3] Filament wiring reverse to 1157.

*5000 plus Hours.

S—Check Customer Service For Availability.

X—Orders will be shipped until inventory is depleted; no longer manufactured.

MIN. & SEALED BEAM

Miniature Lamps

Lamp Trade No.	Unit Pack NAED Number 04-6677-	Bulb	Service and Special Description	Vac(B) or Gas(C)	Design Volts	Design Amps.	Design Watts	Approx. Mean Spherical Candela (MSCd)	Rated Avg. Life (Hours)	Base	Filament Desig- nation	Light Center Length		Max. Overall Length	
												In.	mm	In.	mm
2359			See 3157												
2359NA			See 3157NA												
2455			See 3155												
2456			See 3156												
2457			See 3057												
2458			See 3157												
2458NA			See 3157NA												
† 3057	26328-5	S-8	Auto Replaces 2358/2457	C	12.80 14.00	2.10 0.48	26.88 6.72	32.00 2.00	1200 1500	D.C. Wedge	C-6/ C-6	1.10	27.9	2.12	53.9
† 3057NA	26344-2	S-8	Auto Replaces 2358NA/2457NA	C	12.80 14.00	2.10 0.48	26.88 6.72	24.00 1.50	1200 1500	D.C. Wedge	C-6/ C-6	1.10	27.9	2.12	53.9
3155	31059-9	S-8	Auto, Replaces 2455/2355	C	12.8	1.6	20.5	21	1500	S.C. Wedge	C-6		27.9	2 1/4	53.9
† 3156	31061-5	S-8	Auto Replaces 2356/2456	C	12.80	2.10	26.88	32.00	1200	S.C. Wedge	C-6	1.10	27.9	2.12	53.9
† 3157	26346-7	S-8	Auto Replaces 2359/2458	C	12.80 14.00	2.10 .59	26.88 8.26	32.00 3.00	1200 1500	D.C. Wedge	C-6/ C-6	1.10	27.9	2.12	53.9
† 3157NA	31062-3	S-8	Auto Replaces 2359NA/2458NA	C	12.80 14.00	2.10 .59	26.88 8.26	24.00 1.50	1200 1500	D.C. Wedge	C-6/ C-6	1.10	27.9	2.12	53.9

†New Since Last Printing.

Miniature Blister Carded (MBC) Lamps (All Blister Cards are Packaged 10 Cards Per Carton)

Trade Number	NAED Number 04-6677-	Lamps/Card	Service and Special Description	Design Volts	Design Watts	MSCd	Rated Avg. Life (Hours)	Base
PR2	29110-4	2	Flashlight 2 D Cells	2.38	1.19	.80	15	S.C. Min. Fig.
PR3	29121-1	2	Flashlight 3 D Cells	3.57	1.79	1.50	15	S.C. Min. Fig.
PR4	29122-9	2	Flashlight 2 C Cells	2.33	.63	.40	10	S.C. Min. Fig.
PR12	29125-2	2	Flashlight 5 D Cells	5.95	3.00	3.10	15	S.C. Min. Fig.
PR13	29131-0	2	Hand Lantern 4-F Cells	4.75	2.38	2.20	15	S.C. Min. Fig.
PR15	29133-6	2	Hand Lantern 6 Volt Battery	4.82	2.41	2.00	30	S.C. Min. Fig.
X KPR102	39562-4	2	Flashlight Krypton 2 D Cells	2.40	1.68	1.30	15	S.C. Min. Fig.
X KPR103	39563-2	2	Flashlight Krypton 3 D Cells	3.60	2.70	2.70	20	S.C. Min. Fig.
X KPR113	39564-0	2	Flashlight Krypton 4 F Cells	4.80	3.60	4.06	20	S.C. Min. Fig.
X KPR131	39565-7	2	Flashlight Krypton 2 D Cells	2.40	.835	2.0	15	S.C. Min. Fig.
X HPR52	39566-5	2	Flashlight Halogen 2 D Cells	2.80	2.38	2.78	10	S.C. Min. Fig.
53	29143-5	2	Auto and Indicator	14.40	1.73	1.00	1000	Min. Bay.
57	29145-0	2	Auto	14.00	3.36	2.00	500	Min. Bay.
63	29147-6	2	Auto, Aviation and Coin Machine	7.00	4.41	3.0	1000	S.C. Bay.
67/97	29150-0	2	Auto	13.5	7.97	4.00	5000* ^[1]	S.C. Bay.
89	29151-8	2	Auto	13.00	7.50	6.00	750	S.C. Bay.
90	29153-4	2	Auto and Marine	13.00	7.50	6.00	750	D.C. Bay.
93	29154-2	2	Auto ^[2]	12.80	13.31	15.00	700	S.C. Bay.
168	29157-5	2	Auto	14.00	4.90	3.00	1500	Wedge
194/158	29158-3	2	Auto	14.00	3.78	2.00	3500	Wedge
194A	29159-1	2	Auto, Outside Coated Translucent Amber	14.00	3.78	—	3500	Wedge
211-2	29161-7	2	Auto	12.80	12.42	12.00	1000	Dbl. End Cap
X 222	39532-7	2	Flashlight 2 AA Cells ^[3]	2.25	.56	—	5	Min. S.C.
X 407	39533-5	2	Hand Lantern Flasher 4 F Cells	4.90	1.47	1.40	50 ^[3]	Min. S.C.
561	29173-2	2	Auto	12.80	12.41	12.00	1000	Double Wedge
631	29179-9	2	Auto Two Identical Filaments in Series	14.00	8.82	6.00	1000	S.C. Bay.
904	29180-7	2	Auto	13.50	9.32	4.00	5000* ^[1]	Wedge
906	30264-6	2	Auto	13.00	9.00	6.00	1000	Wedge

^[1] At 14 volts.

*5000 Plus Hours.

^[3] Lens End.

^[4] Average Useful Life.

X—Orders will be shipped until inventory is depleted; no longer manufactured.

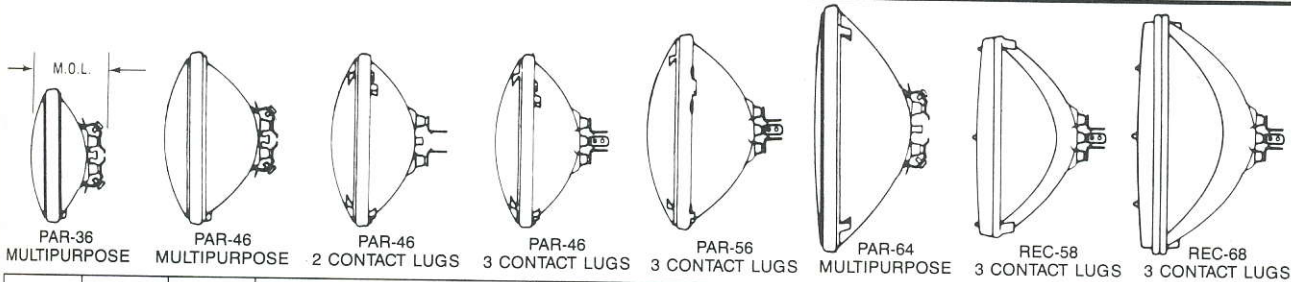
MIN. & SEALED BEAM

Miniature Blister Carded (MBC) Lamps (All Blister Cards are Packaged 10 Cards Per Carton)

Trade Number	NAED Number 04-6677-	Lamps/Card	Service and Special Description	Design Volts	Design Watts	MSCd	Rated Avg. Life (Hours)	Base
912	29185-6	2	Auto	12.80	12.80	12.00	1000	Wedge
921	29188-0	2	Auto	12.80	18.00	21.00	1000	Wedge
1003	29191-4	2	Auto	12.80	12.03	15.00	200	S.C. Bay.
1004	29194-8	2	Auto and Marine	12.80	12.03	15.0	200	D.C. Bay.
1141	29201-1	2	Auto ^[2]	12.80	18.43	21.00	1000	S.C. Bay.
1154	29203-7	2	Auto ^[2]	6.40 7.00	16.83 5.25	21.00 3.00	200 1000	D.C. Index
1155	29204-5	2	Auto	13.50	7.97	4.00	5000* ^[1]	S.C. Bay.
1156/1073	29208-6	2	Auto ^[2]	12.80	26.88	32.00	1200	S.C. Bay.
1157/1034	29225-0	2	Auto ^[2]	12.80 14.00	26.88 8.26	32.00 3.00	1200 5000*	D.C. Index
1157A/1034A	29228-4	2	Auto Outside Coated Translucent Amber ^[2]	12.80 14.00	26.88 8.26	32.00 3.00	1200 5000*	D.C. Index
1157NA	29236-7	2	Auto Natural Amber ^[2]	12.80 14.00	26.88 8.26	32.00 3.00	1200 5000*	D.C. Index
1445	29237-5	2	Auto	14.40	1.94	.70	2000	Min. Bay.
1891	29239-1	2	Auto, Radio and Indicator	14.00	3.36	2.10	500	Min. Bay.
1893	29241-7	2	Radio	14.00	4.62	2.00	7500	Min. Bay.
1895	29249-0	2	Auto	14.00	3.78	2.00	3500	Min. Bay.
2057	29264-9	2	Auto ^[2]	12.80 14.00	26.88 6.72	32.00 2.00	1200 5000	D.C. Index
2057NA	29265-6	2	Auto Natural Amber ^[2]	12.80 14.00	26.88 6.72	24.00 1.50	1200 5000	D.C. Index
2357	30708-2	2	Auto ^[2]	12.80 14.00	28.54 8.26	40.00 3.00	600 5000*	D.C. Index
2357NA	30707-4	2	Auto Natural Amber ^[2]	12.80 14.00	28.54 8.26	28.00 2.20	600 5000	D.C. Index
3057/2457/2358	26350-9	2	Auto Replaces 2457/2358	12.80 14.00	26.88 6.72	32.00 2.00	1200 1500	D.C. Wedge
3057NA/2457NA/2358NA	26359-0	2	Auto Natural Amber Replaces 2457NA/2358NA	12.80 14.00	26.88 6.72	24.00 1.50	1200 1500	D.C. Wedge
3155/2455/2355	31063-1	2	Auto Replaces 2455/2355	12.80	20.50	21.00	1500	S.C. Wedge
3156/2456/2356	30582-1	2	Auto Replaces 2456/2356	12.80	26.88	32.00	1200	S.C. Wedge
3157/2458/2359	26360-8	2	Auto Replaces 2458/2359	12.80 14.00	26.88 8.26	32.00 3.00	1200 1500	D.C. Wedge
3157NA/2458NA/2359NA	30581-3	2	Auto Natural Amber Replaces 2458NA/2359NA	12.80 14.00	26.88 8.26	24.00 1.50	1200 1500	D.C. Wedge
9004	39557-4	1	Auto—Replaceable Halogen Headlamp Bulb	12.80 12.80	65.00 45.00	95.00 56.00	150 320	Special
9005	20814-0	1	Auto—Replaceable Halogen Headlamp—Bulb High Beam	12.80	65.00	136.00	150 ^[1]	Special
9006	20816-5	1	Auto Replaceable Halogen Headlamp Bulb—Low Beam	12.80	55.00	80.00	320 ^[1]	Special
12258	30612-6	1	H1 Halogen	12.00	55.00	123.40	150	P14.5s
12311	30611-8	1	H2 Halogen	12.00	55.00	143.23	150	X511
12336	30609-2	1	H3 Halogen	24.00	70.00	139.27	150	PK22s
12455	30610-0	1	H3 Halogen	12.00	100.00	787.00	100	PK22s
12818	29292-0	2	Auto Cartridge	12.00	3.00	2.11	600	SV6
12829	21791-9	2	Auto Indicator	12.00	2.00	—	600	BA7s
12342/99	26684-1	1	H4 Halogen Heavy Duty	12.00 12.00	60.00 55.00	131.30 127.32	100 200	P43t
12844	29354-8	2	Auto Cartridge	12.00	5.00	2.86	300	SV8.5
12854	29420-7	2	Auto Cartridge	12.00	10.00	9.15	600	SV8.5

^[1] At 14 volts. *5000 Plus Hours. ^[2] Base Pins Approximately at Right Angles to Plane of Filament.
X—Orders will be shipped until inventory is depleted; no longer manufactured.

Sealed Beam Lamps



Lamp Trade No.	Unit Pack NAED Number 04-6677-	Bulb	Service and Special Description	Design Volts	Design Watts or Amps.	Approx. Initial Max. Beam Candela	Approx. Spread to 10% Max. C.P. (Deg.)		Rated Avg. Life (Hours)	Base	Filament Desig- nation	Max. Overall Length	
							Hor.	Vert.				In.	mm
4000	39498-1	PAR-46	Auto Headlamp Low Beam-4-Lamp Round System. [13]	12.8 12.8	37.5 60.0	-	-	-	200 [9] 320 [9]	3 Lugs	C-6 C-6	4	102
X 4001	39499-9	PAR-46	Auto Headlamp High Beam-4 Lamp Round System	12.8	37.5	-	-	-	200 [9]	2 Lugs	C-6	4	102
4001A	21815-6	PAR-46	Warning Lamp, Amber	12.8	37.5	-	26	5	200 [9]	2 Lugs	C-6	4	102
4001R	21818-0	PAR-46	Warning Lamp, Red	12.8	37.5	-	26	5	200 [9]	2 Lugs	C-6	4	102
4007	21858-6	PAR-46	Spot/Flood Lamp	13.0 13.0	100.0 100.0	200,000 50,000	7 13	5 16	25 25	3M-P	C-6 C-6	3 3/8	92
4013	21763-8	PAR-46	Tractor	6.4	25.0	900	80	20	300	M-P	C-6	3 1/16	94
4014	21470-0	PAR-36	Auto Signal	6.4	18.0	1,500	50	25	200	M-P	C-6	2 3/4	70
4019	21746-3	PAR-46	Tractor	6.2	30.0 Nom.	5,500	Trapezoidal		300 [6]	M-P	C-6	3 1/16	94
4040	33723-8	PAR-46	Auto Headlamp Low Beam-4-Lamp Round System. [13]	12.8 12.8	37.5 60.0	-	-	-	300 [9] 500 [9]	3 Lugs	C-6 C-6	4	102
4044	21484-1	PAR-36	Emergency Lighting	12.0	12.0	1,100	30	25	150	M-P	C-2R	2 3/4	70
4049	20114-5	PAR-46	Spot Lamp	13.0	150.0	300,000	15	7	15	M-P	C-6	3 1/16	94
X 4340	21727-3	PAR-36	Electric Vehicles	48.0	80.0	2,500	Trapezoidal		400	M-P	C-2V	2 3/4	70
X 4404	21518-6	PAR-36	Auto Spot [13]	12.8	30.0	35,000	9	4	300	M-P	C-6	2 3/4	70
4405	21541-8	PAR-36	Auto Spot [13]	12.8	30.0	50,000	6	5	100	M-P	C-6	2 3/4	70
Q4405	21601-0	PAR-36	Spot Light	12.8	50.0	50,000	6	5	200	M-P	C-6	2 3/4	70
4406	21596-2	PAR-36	Tractor	12.8	35.0 Nom.	600	80	30	300 [9]	M-P	C-6	2 3/4	70
4411	21616-8	PAR-36	Auto Tractor	12.8	35.0 Nom.	4,000	Trapezoidal		300 [9]	M-P	C-6	2 3/4	70
4412	21792-7	PAR-46	Auto Fog [13]	12.8	35.0	10,000	40	6	300	M-P	C-6	3 1/16	94
4412A	21811-5	PAR-46	Auto Fog Amber [13]	12.8	35.0	8,800	40	6	300	M-P	C-6	3 1/16	94
4413	28919-9	PAR-46	Tractor	12.8	35.0 Nom.	1,300	80	20	300 [9]	M-P	C-6	3 1/16	94
4414	21485-8	PAR-36	Auto Signal	12.8	18.0	1,500	50	25	300	M-P	C-6	2 3/4	70
4414A	21497-3	PAR-36	Auto Signal Amber	12.8	18.0	1,000	50	25	300	M-P	C-6	2 3/4	70
4414AX	21525-1	PAR-36	Auto Signal Light Amber	12.8	18.0	1,200	50	25	300	M-P	C-6	2 3/4	70
4414R	21528-5	PAR-36	Auto Signal Red	12.8	18.0	-	50	25	300	M-P	C-6	2 3/4	70
4415	21584-8	PAR-36	Auto Fog [13]	12.8	35.0	9,000	40	5	300	M-P	C-6	2 3/4	70
4415A	21587-1	PAR-36	Auto Fog Amber [13]	12.8	35.0	7,000	40	5	300	M-P	C-6	2 3/4	70
4416	21560-8	PAR-36	Auto Spot [15]	12.8	30.0	35,000	11	4	300	M-P	C-6	2 3/4	70
4416R	21546-7	PAR-36	Auto Signal Red	12.8	30.0	-	11	4	300	M-P	C-6	2 3/4	70
4419	21776-0	PAR-46	Tractor	12.8	35.0 Nom.	1,600	Trapezoidal		300 [9]	M-P	C-6	3 1/16	94
X 4420	32664-5	PAR-46	Cycle Headlamp	12.8 12.8	30 30	-	-	-	300 300	3 Lugs	C-6 C-6	4	102
4421	22033-5	PAR-46	Auto Special Service [13]	13.0	100.0	23,000	50	6	300	M-P	C-6	3 3/4	96
4435	21773-7	PAR-46	Auto Spot [13] [15]	12.8	30.0	45,000	6	5	300	M-P	C-6	3 1/16	94
X 4440	30795-9	PAR-36	Tractor	12.8 12.8	40.0 40.0	6,000 4,500	33	9	320 320	3 Lugs	C-6 C-6	3	77
4442	21530-1	PAR-36	Special Service, Flood	12.8	18.0 Nom.	100	80	80	2000	M-P	C-6	2 3/4	70
4446	21516-0	PAR-36	Special Service, Flood	12.8	25.0 Nom.	150	80	80	2000	M-P	C-6	2 3/4	70
4461	21604-4	PAR-36	Tractor	12.8	60.0	6,000	Trapezoidal		300 [9]	M-P	C-6	2 3/4	70
4464	21620-0	PAR-36	Auto Signal	12.8	60.0	50,000	12	5	300	M-P	C-6	2 3/4	70
† 4478	28300-2	PAR-46	CIM Flood	13.0	60	1,600	56	32	800 [9]	2 Lugs	2C-6	4	102
4502	21674-7	PAR-36	Auto, Aviation, Military Headlamp	28.0	50.0	10,000	40	7	400	M-P	CC-6	2 3/4	70

[9] At 7.0 volts.

[15] Lightly stippled lens.

[9] At 14.0 volts.

Note: All sealed beams use heat resistant glass bulbs.

[13] Filament shielded.

† New Since Last Printing.

X—Orders will be shipped until inventory is depleted; no longer manufactured.

MIN. & SEALED BEAM

Sealed Beam Lamps

Lamp Trade No.	Unit Pack NAED Number 04-6677-	Bulb	Service and Special Description	Design Volts	Design Watts or Amps.	Approx. Initial Max. Beam Candela	Approx. Spread to 10% Max. C.P. (Deg.)		Rated Avg. Life (Hours)	Base	Filament Design- ation	Max. Overall Length	
							Hor.	Vert.				In.	mm
4505	21668-9	PAR-36	Aviation Passing	28.0	50.0	45,000	11	5	400	M-P	CC-6	2¾	70
4505R	21731-5	PAR-36	Aviation Passing Red	28.0	50.0	-	11	5	400	M-P	CC-6	2¾	70
† 4506	21371-0	PAR-36	Hand Lantern [15]	4.7	.5	4,500	4	4	30	M-P	C-2R	2¾	70
4509	21622-6	PAR-36	Aviation Landing	13.0	100.0	110,000	11	6	25	M-P	C-6	2¾	70
4509S	21641-6	PAR-36	Spot Lamp [13]	13.0	100.0	110,000	11	6	25	M-P	C-6	2¾	70
4510	21472-6	PAR-36	Auto Utility	6.4	25.0	750	80	20	300	M-P	C-6	2¾	70
4511	21468-4	PAR-36	Auto Tractor	6.2	30.0 Nom.	2,300	Trapezoidal		300 [5]	M-P	C-6	2¾	70
4512	21387-6	PAR-36	Bicycle Headlamp	4.7	.5	150	Trapezoidal		100	M-P	C-2R	2¾	70
4515	21480-9	PAR-36	Auto Spot [13]	6.4	30.0	55,000	5	5	100	M-P	C-6	2¾	70
4516	21467-6	PAR-36	Auto Spot	6.2	30.0	40,000	9	4	300	M-P	C-6	2¾	70
4522	22054-1	PAR-36	Aviation Landing Fil. Segments Parallel [13]	13.0	250.0	290,000	12	10	25	M-P	C-2	3½	80
4531	21767-9	PAR-46	Auto Mil. Headlamp	12.5	40.0	30,000	20	6	400	M-P	C-6	3¼	94
4535	21765-3	PAR-46	Auto Spot [13]	6.4	30.0	95,000	5	4	100	M-P	C-6	3¼	94
4537	21999-8	PAR-46	Aviation Landing	13.0	100.0	200,000	11	6	25	M-P	C-6	3¼	94
4537S	32167-9	PAR-46	Auto Spot [13]	13.0	100.0	200,000	11	6	25	M-P	C-6	3¼	94
4543	22085-5	PAR-56	Special Serv. Spotlamp	12.5	100.0	250,000	9	5	50	M-P	C-6	4½	114
4545	22066-5	PAR-56	Marine Searchlight [13]	12.0	100.0	240,000	9	5	100	M-P	C-6	4½	114
4546	21389-2	PAR-36	Hand Lantern-4 F Cells	4.7	.5	4,000	4	4	100	M-P	C-2R	2¾	70
4546H	21400-7	PAR-36	Hand Lantern-4 F Cells Clear	4.7	.5	4,500	4	4	100	M-P	C-2R	2¾	70
† 4547	21407-2	PAR-36	Hand Lantern	4.75	1.25	20,000	3	3	100	M-P	C-2R	2¾	70
4551	32801-3	PAR-46	Aircraft	28.0	250.0	75,000	50	10	25	M-P	CC-6	3½	99
4559	29100-5	PAR-64	Aviation Landing [13]	28.0	600.0	600,000	11	12	25	M-P	CC-8	4	102
Q4559	31906-1	PAR-64	Aviation Land. Quartz	28.0	600.0	600,000	12	8	100	M-P	CC-6	4	102
Q4559X	20281-2	PAR-64	Aviation Landing-Quartz	28.0	600.0	765,000	12	8	100	M-P	CC-6	4	102
† 4564	22062-4	PAR-36		20	250	300,000	11	12	25	M-P	CC-6	4	102
4570	22092-1	PAR-46	Aviation Taxiing	28.0	150.0	32,000	50	9	300	M-P	CC-6	3½	99
† 4578	28298-8	PAR-46	CIM Flood	28	60	1,600	55	30	800	2 Lugs	2C-6	4	102
† 4579	28311-9	PAR-46	CIM Headlamp	28	80 60	11,000	-	-	400 400	3 Lugs	CC-6 CC-6	4	102
4581	22100-2	PAR-46	Aircraft Landing	28.0	450.0	400,000	13	14	10	M-P	CC-8	4	102
4589	21732-3	PAR-36	Aviation	28.0	50.0	5,000	Trapezoidal		400	M-P	CC-6	2¾	70
4619	28647-6	PAR-46	Auto Headlamp High Beam-24 Volt 4-Lamp Round System	28.0	50.0	-	-	-	400	2 Lugs	CC-6	4	102
4624	20863-7	PAR-46	Auto Headlamp Low Beam-24 Volt 4-Lamp Round System	28.0 28.0	50.0 50.0	-	-	-	400 400	3 Lugs	CC-6 CC-6	4	102
Q4631	21646-5	PAR-36	Aircraft Landing (Quartz)	13.0	250.0	80,000	13	12	500	M-P	C-6	2¾	70
Q4632	21647-3	PAR-36	Aircraft (Quartz)	13.0	250.0	75,000	14	12	500	M-P	C-6	2¾	70
4651	39500-4	REC-58	Auto Headlamp High Beam-4-Lamp Rectangular System	12.8	50.0	-	-	-	200 [9]	2 Lugs	C-6	4½	114
H4651	39505-3	REC-58	Auto Headlamp High Beam-4-Lamp Rectangular System (Halogen)	12.8	50.0	-	-	-	200 [9]	2 Lugs	C-6	4½	114
X HP4651	30039-2	REC-58	Auto Headlamp Plastic High Beam 4 Lamp Rectangular System	12.8	50	-	-	-	200 [9]	2 Lugs	C-6	4½	114
X 4651R	30182-0	REC-58	Signal-Red	12.8	50.0	-	-	-	200 [9]	M-P	C-6	4½	114
4652	39501-2	REC-58	Auto Headlamp Low Beam-4-Lamp Rectangular System	12.8 12.8	60.0 40.0	-	-	-	200 [9] 320 [9]	3 Lugs	C-6 C-6	4½	114
X HP4652	30040-0	REC-58	Auto Headlamp Plastic Low Beam 4 Lamp Rectangular System	12.8 12.8	35 35	-	-	-	200 [9] 320 [9]	3 Lugs	C-6 C-6	4½	114
† 4653	31279-3	REC-58	Truck Headlamp — Fleet Service	12.8 12.8	40 60	-	-	-	300 [9] 500 [9]	3 Lugs	C-6 C-6	4½	114
H4656	39506-1	REC-58	Auto Headlamp Low Beam-4-Lamp Rectangular System (Halogen)	12.8 12.8	35.0 35.0	-	-	-	200 [9] 320 [9]	3 Lugs	C-6 C-6	4½	114

[6] At 7.0 volts.

[15] Lightly stippled lens.

[9] At 14.0 volts.

Note: All sealed beams use heat resistant glass bulbs.

[13] Filament shielded. †New Since Last Printing.

X—Orders will be shipped until inventory is depleted; no longer manufactured.

Sealed Beam Lamps

Lamp Trade No.	Unit Pack NAED Number 04-6677-	Bulb	Service and Special Description	Design Volts	Design Watts or Amps.	Approx. Initial Max. Beam Candela	Approx. Spread to 10% Max. C.P. (Deg.)		Rated Avg. Life (Hours)	Base	Filament Designation	Max. Overall Length	
							Hor.	Vert.				In.	mm
H4666	39561-6	REC-58	Auto Headlamp (Halogen)	12.80 12.80	65.0 45.0	-	-	-	150 320	3 Lugs	C-8 C-6	4½	114
H4701	39560-8	REC-48	Auto Headlamp High Beam (Halogen)	14.0	65.0	-	-	-	150	2 Lugs	C-8	3¼	85
H4703	39559-0	REC-48	Auto Headlamp Low Beam (Halogen)	14.0	55.0	-	-	-	320	2 Lugs	C-8	3¼	85
4710	22089-7	PAR-56	Spot/Flood	13.0	100.0 100.0	200,000 50,000	8 16	5 12	25 25	M-P	C-6 C-6	5¼	134
4715	28014-9	PAR-64	Marine Spot Light	13.0	250.0	500,000	8	7	25	M-P	C-2	4	102
H4719	27963-8	PAR-46	Tractor (Halogen)	12.8	50.0	-	Trapezoidal		200 [9]	M-P	C-6	3¼	94
4919	26691-6	REC-58	Tractor	12.8	50.0	3,700	Trapezoidal		400 [9]	M-P	C-6	4½	114
† 4921	25824-4	REC-58	Truck Special Service	13.0	100	-	40	7	300	M-P	C-6	4½	115
5001	39511-1	PAR-46	Auto Headlamp High Beam-4-Lamp Round System	12.8	50.0	-	-	-	200 [9]	2 Lugs	C-6	4	102
H5001	39507-9	PAR-46	Auto Headlamp High Beam-4-Lamp Round System (Halogen)	12.8	50.0	-	-	-	200 [9]	2 Lugs	C-6	4	102
H5006	39508-7	PAR-46	Auto Headlamp Low Beam-4-Lamp Round System (Halogen)	12.8	35.0 35.0	- -	- -	- -	200 [9] 320 [9]	3 Lugs	C-6 C-6	4	102
6006	22065-7	PAR-56	Auto Headlamp Aimer Buttons on Lens [13]	6.1 6.2	50.0 40.0	- -	- -	- -	300 500	3 Lugs	C-6 C-6	5¼	134
6014	39502-0	PAR-56	Auto Headlamp 2-Lamp Round System [13]	12.8 12.8	60.0 50.0	- -	- -	- -	200 [9] 320 [9]	3 Lugs	C-6 C-6	5¼	134
6015	39558-2	PAR-56	Truck-Heavy Duty Headlamp [13]	12.8 12.8	60.0 50.0	- -	- -	- -	300 500	3 Lugs	C-6 C-6	5¼	134
6016	39503-8	PAR-56	Auto Fleet Service High/Low Beam Headlamp [13]	12.8 12.8	60.0 50.0	- -	- -	- -	300 500	3 Lugs	C-6 C-6	5¼	134
H6017	39509-5	PAR-56	Auto Headlamp 2-Lamp Round System (Halogen)	12.8 12.8	60.0 35.0	- -	- -	- -	200 [9] 320 [9]	3 Lugs	C-6 C-6	5¼	134
6052	39504-9	REC-68	Auto Headlamp 2-Lamp Rectangular System	12.8 12.8	65.0 55.0	- -	- -	- -	150 [9] 320 [9]	3 Lugs	C-6 C-6	5½	143
† HP6052	30041-8	REC-68	Auto Headlamp Plastic 2 Lamp Rectangular System	12.8 12.8	65 35	- -	- -	- -	150 [9] 320 [9]	3 Lugs	C-6 C-6	5½	143
† 6053	30541-7	REC-58	Truck Headlamp	12.8	65 55	-	-	-	300 500	3 Lugs	C-6 C-6	5½	43
H6054	39510-3	REC-68	Auto Headlamp 2-Lamp Rectangular System (Halogen)	12.8 12.8	65.0 35.0	- -	- -	- -	150 [9] 300 [9]	3 Lugs	C-6 C-6	5½	143
7128	21483-3	PAR-36	Emergency Lighting	12.0	8.0	800	24	18	50	M-P	C-2R	2¾	70
7400	21570-7	PAR-36	Rotating Beacon and Auto Spot	12.8	35.0	35,000	12	5	300	M-P	C-6	2¾	70
X 7400A	21553-3	PAR-36	Rotating Beacon Amber	12.8	35.0	-	12	5	300	M-P	C-6	2¾	70
X 7400R	31023-5	PAR-36	Rotating Beacon Red	12.8	35.0	-	12	5	300	M-P	C-6	2¾	70
X 7401	21645-7	PAR-36	Auto-Spot	13.0	150.0	170,000	11	6	15	M-P	C-6	2¾	70
X 7455	21602-8	PAR-36	Warning Lamp	12.8	55.0	72,000	12	5	200	M-P	C-6	2¾	70
7613	21438-7	PAR-36	Emergency Lighting	6.0	8.0	800	24	18	50	M-P	C-2R	2¾	70
H7635	21835-4	PAR-46	Halogen Spot Lamp	12.8	50.0	160,000	6	4	100	M-P	C-6	3¼	94
7701	32843-5	PAR-46	Auxiliary Passing Lamp	12.8	50.0	50,000	12	6	200 [9]	M-P	C-6	3¼	94
X 7711	20204-4	PAR-46	Driving Lamp [13]	12.8	100.0	100,000	12	6	25	M-P	C-6	3¼	94
9004	37662-4	T-5	Auto-Replaceable Halogen Headlamp Bulb	12.8 12.8	65.0 45.0	*95 *56	- -	- -	150 320	Special	C-6 C-6	3¼	94
9005	21195-3	T-4	Auto-Replaceable Halogen Headlamp Bulb-High Beam	12.8	65.0	*136	-	-	150 [9]	Special	C-8	3	77
9006	21193-8	T-4	Auto-Replaceable Halogen Headlamp Bulb-Low Beam	12.8	55.0	*80	-	-	320 [9]	Special	C-8	3¼	80

[9] At 14.0 volts. Note: All sealed beams use heat resistant glass bulbs.

*5000 Plus Hours.

[13] Filament shielded. †New Since Last Printing.

X—Orders will be shipped until inventory is depleted; no longer manufactured.

MIN. & SEALED BEAM

Philips European Halogen Miniature Lamp Types

The Halogen Process

Halogen lamps eliminate bulb blackening caused by filament deposits, through a Halogen Cycle process that returns the deposits to the filament — to maintain filament strength and high light output. The Philips halogen lamp distributes an even, white light for better visibility and operates at close to 100% efficiency throughout life. This highly efficient Halogen process generates 1/3 more light per watt than conventional incandescent lamps.

Applications: Motorcycles • Snowmobiles • Fog lights
• Police/security vehicles • Auxiliary driving lights

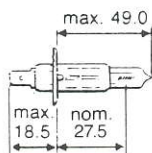


Fig. 1

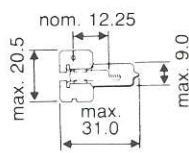


Fig. 2

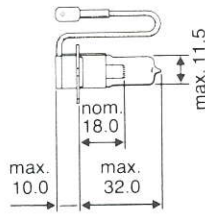


Fig. 3

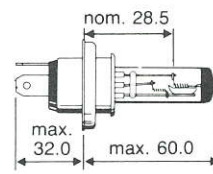


Fig. 4

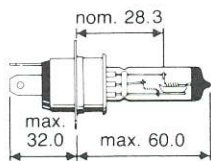


Fig. 5

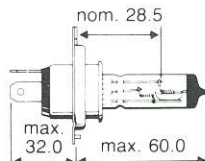


Fig. 6

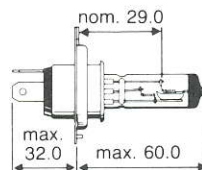


Fig. 7

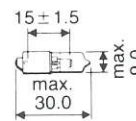


Fig. 8

All dimension in mm.

Ordering Information

Lamp Type	Case Pack	Type Number	Ordering Product Number	Volts	Watts	Light Output Lumens	Life Hours	Base	Fig.	Comment
X H1	200	12258/99	21324-9	12	55	1550	150	P14.5s	1	—
H1	200	13258	30876-7	24	70	1900	150	P14.5s	1	—
H1	200	12454	30878-3	12	100	2800	150	P14.5s	1	Special Base
X H2	100	12311	30885-8	12	55	1800	150	X511	2	—
H2	100	12507	30886-6	12	100	3000	100	X511	2	Special Base
X H2	100	13311	30887-4	24	70	2150	150	X511	2	—
X H3	200	6336	30928-6	6	55	1050	150	PK22s	3	—
H3	200	12336	30933-6	12	55	1450	150	PK22s	3	—
H3	200	12455	30934-4	12	100	2350	100	PK22s	3	Special Base
X H3	200	13336	30936-9	24	70	1750	150	PK22s	3	—
H3	24	50/CL/SC	31286-8	12	50	1700	1200	S.C. Bay	*	—
X H4	100	6342	30938-5	6	60/55	1650/1600	100/200	P43t	5	6 Volt H4
H4	100	12342	30944-3	12	60/55	1650/1600	100/200	P43t	4	—
H4	100	12342/99	30952-6	12	60/55	1650/1600	100/200	P43t	4	Heavy Duty
H4	100	12569	43847-3	12	100/90	2600/1500	100/200	P43t	6	—
X H4	100	12593	43575-0	12	100/55	2600/1000	100/200	P43t	6	—
H4	200	13342	30954-2	24	60/55	1650/1600	100/200	P43t	7	—
H	200	12452	30956-7	12	20	500	100	Min Bay	8	—
H	200	12345	30960-9	12	20	550	100	Bi-Pin	*	—

*Not Shown

**Bulk Pack

X—Orders will be shipped until inventory is depleted; no longer manufactured.

Philips European Miniature Lamp Types

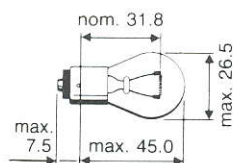


Fig. 9

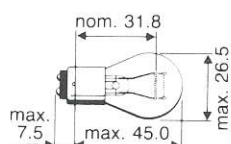


Fig. 10



Fig. 11

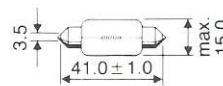


Fig. 12

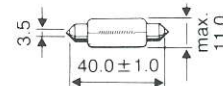


Fig. 13

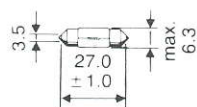


Fig. 14

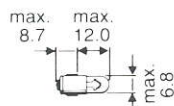


Fig. 15

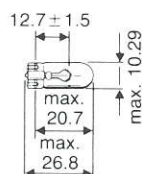


Fig. 16

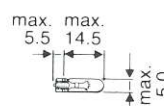


Fig. 17

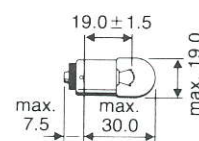


Fig. 18

All dimensions in mm.

Ordering Information

Lamp #	Case Pack	Ordering Product Number	Volts	Watts	Light Output Lumens	Life Hours	MOL (mm)	Max. Dia.	Base	Figure	Comment
† 12256	2500	26412-7	12	3	4	1000	26.8	10.3	Wedge	16	US T3¼ Wedge
† 12498 (P25-1)	250**	43549-5	12	21	460	300	52.5	26.5	BA15s	9	—
† 12499 (P25-2)	250**	43550-3	12	21/5	440	300/3000	52.5	26.5	BA15d	10	—
S† 12814	500	39571-5	12	10	10	200	37.5	19.0	Bay 15s	18	S.C. Bay
12818	500	35794-7	12	3	26.5	600	28	6.3	SV6	14	—
12829	1000	35793-9	12	2	—	600	20.7	6.8	BA7s	15	—
† 12844	500	22420-4	12	5	3.6	300	35	11.0	SV 8.5	10	Cartridge
12850	500	39551-7	12	15	215	300	42	15	SV 8.5	12	—
12854	500	35792-1	12	10	115	600	36	11	SV 8.5	11	—
12864	1000**	20639-1	12	5	6	200	41	11	SV 8.5	13	—
12866	500	43548-7	12	10	115	200	41	11	SV 8.5	13	—
† 12961	2500	26413-5	12	5	4	300	26.8	10.3	Wedge	16	US T3¼ Wedge
† 13498	200	30004-6	24	21	36.8	100	45.0	26.5	Bay 15s	18	S.C. Bay
X 13499	100	43546-1	24	21/5	440/40	300/3000	52.5	26.5	BA15d	10	—
13522	1000	43850-7	24	.72	2	1000@30V 5000	20	5	W2 × 4.6d	17	Wedge
13807	500	43551-1	24	18	275	75	42	15	SV 8.5	12	—
X 13807CC	500	43552-9	24	18	275	75	42	15	SV 8.5	12	Heavy Duty Coiled Coil Filament
† 13814	500	30003-8	24	10	10	200	37.5	19.0	BA15s	18	S.C. Bay
13844	500	43553-7	24	5	45	200	36	11	SV 8.5	11	—
13850	500	39553-3	24	15	165	100	42	15	SV 8.5	12	—

*Not Shown S Check Customer Service For Availability.

**Bulk Pack

†New Since Last Printing.

X—Orders will be shipped until inventory is depleted; no longer manufactured.

MIN. & SEALED BEAM

Fleet Service Lamps

Fleet Service Miniature Lamps (Substitution Guide)

Miniature Service	Fleet Service Types Trade No.	Original Equipment Types Trade No.	Design: CP	Volts	Amps	Rated Avg. Life at Design Volts-Hrs.	Filament Type	Bulb	Base
Instrument Indicator	182	53X 53	1	14.4	0.18	2000	C-2F	G-3½	Min. Bay
			1	14.4	0.12	1000	C-2F	G-3½	Min. Bay.
			1	14.4	0.12	1000	C-2V	G-3½	Min. Bay
	184	161	1	14.4	0.24	7000	C-2F	T-3¼	Wedge
Instrument Indicator Identification Clearance Marker	293	1895 57	2	14.0	0.33	7500	C-2F	G-4½	Min. Bay
			2	14.0	0.27	3500	C-2F	G-4½	Min. Bay.
			2	14.0	0.24	500	C-2V	G-4½	Min. Bay.
	1893	1889 1891	2	14.0	0.33	7500	C-2F	T-3¼	Min. Bay
			2	14.0	0.27	3500	C-2F	T-3¼	Min. Bay
			2	14.0	0.24	500	C-2F	T-3¼	Min. Bay
	193	194 158	2	14.0	0.33	7500	C-2F	T-3¼	Wedge
			2	14.0	0.27	3500	C-2F	T-3¼	Wedge
			2	14.0	0.24	500	C-2V	T-3¼	Wedge
Instrument Parking Clearance Marker	97	1155 67	4	13.5	0.69	5000**	C-2V	G-6	Single Contact
			4	13.5	0.59	5000**	2C-2R	G-6	Bayonet
			4	13.5	0.59	5000**	C-2R	G-6	
Tail License Plate	96	68	4	13.5	0.69	5000**	C-2V	G-6	Double Contact
			4	13.5	0.59	5000**	C-2R	G-6	Bayonet
Front Turn Signal	199*	1156* 1073	32	12.8	2.25	1500	C-6	S-8	Single Contact
			32	12.8	2.10	1200	C-6	S-8	Bayonet
			32	12.8	1.80	200	C-6	S-8	
Rear Turn Signal	1159	1141	21	12.8	1.60	500	C-6	S-8	Single Contact
			21	12.8	1.44	1000	C-6	S-8	Bayonet
Stop	1093	93	15	12.8	1.19	1000	C-2R	S-8	Single Contact
			15	12.8	1.04	700	C-6	S-8	Bayonet
Front Park & Turn Tail & Turn Signal Stop & Tail Stop, Tail & Turn Signal	198*	1157* 1034	32/3	12.8/14.0	2.25/.68	1500/5000†	C-6/C-6	S-8	Double Contact Index Bayonet
			32/3	12.8/14.0	2.1/.59	1200/5000†	C-6/C-6	S-8	
			32/3	12.8/14.0	1.8/.59	200/5000	C-6/C-6	S-8	
Dome	105	1003	12	12.8	1.0	1200	C-6	B-6	Single Contact
			15	12.8	.94	200	C-6	B-6	Bayonet
	104	1004	12	12.8	1.0	1200	C-6	B-6	Double Contact
			15	12.8	.94	200	C-6	B-6	Bayonet
	1093	93	15	12.8	1.19	1000	C-2R	S-8	Single Contact
			15	12.8	1.04	700	C-6	S-8	Bayonet
	98	631 89	6	13.0	0.62	1300	C-2V	G-6	Single Contact Bayonet
			6	14.0	0.63	1000	2C-2R	G-6	
			6	13.0	0.58	750	C-2R	G-6	
	99	632 90	6	14.0	0.63	1000	2C-2R	G-6	Double Contact
			6	13.0	0.58	750	C-2R	G-6	Bayonet

*Variable load flasher required

**At 14.0 Volts

†5000 plus Hours.

Fleet Service Sealed Beam Lamps (Substitution Guide)

Sealed Beam Service	Fleet Service Types Trade No.	To Replace Trade No.	Design: Volts	Watts	Max. Amps at Design Volts	Rated Avg. Life at Design Volts-Hrs.	Filament Type	Bulb	Terminals	
									No.	Type
Low Beam Headlamp ¹³ X	4040	4000	12.8	37.5/60	3.14/5.02	900/1500	C-6/C-6	PAR-46	3	Lugs
			12.8	37.5/60	3.14/5.02	600/960	C-6/C-6		3	Lugs
Low Beam Headlamp ¹³ XXXX	4653	4652	12.8/12.8	60/40	5.02/3.13	900/1500	C-6/C-6	REC-58	3	Lugs
			12.8/12.8	60/40	5.02/3.13	600/900	C-6/C-6		3	Lugs
High Beam Headlamp ^X	5001	4006 4001	12.8	50	4.18	600	C-6	PAR-46	2	Lugs
			12.8	37.5	3.14	720	C-6		2	Lugs
			12.8	37.5	3.14	600	C-6		2	Lugs
High/Low Beam Headlamp ¹³ XX	6016	6015 6014	12.8	60/50	5.02/4.18	900/1500	C-6/C-6	PAR-56	3	Lugs
			12.8	60/50	4.97/4.20	300/500	C-6/C-6		3	Lugs
			12.8	60/50	5.02/4.18	600/960	C-6/C-6		3	Lugs
High/Low Beam Headlamp ^{XXX}	6053	6052	12.8	65/55	5.43/4.60	900/1500	C-6/C-6	REC-58	3	Lugs
			12.8	65/55	5.43/4.60	150/320	C-6/C-6		3	Lugs
Driving Lamp	4921	—	13.0	100	8.23	300	C-6	REC-58	2	M-P

^{X4} Lamp Round System

¹³ Filament Shielded

^{XX2} Lamp Round System

^{XXX2} Lamp Rectangular System

^{XXXX4} Lamp Rectangular System

Terminology

1. **Lamp Number** — Lamps are marked with a Philips lamp number which has been registered with American National Standards Institute (ANSI).
2. **Bulb** — Refer to Illustration Chart next page.
3. **Service and Special Description** — The application for which the lamp was designed. Sealed Beam lamps can be used in applications other than that for which they were originally designed. Contact your local Philips sales rep for application assistance.
4. **Vac. or Gas** — Indicates whether lamp is Vacuum (B) or Gas (C) filled.
5. **Design Voltage** — The voltage at which the lamp was designed to operate.
6. **Design Amps** — The amount of current consumed when operating the lamp at design voltage.
7. **Design Wattage** — The amount of power consumed when operating the lamp at design voltage.
8. **Approximate Mean Spherical Candela** — The spherical candela emitted by the light source. This measurement is approximate, due to the difficulty in measuring and the variation from lamp to lamp. This measurement can be converted to Lumens by multiplying by $12.57(4\pi)$. Also known as Approximate Mean Spherical Candlepower.
9. **Lumens** — The amount of light emitted by a bulb. This can be converted to spherical candlepower by dividing by $12.57(4\pi)$.
10. **Approximate Initial Maximum Beam Candela** — The amount of light at the point of highest intensity in the beam. Values are approximate because of the difficulty in measurement and because of variation from lamp to lamp. This is also known as Approximate Initial Peak Beam Candlepower (AIPBC).
11. **Beam Spread to 10% of Maximum** — The spread to 10% of initial beam candela is an approximate measure of the height and width of a beam pattern. This measurement is not precise and is only intended to classify beam pattern sizes in a general way. The unit of measurement is the degree.
12. **Rated Average Life** — The rated average life is a statistical average of lamp life under controlled laboratory conditions. The actual life may vary depending on the environmental conditions, such as shock, vibration, temperature and voltage fluctuations of the application.
13. **Base** — Refer to illustration charts on following pages.
14. **Filament Designation** — Refer to illustrations in the Filament Designation Section below.
15. **Light Center Length** — Light center length indicates the location of the filament with reference to the lamp base. It is subject to manufacturing tolerances. The light center length is measured from the geometric center of the light source to a particular point of the base. This point is shown below for the base types used.
 Screw — End of bottom base contact.
 Bayonet — Top of base pins.
 S.C. or D.C. Prefocus — Bottom of indentations on prefocusing collar.
 S.C. Miniature Flanged — Top of bosses in flange.
 D.C. Index — Top of base pin nearer bottom contacts.
 Wedge — Center of notch.
 Flanged — Top of flange.
 Midget Grooved — Center of groove.
 Wire Terminal — Not Specified.
16. **Maximum Overall Length** — The dimension which includes the bulb and base is designated as the overall length of the lamp. In the case of wire terminal lamps, this dimension applies only to the glass portion. The figures listed here are maximum tolerances.

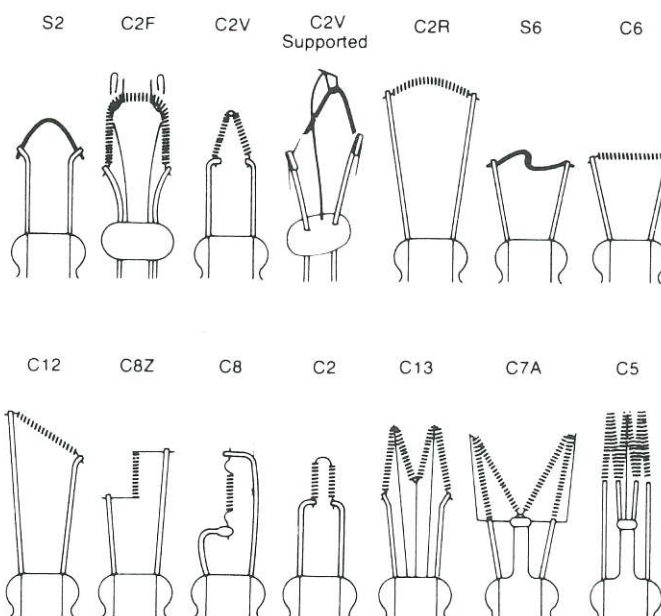
Filament Designations

The method of mounting a filament in a tungsten filament lamp is designed by an identification made up of a prefix letter or letters and an arbitrary number. The prefix letter indicates whether the filament wire is straight, coiled or coiled coil and the number indicates the form or arrangements of the filament on the supports.

S = Straight, there is no coil to the filament.

C = Coiled, the filament is wound into a helical coil.

CC = Coiled Coil, the helical coiled filament is wound again into another helical coil.

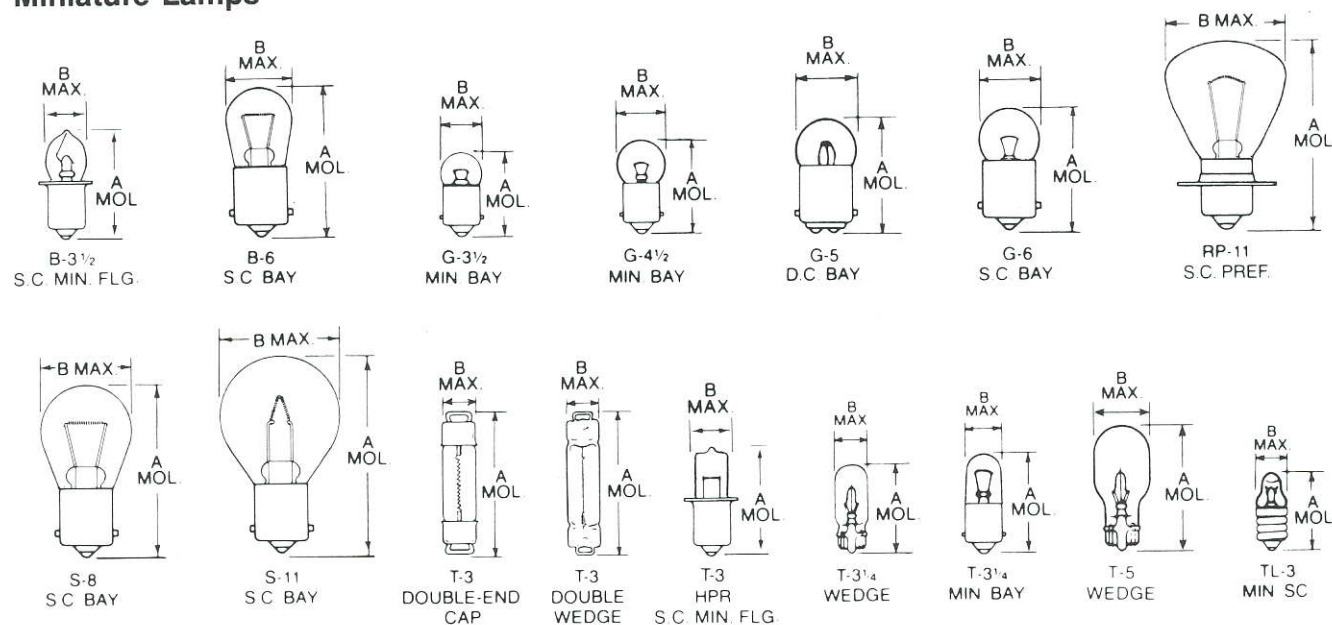


Miniature/Sealed Beam Lamps

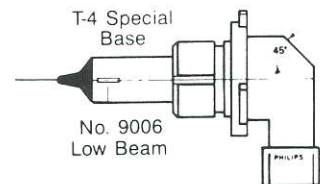
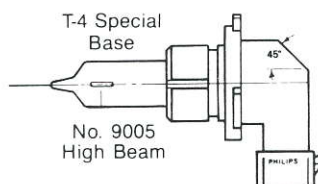
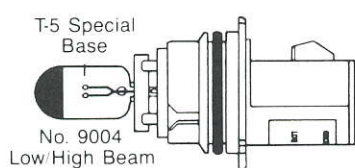
Bulb Designations

Bulbs are identified by a letter or letters followed by a number. This letter indicates the shape of the bulb, and the number indicates the diameter of the bulb in eighths of an inch. EXAMPLE: "S-8" indicates 'S' bulb having a diameter of $\frac{8}{8}$ inch or approximately 1 inch.

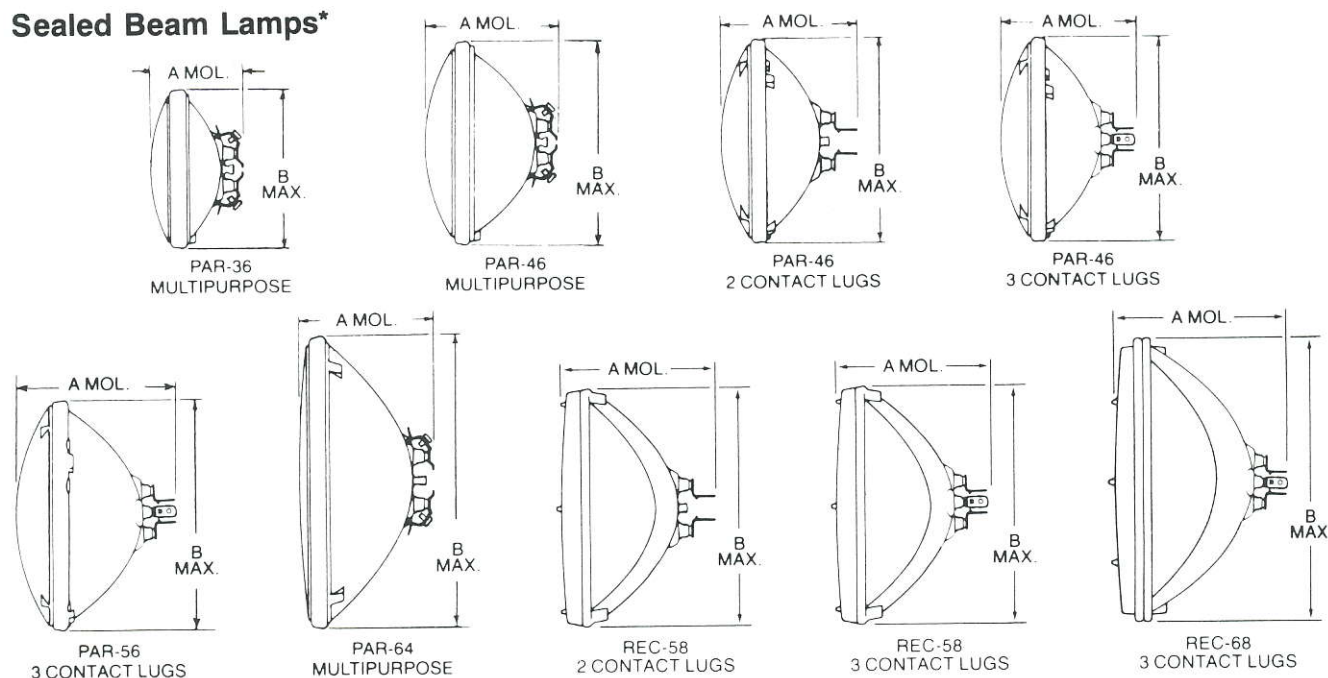
Miniature Lamps*



Auto Replacement Halogen Headlamp Bulbs



Sealed Beam Lamps*



MIN. & SEALED BEAM

Miniature/Sealed Beam Lamps

BASE DESIGNATIONS

The base serves two functions: support for the lamp and the providing of electrical contact.

Sealed beam base types:

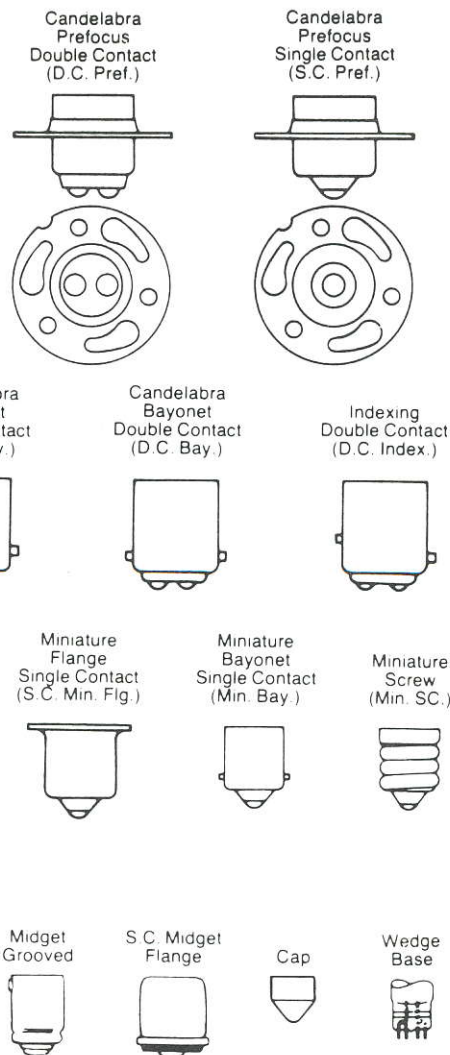
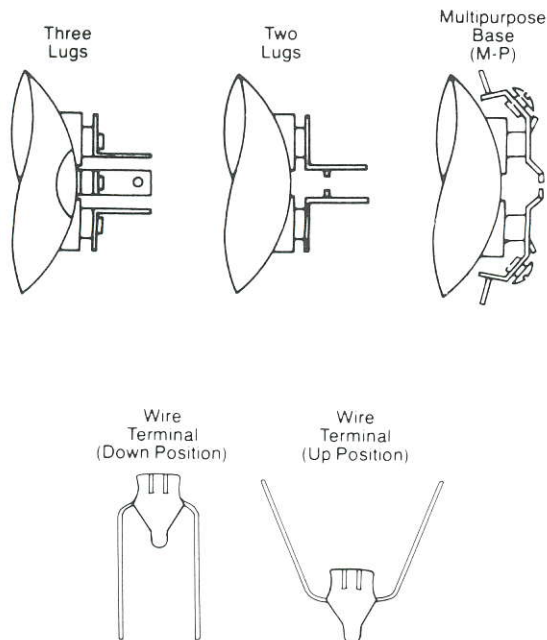
2 contact lugs — mainly used on automotive headlamps where two terminals are required (high beam headlamps).

3 contact lugs — mainly used on automotive headlamps where three terminals are required (low beam/high beam headlamps).

Multi-Purpose (M-P) Terminal — mainly used on non-headlamp applications. This base is designed to accept both slipon and screw lugs.

Miniature base types:

See illustrations



Dimensions for Miniature and Sealed Beam Lamps (see illustration page 110)

Bulb Shape	A MOL Dimension		B MAX Dimension		Bulb Shape	A MOL Dimension		B MAX Dimension	
	Inch	mm	Inch	mm		Inch	mm	Inch	mm
B-3½ S.C. MIN. FLG.	1¼	32	.437	11.1	T-3¼ MIN. BAY	1⅜	31	.43	10.9
B-6 S.C. BAY	1¾	45	.78	19.7	T-5 WEDGE	1½	38.1	.625	15.9
G-3½ MIN. BAY	1⅝	24	.46	11.7	TL-3 MIN. S.C.	1⅝	24	.39	10
G-4½ MIN. BAY	1⅞	27	.59	15	PAR-36 MULTIPURPOSE	2¾	70	4.5	113.3
G-5 D.C. BAY	1⅞	35	.64	16.2	PAR-46 MULTIPURPOSE	3⅞	99	5.7	144.8
G-6 S.C. BAY	1⅞	37	.75	19	PAR-46 2 CONTACT LUGS	4	102	5.7	144.8
RP-11 S.C. PREF	2¼	58	1.42	36	PAR-46 3 CONTACT LUGS	4	102	5.7	144.8
S-8 S.C. BAY	2	51	1.04	26.5	PAR-56 3 CONTACT LUGS	5¼	134	7.05	178.6
S-11 S.C. BAY	2⅜	61	1.42	36	PAR-64 MULTIPURPOSE	4	102	8.1	205.7
T-3 DOUBLE-END CAP	1⅞	44	.39	10.0	REC-58 2 CONTACT LUGS	4½	114	6.5	166
T-3 DOUBLE WEDGE	1⅞	44	.39	10.0	REC-58 3 CONTACT LUGS	4½	114	6.5	166
T-3 S.C. MIN. FLG.	1¼	31	.39	10.0	REC-68 3 CONTACT LUGS	5⅞	143	7.87	200
T-3¼ WEDGE	1⅞	27	.40	10.3					

Photo, Projection, Sound Reproducer and Film Viewer Lamps

	ANSI Code	NAED Number 04-6677-	Std. Pkg.	Volts	Watts (Amps.)	Bulb	Base	Avg Rated Life (Hrs)	Coil Type	L.C.L.		M.O.L.		Rated Approx. Lumens	Color Temp (K)	Operating Position	Fig No.
										In.	mm	In.	mm				
X	BAK	30769-4	24	4	(0.75)	T-5	P-30s	250	C-6	1.13	28.60	2.00	50.80	30		ANY	1
†	BBA	25222-1	24	115-120	250	A-21	MED SCREW	3	C-9			4.94	125.40	8500	3400	ANY	24
	BCK	31625-7	24	120	500	T-6	G17t 4 PIN	50	C13D	1.56	39.70	3.50	88.90	11000	3200	BDTH	41
X	BEH	38661-5	24	120	150	T-10	G17q	15	2-CC8	1.32	33.40	3.13	79.40	3500	3100	BDTH	15
X	BFE	31298-3	24	120	750	T-20	P40s	2000	C-13	2.19	55.60	5.75	146.10	17000	3000	BD	20
	BGB/BGK	30770-2	24	4	(0.75)	S-8	P30d	50	C-6	1.13	28.60	2.00	50.80	30		ANY	9
	BGK	SEE BGB															
X	BHB	25223-9	24	120	250	MR-14	GX5.3	25	CC-8	.625	15.88	1.66	42.15		3350	HORIZ	59
	BHC	SEE DYS															
X	BLC	27067-8	120	115	30	S-11	BA15d	50	CC2V	1.37	34.90	2.37	60.30	400	2775	ANY	23
X	BLX	26625-4	120	120	50	S-11	BA15d	50	CC2V	1.37	34.90	2.37	60.30	780	2850	ANY	23
X	BMG/BMH	30638-1	120	115	100	S-11	BA15d	25	CC2V	1.37	34.90	2.37	60.30	2000	3000	BDTH	23
	BMH	SEE BMG															
	BRH	34966-2	24	120	1000	T-5	R7s	75	CC8			3.75	95.30	30000	3400	ANY	50
X	BRK	30772-8	24	4	(0.75)	T-5	P30s	50	C8	1.13	28.60	2.37	60.30	28		ANY	2
	BRL	31627-3	24	12	50	T-3.5	G6.35	50	C-6	1.18	30.00	1.73	44.00	1500	3400	BDTH	28
X	BRS	30774-4	24	4	(0.75)	T-5	P30s	50	C-6	1.13	28.60	2.00	50.80	30		ANY	1
X	BRX	27197-3 43917-4	100 24	6	(1.0)	T-5	P30d	100	C-6	1.13	28.60	2.37	60.30	70		ANY	1
X	BSB/BSS	30697-7 30782-7	100 24	6	(1.0)	T-5	P30s	100	C-8	1.13	28.60	2.37	60.30	70		ANY	2
X	BSK	30776-9	24	6	(1.0)	T-5	P30s	100	C-6	1.13	28.60	2.00	50.80	70		ANY	1
	BSS	SEE BSB															
X	BSW	27174-2 30778-5	100 24	7	(0.2)	T-5	P30s	50	C-8	1.13	28.60	2.37	60.30	15		ANY	2
X	BTD	27171-8 30784-3	100 24	7	(0.2)	T-5	P30d	50	C-6	1.13	28.60	2.37	60.30	15		ANY	2
	BVE	30762-9	24	120	625	T-6	GZ9.5	75	C-8	1.75	44.50	3.50	88.90		3200	BDTH	40
X	BVK/BVS	30785-0	24	5	(6.5)	T-8	P30s	50	C-8	1.63	41.30	2.63	66.70	365		BDTH	4
	BVS	SEE BVK															
	BWD	31580-4	24	8.5	(4.2)	T-8	P30d	150	C-8	1.63	41.30	3.13	79.40	700		BD	4
X	BXA	27223-7	24	10	(7.5)	T-8	P30s	100	C-6	1.47	37.30	3.13	79.40			BD	4
X	BXB	30787-6	24	8.5	(4.0)	T-8	P30s	100	C-8	1.63	41.30	3.13	79.40	690		BDTH	4
X	BXE	27221-1 30790-0	24 24	10	(7.5)	T-8	BA15s	100	C-8	1.75	44.50	3.13	79.40	690		BD	3
X	BXG	27220-3	24	10	(7.5)	T-8	BA15s	100	C-6	1.59	40.50	3.13	79.40	1600		BD	3
X	BXM	27213-8	24	9	(4.0)	T-8	P30s	500	C-6	1.47	37.30	3.13	79.40			BD	4
	BXN	31559-8	24	10	(5.0)	T-8	P30s	100	C-6	1.47	37.30	3.13	79.40	1050		BD	4
	CAL	26791-4	24	120	300	T-10	G17q	25	C-13	1.56	39.70	4.00	101.60		3200	BD	15
X	CAR	26715-3	24	120	150	T-10	G17q	15	2-CC8	1.32	33.40	3.13	79.40		3100	BD	15
X	CAW/CAX	26628-8	24	120	50	T-8	BA15d	50	CC-13	1.37	34.90	3.13	79.40	810	2900	BD	12
	CAX	SEE CAW															
	CBA	31628-1	24	120	500	T-6	G17t	50	C-13D	1.75	44.50	3.62	92.00	10000	3200	BDTH	41
	CBC	SEE CBJ															
X	CBJ/CBC	26649-4	24	120	75	T-8	BA15s	50	CC-13	1.37	34.90	3.13	79.40	1250	2950	BD	12
X	CBS/CBX	26641-1	24	120	75	T-8	BA15d	50	C-13	1.37	34.90	3.13	79.40	1250	2950	BD	12
	CBX	SEE CBS															
X	CDD	25225-4	24	120	100	T-8	BA15s	50	CC-2V	1.37	34.93	3.12	79.38	2000	2975	BD	22
X	CDJ/CEL	30648-0	24	120	100	T-8	BA15d	50	CC2V	1.37	34.90	3.13	79.40	2000	2975	BD	12
X	CDS/CDX	31561-4	24	120	100	T-8	BA15s	50	CC13	1.37	34.90	3.13	79.40	1800	2975	BD	12
	CDX	SEE CDS															

PHOTO

Photo, Projection, Sound Reproducer and Film Viewer Lamps

	ANSI Code	NAED Number 04-6677-	Std. Pkg.	Volts	Watts (Amps.)	Bulb	Base	Avg Rated Life (Hrs)	Coil Type	L.C.L.		M.O.L.		Rated Approx. Lumens	Color Temp (K)	Operating Position	Fig No.
										In.	mm	In.	mm				
	CEL	SEE CDJ															
X	CEM	25232-0	24	120	120	T-8	BA15s	200	2CC-8	1.37	34.93	3.12	79.38	1950	300	BD	12
	CLG/CLS	26770-8	24	120	300	T-8.5	BA15s	25	C-13	1.37	34.93	4.13	104.80	7700	3200	BD	17
	CLS	SEE CLG															
	CLX/CMB	26757-5	24	120	300	T-8.5	BA15d	25	C-13	1.38	34.93	4.13	104.80	7600	3150	BD	12
X	CTT/DAX	30590-4	24	120	1000	T-12	G17q	25	C13D	1.56	39.70	4.63	117.50		3300	BD	22
X	CWA	31558-0	24	120	750	T-12	G17q	25	C13D	1.56	39.70	4.63	117.50	3400	3250	BD	22
X	CWD	26794-8	24	120	300	T-10	G17q	25	C-13	1.56	39.70	4.00	101.60	7500	3150	BD	15
X	CXK	30766-0	24	120	300	T-10	P28s	25	C-13	2.19	55.60	5.75	146.00	7500	3200	BD	13
	CXL	SEE CXR															
	CXR/CXL	31566-3	50	8	50	T B-6	P30s	25	C-6F	1.85	47.00	3.78	96.00		3200	BD	5
X	CXY	26805-2	24	120	300	T-10	P28s	25	C-13D	2.19	55.60	5.75	146.10	7300	3100	BD	13
X	CZA/CZB	37494-2	24	120	500	T-10	G17q	25	C-13D	1.56	39.70	4.00	101.60	11900	3300	BD	15
	CZB	SEE CZA															
X	CZS	31567-1	24	120	500	T-10	E26/24	25	C-13SD	3.00	76.20	5.50	139.70	12500	3200	BD	△
	CZX/DAB	30087-1	24	120	500	T-10	P28s	25	C-13D	2.19	55.60	5.75	146.10	12500	3200	BD	13
	DAB	SEE CZX															
X	DAK	26837-5	24	120	500	T-10	G17q	25	C-13D	1.56	39.70	4.00	101.60	13400	3200	BD	15
	DAX	SEE CTT															
X	DCH/DJA/DFP	25233-8	24	120	150	T-12	4 PIN	15	CC-6	1.56	39.66	3.37	85.73		3150	BD	18
	DCX	26959-7	24	120	750	T-12	E26/24	25	C-13D	3.00	76.20	5.50	139.70	19500	3250	BD	△
X	DDB	31676-0	24	115	750	T-12	P28s	25	C-13D	2.19	55.60	5.75	146.10	20000	3250	BD	16
X	DDK	25234-6	24	19	80	MR-16	GX5.3	40	CC-6			1.75	44.45		3300	BD	55
	DDL	31509-3	24	20	150	50 DICH	GX5.3	500	CC-6			1.75	44.50		3150	BDTH	55
†	DDM	25235-3	24	19	80	MR-16	GX5.3	50	CC-6			1.75	44.45		3350	BD	55
X	DDN	25237-9	24	20	200	T-3	R7s	100	CC-8			2.37	60.33	4600	3150	ANY	46
	DDS	31510-1	24	21	80	50 DICH	GX5.3	1000	CC-6			1.75	44.50		3125	BDTH	54
X	DDY	26951-4		120	750	T-12	P28s	200	C-13D	2.19	55.60	5.75	146.10	17000	2950	BD	16
†	DEB	31295-9	24	120	500	T-12	P28s	800	C-13D	3.50	88.90	6.19	157.16	9000	2850	BU	16
	DED	31475-7	24	13.8	85	50 DICH	GX5.3	1000	C-8			1.75	44.50		3150	BDTH	54
X	DEJ	26930-8	24	120	750	T-12	SPECIAL	25	C-13D	2.32	58.80	5.50	139.70	20000	3250	BD	21
X	DEK/DFW	30081-4	24	120	500	T-12	G17q	25	C-13D	1.75	44.50	3.54	90.00		3250	HORIZ	22
X	DEP	26923-3	24	120	750	T-12	G17q	25	C-13D	1.56	39.70	4.63	117.50	20000	3250	BD	22
X	DFD	26992-8	24	120	1000	T-12	P28s	10	C-13D	2.19	55.60	5.75	146.10	31000	3350	BD	16
†	DFP	SEE DCH															
X	DFT	26994-4	24	120	1000	T-12	P28s	25	C-13D	2.19	55.60	5.75	146.10	28000	3300	BD	16
	DFW	SEE DEK															
X	DFY	30765-2	24	120	1000	T-12	SPECIAL	25	C-13D	2.24	56.80	5.50	139.70	28000	3250	BD	21
X	DGH	26952-2	24	120	750	T-12	P28s	500	C-13D	2.19	55.60	5.75	146.10	15000	3050	BD	16
	DGS	31681-0	24	120	1000	T-12	SPECIAL	10	C-13D	3.50	88.90	5.87	149.20	33000	3375	BU	△
X	DHT	27033-0	24	120	1200	T-12	P28s	10	C-13D	2.19	55.60	5.75	146.10	37000	3350	BD	16
†	DJA	SEE DCH															
	DJT	31482-3	24	13.8	50	50 DICH	GX5.3	1000	CC-6			1.75	44.50		3150	BDTH	54
	DLG	43979-4	24	21.5	150	T-14	GX17q	10	CC-6	1.56	39.70	3.56	90.50			BDTH	△
X	DLT	31683-6	24	30	500	T-20	E26/24	50	C-13	3.00	76.20	5.50	139.70	1250		BD	△
X	DLY	31688-5	24	30	500	T-20	P28s	50	C-13	2.19	55.60	5.75	146.10	1250		BD	△
X	DMS	31689-3	24	120	500	T-20	E26/24	50	C-13	3.00	76.20	5.50	139.70	13200	3200	BD	19
X	DMX	31690-1	24	120	500	T-20	P28s	50	C-13	2.19	55.60	5.75	146.10	13200	3200	BD	△

△ Not Shown

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Photo, Projection, Sound Reproducer and Film Viewer Lamps

	ANSI Code	NAED Number 04-6677-	Std. Pkg.	Volts	Watts (Amps.)	Bulb	Base	Avg Rated Life (Hrs)	Coil Type	L.C.L.		M.O.L.		Rated Approx. Lumens	Color Temp (K)	Operating Position	Fig No.
										In.	mm	In.	mm				
†	DNE	25238-7	24	120	150	MR-16	GX5.3	12	CC-8	.625	15.88	1.78	45.24		3350	HORIZ	60
†	DNF	25241-1	24	21	150	MR-16	GX5.3	25	CC-6	6.15	15.88	1.78	45.24		3400	HORIZ	60
X	DPJ	31693-5	24	120	750	T-20	P28s	25	C-13D	2.19	55.60	5.75	146.10	19000	3250	BD	14
X	DPW	31724-8	24	120	1000	T-20	P40s	50	C-13	3.44	87.30	9.50	241.30	28000	3200	BD	20
X	DRC	31728-9	24	120	1000	T-20	P28s	50	C-13	2.19	55.60	5.75	146.10	29000	3250	BD	14
X	DRS	31730-5	24	115	1000	T-20	P28s	25	C-13D	2.19	55.60	5.75	146.10	29000	3300	BD	14
	DRW	31741-2	24	120	1000	T-20	E-39	25	C-13D	4.75	120.70	9.06	230.20	28500	3325	BD	20
X	DSB	31742-0	24	120	1000	T-20	P40s	25	C-13D	3.44	87.30	9.50	241.30	28500	3325	BD	20
	DTJ	31744-6	24	120	1500	T-20	P40s	25	C-13D	3.44	87.30	9.50	241.30	42500	3225	BD	20
	DWY	31176-1	12	120	650	T-4	R7s	25	CC-8			3.17	80.60	20000	3400	ANY	47
	DWZ	31750-3	100	30	375	T-4	R7s	1000	CC-6			3.17	80.60	7000	2900	ANY	46
	DXN	44078-4 31202-5	24 12	120	1000	T-5	R7s	30	CC-8			3.75	95.30	33000	3400	ANY	50
	DXW	44080-0 31219-9	24 12	120	1000	T-5	R7s	150	CC-8			3.75	95.30	28000	3200	ANY	50
	DXX	31753-7	100	240	800	T-4	R7s	75	CC-8			3.17	80.60	20500	3200	ANY	52
	DYA	44091-7 31224-9	24 12	120	1000	T-5	R7s	200	CC-8			4.37	111.10	28000	3200	ANY	50
	DYH	31638-0	24	120	600	G-7	G5.3	75	CC-6	1.44	36.50	2.50	63.50	17000	3200	ANY	42
	DYS/DYV/BHC	31639-8	24	120	600	G-7	GZ9.5	75	CC-6	1.44	36.50	2.50	63.50	17000	3200	HORIZ	42
	DYV	SEE DYS															
X	DZB	31636-4	24	12	100	T-3	G5.3	50	C 6	1.06	27.00	2.00	50.80	2800	3300	BDTH	28
	DZE	SEE FDS															
X	DZZ	44102-2 31629-9	100 24	12	100	T-3.5	GZ9.5	1000	C-6F	1.06	26.90	2.25	57.20	2700	3050	BDTH	△
X	EBP	31754-5	24	120	1000	T-12	E26/24	25	C-13D	3.00	76.20	5.50	139.70	28000		BD	△
X	EBV	25257-7	24	115-120	500	PS-25	MED SCREW	6	C-9			6.94	176.20	17000	3400	ANY	25
X	EBW	25260-1	24	115-120	500	PS-25	MED SCREW	6	C-9			6.94	176.20	10500	4800	ANY	25
†	ECA	25261-9	24	120	250	A-23	MED SCREW	20	C-9			6	152.40	6500	3200	ANY	△
†	ECT	25264-3	24	120	500	PS-25	MED SCREW	60	C-9			6.94	176.20	13650	3200	ANY	25
	EFM	31484-9	50	8	50	50 DICH	GZ6.35	50	C-6			1.65	42.00		3300	BDTH	54
	EFN	31502-8	50	12	75	50 DICH	GZ6.35	50	C-6			1.65	42.00		3350	BDTH	54
	EFF	31488-0	50	12	100	50 DICH	GZ6.35	50	C-6			1.65	42.00		3350	BDTH	54
	EFR	31490-6	50	15	150	50 DICH	GZ6.35	50	C-6			1.65	42.00		3350	BDTH	54
	EGH	31640-6	24	120	500	T-6	G17t	50	C-13D	1.56	39.70	3.50	88.90	11900	3250	BDTH	41
†	EGY	31757-8	24	225	1000	T-7	GX6.35	15		1.50	38.00	2.40	61.00	31000	3400	ANY	44
	EHA	31641-4	24	120	500	T-6	GZ9.5	50	C-13D	1.44	36.50	3.00	76.20	11000	3250	BDTH	40
	EHJ	31758-6	100	24	250	T-4	G6.35	50	C-6F	1.30	33.00	2.17	55.00	9400	3400	BD	37
	EJA	33732-9	24	21	150	50 DICH	GX5.3	40	CC-6			1.85	47.00		3350	BDTH	55
	EJL	31508-5	24	24	200	50 DICH	GX5.3	50	CC-6			1.85	47.00		3400	BDTH	55
	EJM	31589-5	24	21	150	50 DICH	GX5.3	40	CC-6			1.85	47.00		3350	BDTH	54
	EJN	SEE ELD															
	EJV	33744-4	24	21	150	50 DICH	GX5.3	40	CC-6			1.85	47.00		3350	BDTH	55
X	EJY	31624-0	24	19	80	50 DICH	GX5.3	25	CC-6			1.85	47.00		3400	BDTH	55
	EKE	31592-9	24	21	150	50 DICH	GX5.3	200	CC-6			1.75	44.50		3250	BDTH	55
X	EKG	31593-7	24	19	80	50 DICH	GX5.3	25	CC-6			1.85	47.00		3400	HORIZ	55
†	EKM	31762-8	24	225	1000	T-3	R7s	200	CC-6			7.54	191.40	26000	3200	ANY	53
	EKN	31595-2	24	17.7	120	50 DICH	GX5.3	120	CC-6			1.75	44.50		3200	BDTH	55
	EKP/ENA	31601-8	24	30	80	50 DICH	GX5.3	25	CC-6			1.75	44.50		3350	BDTH	55
†	EKS	SEE EMM															
X	ELB	31617-4	24	30	80	50 DICH	GX5.3	18	CC-6			1.75	44.50		3400	BDTH	55
	ELC	31491-4	24	24	250	50 DICH	GX5.3	50	CC-6			1.85	47.00		3400	BDTH	54

Photo, Projection, Sound Reproducer and Film Viewer Lamps

ANSI Code	NAED Number 04-6677-	Std. Pkg.	Volts	Watts (Amps.)	Bulb	Base	Avg Rated Life (Hrs)	Coil Type	L.C.L.		M.O.L.		Rated Approx. Lumens	Color Temp (K)	Operating Position	Fig No.
									In.	mm	In.	mm				
ELD/EJN	31618-2	24	21	150	50 DICH	GX5.3	40	CC-6			1.85	47.00		3350	BDTH	54
X ELE/ELT	25275-9	24	30	80	MR-14	GX5.3	20	CC-6	.625	15.88	1.70	43.26		3450	HORIZ	59
ELH	31619-0	24	120	300	50 DICH	GY5.3	35	CC-8			1.85	47.00		3350	BDTH	56
† ELR	SEE ELS															
X ELS/ELR	25276-7	24	16	50	MR-14	GX5.3	650	CC-6			1.16	29.35		3100	BDTH	59
† ELT	SEE ELE															
† EML	25278-3	24	24	175	T-4	GY5.3	125	C-6	1.06	26.96	2.12	53.98	5000	3200	BDTH	36
† EMM/EKS	25279-1	24	24	150	MR-14	GX5.3	50	CC-6	.625	15.88	1.75	44.45		3400	BDTH	59
ENA	SEE EKP															
ENG	31925-1	24	120	300	50 DICH	GY5.3	15	CC-8			1.75	44.50		3450	BDTH	56
ENH	31621-6	24	120	250	50 DICH	GY5.3	175	CC-8			1.75	44.50		3250	BDTH	56
X ENW	31938-4	24	19	80	50 DICH	GX5.3	200	CC-6			1.85	47.00		3200	BDTH	55
ENX	31927-7	24	82	360	50 DICH	GY5.3	75	CC-8			1.75	44.50		3300	BDTH	55
X EPK	31622-4	24	30	80	50 DICH	GX5.3	18	CC-6			1.75	44.50		3400	BDTH	54
EPV	31493-0	24	14.5	90	50 DICH	GX5.3	500	CC-6			1.75	44.50		3150	BDTH	54
EPX	31494-8	24	14.5	90	50 DICH	GX5.3	500	C-8			1.75	44.50		3150	BDTH	54
EPZ	31496-3	24	13.8	50	50 DICH	GX5.3	1000	CC-6			1.75	44.50		3150	BDTH	54
ESA/FHD	31764-4	200	6	10	T-2.5	G-4	100	C-6	0.77	19.50	1.18	30.00	200	3200	ANY	26
ESB	31767-7	200	6	20	T-3	G-4	100	C-6	0.77	19.50	1.22	31.00	420		ANY	26
ETA	31882-4	24	12	100	T-3.5	PG22d	50		0.71	18.00	1.89	48.00	3000		BDTH	32
EVA	31642-2	24	12	100	T-3.5	GY6.35	1000	C 6 F	1.18	30.00	1.73	44.00	2500	3200	ANY	30
EVB	31883-2	100	15	150	T-3.5	G6.35	50	C-6	1.18	30.00	1.73	44.00	5000		BDTH	34
EVC	31884-0	100	24	250	T-4.75	G6.35	300	C 6 F	1.30	33.00	2.24	57.00	8400		ANY	38
† EVD	31885-7	100	36	400	T-6	G6.35	50		1.42	36.00	2.36	60.00	14500	3200	BDTH	39
† EVW	25284-1	24	82	250	MR-16	GX5.3	50	CC-8			1.75	44.45		3300	BD TO 22° UP	55
EWJ	31498-9	50	12	28	50 DICH	GX5.3	750	C-8			1.75	44.50		3200	BDTH	54
† EXR	25286-6	24	82	300	MR-13	GX5.3	35	CC-8			1.75	44.45		3350	BDTH	58
X EXW	25288-2	24	82	300	MR-13	GX5.3	15	CC-8			1.75	44.45		3450	BDTH	58
† EXY	25289-0	24	82	250	MR-13	GX5.3	200	CC-8			1.75	44.45		3200	BDTH	58
† EYB	23257-9	24	82	360	T-3.5	G5.3	75	CC-8	1.26	32.00	2.52	64.00	10000	3250	BDTH	29
FAD	44161-8 31182-9	24 12	120	650	T-4	R7s	100	CC-8			3.17	80.60	16500	3200	ANY	47
FAL	30761-1	24	120	420	T-4	R7s	75	CC-8			2.63	66.70	11000	3200	ANY	47
FBY	44179-0 31221-5	24 12	120	1000	T-5	R7s	150	CC-8			3.75	95.30	25000	3200	ANY	48
FCM	44186-5 33269-2	72 12	120	1000	T-3	R7s	300	C-8			4.72	119.90	27000	3200	HORIZ	49
FCR	31643-0	24	12	100	T-3.5	GY6.35	50	C 6 F	1.18	30.00	1.73	44.00	3400	3250	BDTH	30
FCS	20607-8	24	24	150	T-4	G6.35	50	C 6 F	1.18	30.00	2.00	50.80	5200	3400	BDTH	37
FDF	20255-6	12	120	500	T-3	R7s	400				4.72	119.90	13250	3200	HORIZ	49
FDN	44188-1 31271-0	72 12	120	500	T-3	R7s	400				4.72	119.90	12500	3200	HORIZ	49
FDS/DZE	31655-4	24	24	150	T-4	GZ9.5	50	C6F	1.32	33.40	2.25	57.20	5000	3400	BD	35
FDT	31653-9	24	12	100	T-3.25	GY9.5	50	C6F	1.06	27.00	2.25	57.00	3000	3300	BD	31
FDV	31663-8	24	24	150	T-4	G6.35	100	C6F	1.18	30.00	2.00	50.80	4300	3300	BDTH	37
X FDW	31664-6	24	24	150	T-4	G6.35	50	C6F	1.81	30.00	2.00	50.80	4450	3400	BDTH	37
FDX	31665-3	24	12	100	T-3.25	GY6.35	50	C6F	1.81	30.00	1.74	44.10	2900	3300	ANY	30
FEB	31886-5	100	225	600	T-4	R7s	75	CC-8			3.75	95.30	17000	3200	HORIZ	52
† FFJ	25300-5	24	120	600	T-4	R7s	75	CC-8			2.62	66.68	17000		ANY	47
FHD	SEE ESA															
FHM	44189-9 31155-5	72 12	120	1000	T-3	R7s	300	C-8			4.72	119.90	26000	3200	HORIZ	49

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Photo, Projection, Sound Reproducer and Film Viewer Lamps

	ANSI Code	NAED Number 04-6677-	Std. Pkg.	Volts	Watts (Amps.)	Bulb	Base	Avg Rated Life (Hrs)	Coil Type	L.C.L.		M.O.L.		Rated Approx. Lumens	Color Temp (K)	Operating Position	Fig No.
										In.	mm	In.	mm				
X	FHR	31666-1	24	12	50	T-3.5	G5.3	50	C6F	1.16	29.40	2.00	50.80	1400	3400	BDTH	29
†	FHS	25305-4	24	82	300	MR-13	GX5.3	70	CC-8			1.75	44.45		3300	BDTH	58
	FHV	31671-1	24	32	150	T-4	G6.35	50	C6F	1.81	30.00	1.20	50.00	5000	3400	BDTH	37
†	FHX	25306-2	24	13.8	25	MR-16	GX5.3	250	CC-6			1.75	44.45		3200	BDTH	55
	FJX	31499-7	24	13.8	30	50 DICH	GX5.3	500	C-8			1.77	45.00			BDTH	54
	FJY	31501-0	24	12	28	35 DICH	G3.9	1000				1.65	42.00			BDTH	57
†	FJZ	31505-1	24	13.8	30	35 DICH	GZ4	500	C-8			1.58	40.00			BDTH	57
	FKT	44099-0	24	120	250	GT-7	G5.3	200	CC-6	1.44	36.50	2.47	68.70	5500	3125	ANY	△
	FKY	31924-4	24	6	9	35 DICH	G3.9	250	C-6			1.65	42.00			BDTH	57
	FKZ	31923-6	24	13.8	25	35 DICH	GZ4	250	C-8			1.58	40.0			BDTH	57
	FLN	31935-0	24	13.8	50	50 DICH	GX5.3	1000	C-8			1.75	44.50			BDTH	55
	FLZ	31929-3	24	18.7	125	50 DICH	GX5.3	120	CC-6			1.85	47.00			BDTH	54
	FML	33515-8	24	13.8	50	50 DICH	GX5.3	1000	C-8			1.85	47.00			BDTH	55
†	FDN	27676-6	24	40	150	T-4	G6.35	1000	CC-8	1.25	31.75	2.00	50.8	3200		BDTH	34
†	GDA	21184-7	72	120	500	T-3.5	R7s	75	CC-8			5.25	133.3	11000	3200	ANY	48
	392N	31390-8	50	25	1		BA15s									HORIZ 120	
	397M	31394-0	400	6	(4.5)	G-13	E14	70		0.32	8.00	2.64	67.00	470		HORIZ 120	
	PF810	31387-4	24	225	650	T-5	G6.35	15	C-8	1.61	41.00	2.64	67.00	21000		ANY	45
	5972	31333-8	100	6	10	T-3	G4	200		0.95	24.00	1.50	38.00	150		ANY	27
X	6144F	31337-9	100	16	(8)	G-13	BA21d	25		1.03	26.20	2.56	65.00	3455		BDTH	11
X	6604	31284-3	50	12	75	54 DICH	GZ6.35	50	C-8			2.01	51.00			BDTH	61
	6605	31335-3	200	6	10	T-3	G4	2000	C-6	0.77	19.50	1.81	30.00	150		ANY	26
	7389	31339-5	24	225	500	T-7	GY9.5	50		1.44	36.50	2.95	75.00	14000		BDTH	43
	7763C	31341-1	100	24	250	T-4.5	PG22d	50	C-6F	0.91	23.00	2.21	56.00	8500		BDTH	33
†	13077	34338-4	100	12	30	T-4.5	PG22d	50	C-6F	0.55	14.00	1.65	42.00	800	3200	ANY	33
X	13116C	31447-6	50	12	100	TB	P30s	25	C-6F	1.73	44.00	3.74	95.00			BD	6
X	13119C	31448-4	24	12	150	TB	P30s	25	C-6F	2.17	55.00	3.74	95.00			HORIZ 15	7
	13139	33545-5	50	12	75	50 DICH	GX5.3	1000	C-8			1.65	42.00			BD ± 105	54
	13151	31503-6	300	6	15	50 DICH	GZ4	500	C-6			1.77	45.00			BD ± 105	54
	13165	44295-4	50	14	35	35 DICH	GZ4	50				1.50	38.00			BD ± 130	57
X	13347C	31450-0	100	6	15	T-6	PX22d	100		0.26	6.50	2.13	54.00	210		HORIZ 135	8
	13347Z	31455-9	100	6	15	T-6	BA15dPF	100		0.26	6.50	2.13	54.00	210			△
	13477R	31349-4	150	220	800	T-3.5	R7s	150				4.72	120.00	21600	3200	HORIZ	51
X	13512	44028-9	50	12	50	T-5	GY6.35-15	2000		1.18	30.00	1.73	44.0	900			30
	13528	31504-4	360	6	15	35 DICH	GZ4	500	C-6			1.50	38.00			BD ± 105	57
	13529	31507-7	360	6	9	35 DICH	GZ4	250	C-6			1.50	38.00			BD ± 105	57
X	13702C	31456-7	100	6	15	T-6	PX22d	100		0.26	6.50	2.13	54.00	218		HORIZ ± 135	8
X	13730C	31457-5	50	12	75	TB	P35s	25		1.73	44.00	3.74	95.00			BD ± 15	6

Cross Reference List of IEC and ANSI Base Designations:

IEC	ANSI	IEC	ANSI	IEC	ANSI	IEC	ANSI
E10/12	Miniature Screw	G13	Medium Bipin	G17t	3-Pin Prefocus	GY9.5	Prefocus Two-Pin (Higher Wattage)
E12/15	Candelabra Screw	G20	Mogul Bipin	G17q	4-Pin Prefocus	GZ9.5	Prefocus Two-Pin
E17/20	Intermediate Screw	R17d	Recessed D.C.	GX17q	4-Pin Prefocus (Low-Volt)	G22	Medium Bipost
E26s	Medium Screw S.C.	BA15s	Candelabra Bayonet S.C.	G5.3	Miniature Two-Pin	G38	Mogul Bipost
E26d	Medium Screw D.C.	BA15d	Candelabra Bayonet D.C.	G6.35	Glass Two-Pin	R7s	Recessed S.C.
E39	Mogul Screw	P28s	Medium Prefocus	GY6.35	Glass Two-Pin	GX5.3	Two-Pin Reflector (Low-Volt)
Fa8	Single-Pin	P40s	Mogul Prefocus	G9.5	Medium Two-Pin	GY5.3	Two-Pin Reflector
G5	Miniature Bipin						

*SPECIAL ORDER ITEM — Consult Customer Service for minimum order quantities and delivery.
Unless otherwise noted all dimensions are in inches. To convert inches to millimeters multiply by 25.4001.

Photo, Projection, Sound Reproducer and Film Viewer Lamps

Bulb Shapes (Not Actual Sizes)

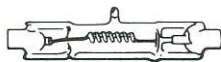
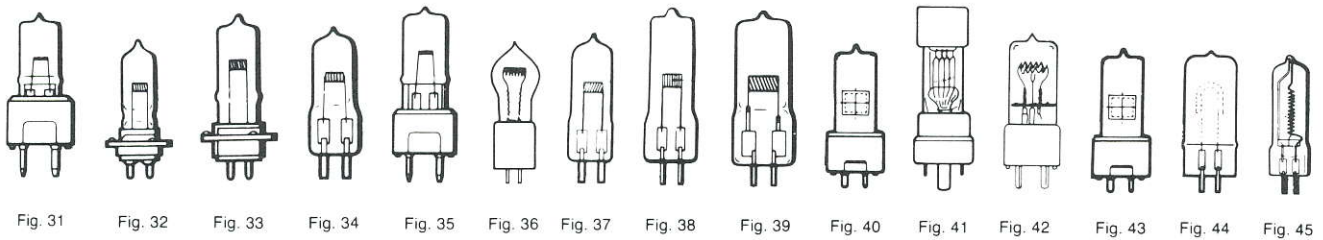
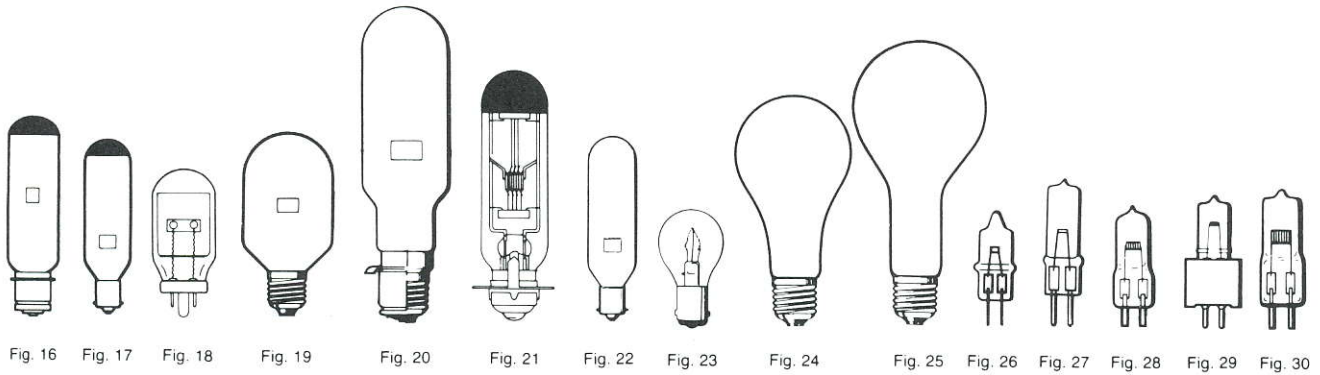
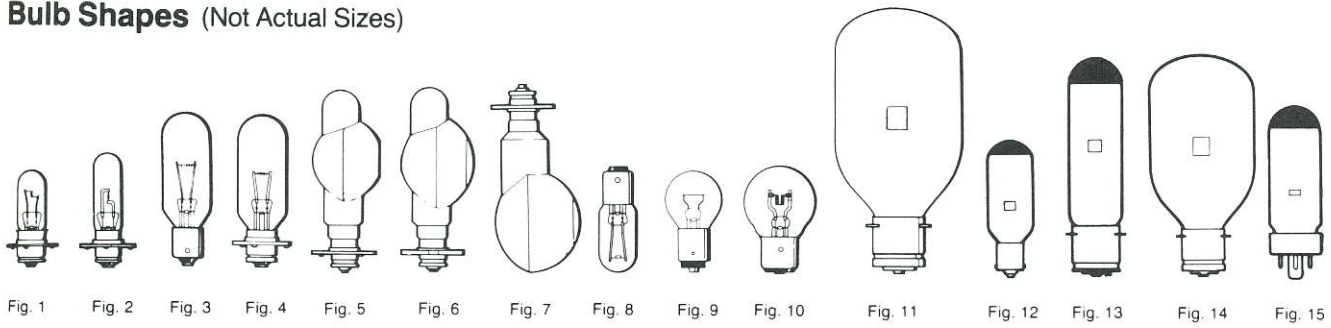


Fig. 46



Fig. 47



Fig. 48



Fig. 49

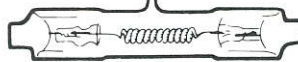


Fig. 50



Fig. 51

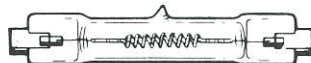


Fig. 52



Fig. 53

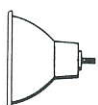


Fig. 54



Fig. 55

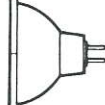


Fig. 56

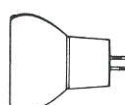


Fig. 57

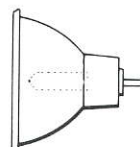


Fig. 58

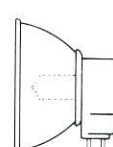


Fig. 59

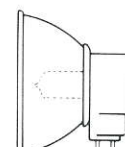


Fig. 60

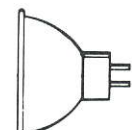
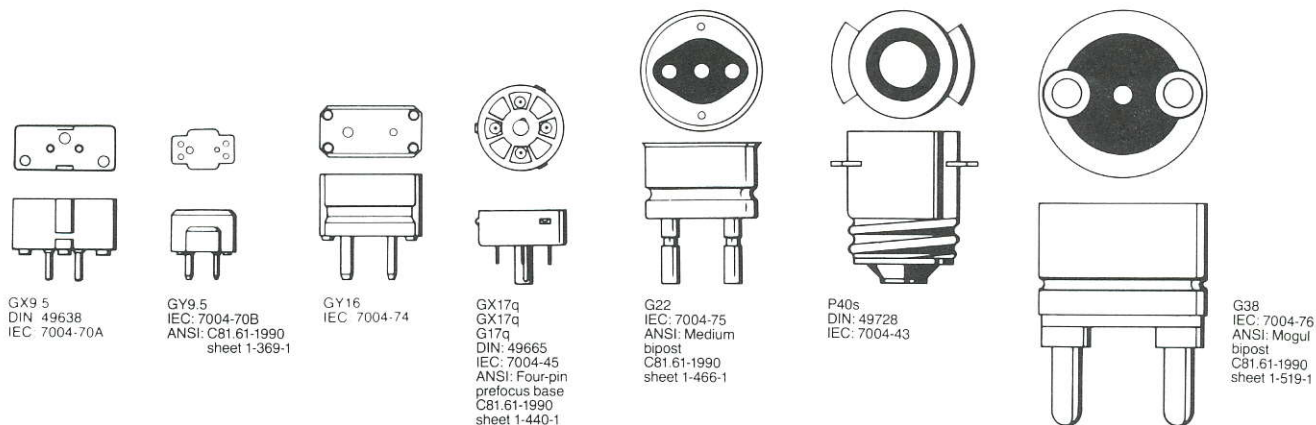
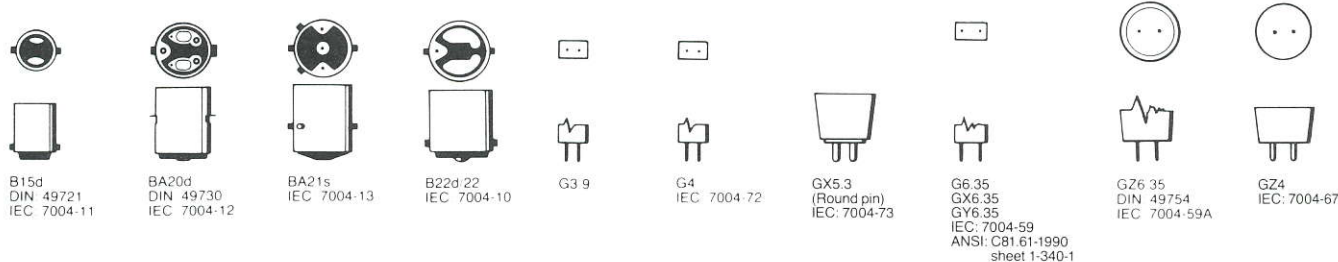
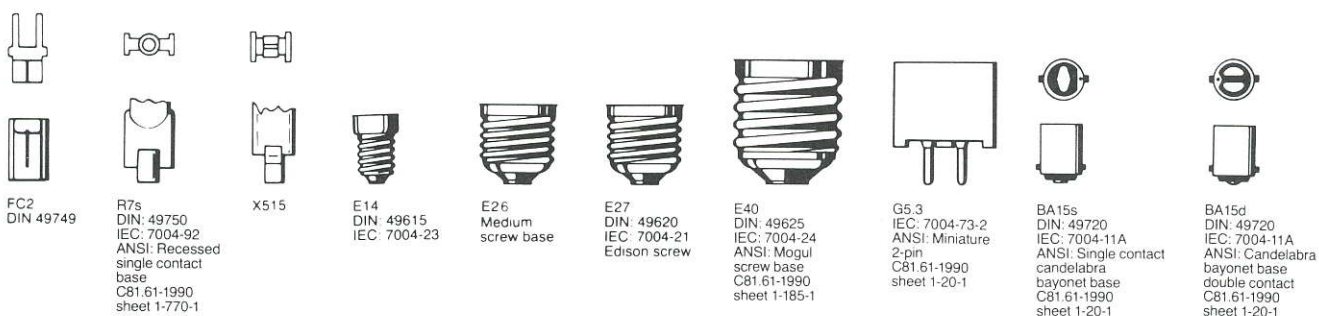
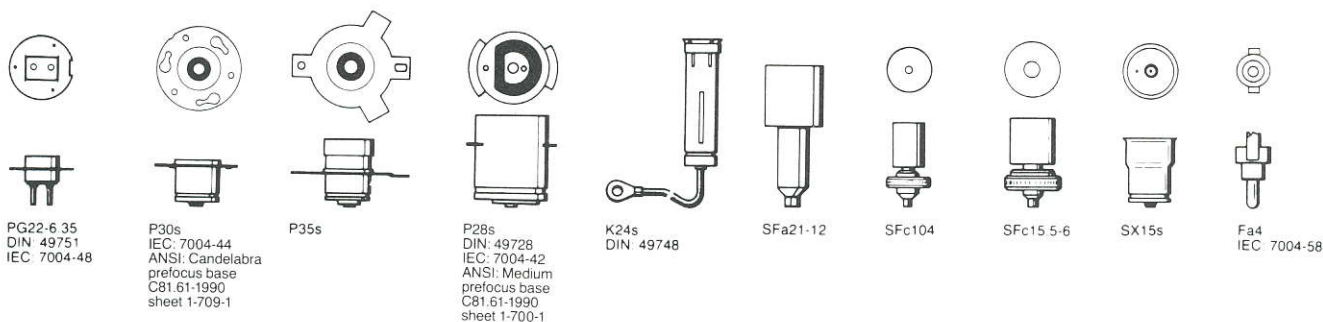


Fig. 61

PHOTO

Photo, Projection, Sound Reproducer and Film Viewer Lamps

Base Types (Not Actual Sizes)



Stage/Studio/TV Lamps

S
S
/TV

ANSI Code	NAED Number 04-6677-	Watts	Description	Volts	Base	M.O.L. (In.)	L.L. (In.)	L.C.L. (In.)	Mean Lumens	Average Rated Life (Hrs.)	Filament	Color Temp. (K)	Envelope Finish
†BKD	21175-5	750	—	120	Med. Bipost	5½	—	2½	18000	150	C-13D	3200	Clear
†BKE	21177-1	1000	—	120	Med. Bipost	5½	—	2½	25000	175	C-13D	3200	Clear
BRH	31626-5	1000	—	120	R7s	3¾	13/16	—	30000	75	CC-8	3375	Clear
BTL	31891-5	500	—	120	Med. Pf.	4½	—	2¾	11000	500	C-13D	3050	Clear
BTM	31890-7	500	—	120	Med. Pf.	4½	—	2¾	12000	100	C-13D	3200	Clear
BTP	30514-4	750	750T7Q/4CL/2P	120	Med. Pf.	4½	—	2¾	21000	200	C-13D	3200	Clear
BTR	30533-4	1000	1000T7Q/4CL/2P	120	Med. Pf.	4½	—	2¾	28500	250	C-13D	3200	Clear
BWM	20613-6	750	—	120	Med. Two-Pin	4½	—	2¾	21000	200	C-13D	3200	Clear
BWN	20154-1	1000	—	120	Med. Two-Pin	4½	—	2¾	28500	250	C-13D	3200	Clear
†CXZ	29864-6	1500	—	120	Mog. Bipost.	8½	—	5	44500	325	C-13	3200	Clear
CYV	31892-3	1000	—	120	Mog. Bipost	7¾	—	5	28500	200	C-13D	3200	Clear
CYX	31893-1	2000	—	120	Mog. Bipost	8½	—	5	59000	300	C-13	3200	Clear
†CZM	21173-0	2000	—	120	Mog. Bipost	8½	—	5	55000	250	C-13D	3200	Clear
DPJ	31693-5	750	—	120	Med. Pf.	5¾	—	2¾	19000	25	C-13D	3250	Clear
DPW	31724-8	1000	—	120	Mog. Pf.	9½	—	3¾	28500	25	C-13D	3225	Clear
DPY	31922-8	5000	—	120	Mog. Bipost	11	—	6½	14300	500	C-13	3200	Clear
DWT	38711-8	1000	1000T6Q/CL	120	R7s	5½	1	—	23400	2000	CC-8	3000	Clear
XDWY	31176-1	650	650T4Q/2CL	120	R7s	3½	5/8	—	20000	25	CC-8	3400	Clear
DWZ	31750-3	375	—	30	R7s	3½	—	—	7800	1000	CC-8	2900	Clear
DXN	31202-5	1000	1000T5Q/CL	120	R7s	3¾	11/16	—	33500	50	CC-8	3400	Clear
DXW	31219-9	1000	1000T5Q/CL	120	R7s	3¾	13/16	—	28000	150	CC-8	3200	Clear
DXX	31753-7	800	6366R	240	R7s	3½	1	—	20500	75	CC-8	3200	Clear
XDYA	31224-9	1000	1000T5Q/2CL	120	R7s	4½	13/16	—	28000	200	CC-8	3200	Clear
DYH	31638-0	600	GT7 Bulb	120	Min. Two-Pin	2½	—	1¾	17000	75	CC-6	3200	Clear
DYN	31237-1	1000	1000T5Q/2	120	R7s	4¾	—	—	28000	200	CC-8	3200	Frosted
DYS/DYV/BHC	31639-8	600	GT7 Bulb	120	Two-Pin Pf.	2½	—	1¾	17000	75	CC-6	3200	Clear
EGE	26969-6	500	—	120	Med. Pf.	5½	—	3½	10000	2000	CC-8	3000	Clear
EGF	31894-9	750	—	120	Med. Pf.	6	—	3½	20400	250	CC-8	3200	Clear
EGG	26973-8	750	—	120	Med. Pf.	6	—	3½	15000	2000	CC-8	3000	Clear
EGJ	26975-3	1000	—	120	Med. Pf.	6	—	3½	27500	400	CC-8	3200	Clear
EGK	29845-5	1000	—	120	Med. Pf.	6	—	3½	26500	400	CC-8	3200	Frosted
XEGM	25320-3	1000	—	120	Med. Prefocus	6	—	3½	21500	2000	CC-8	3000	Clear
EGN	34450-7	500	500Q/CL	120	Med. Bipost	5½	—	2½	1300	100	C-13D	3200	Clear
EGR	31895-6	750	—	120	Med. Bipost	5½	—	2½	21000	150	C-13D	3200	Clear
EGT	31896-4	1000	—	120	Med. Bipost	5½	—	2½	28500	250	C-13D	3200	Clear
EHC/EHB	31897-2	500	500Q/CL	120	Med. Two-Pin	3¾	—	2¾	13000	300	CC-8	3200	Clear
EHD	26971-2	500	500Q/CL	120	Med. Two-Pin	3¾	—	2¾	10600	2000	CC-8	3000	Clear
EHF	31898-0	750	750Q/CL	120	Med. Two-Pin	4	—	2¾	20400	300	CC-8	3200	Clear
EHG	26972-0	750	750Q/CL	120	Med. Two-Pin	4¼	—	2¾	15000	2000	CC-8	3000	Clear
EHM	39282-9	300	300T3Q/CL	120	R7s	411/16	27/8	—	6000	2000	C-8	2950	Clear
EHP	37960-2	300	300T4Q/CL	120	R7s	3½	5/8	—	5600	2000	CC-8	3000	Clear
EHR	20797-7	400	400T4Q/CL	120	R7s	3½	5/8	—	7800	2000	CC-8	3000	Clear
EHT	37857-0	250	250Q/CL	120	Mini-Can	3¾	—	1¾	5000	2000	CC-8	3000	Clear
EHX	29851-3	300	300T4Q	120	R7s	3½	—	—	5600	2000	C-8	2950	Frosted
EHZ	38206-9	300	300T3Q	120	R7s	411/16	—	—	6000	2000	C-8	2950	Frosted
EJG	31136-5	750	750T3Q/4CL	120	R7s	411/16	27/16	—	20600	400	C-8	3200	Clear
†EKB	25307-0	420	—	120	2-Pin Prefocus	2½	—	1¾	11000	75	CC-6	3200	Clear
XEKD	25311-2	650	—	120	2-Pin Prefocus	2½	—	1¾	20000	25	CC-6	3400	Clear
EMD	31154-8	750	750T3Q/4	120	R7s	411/16	—	—	20600	400	C-8	3200	Frosted
ESL	43011-6	150	150Q/CL	120	Mini-Can	2¾	—	1¾	2600	1000	CC-2V	3000	Clear
ESM	23384-1	250	250Q	120	Mini-Can	3¾	—	1¾	4800	2000	CC-8	3000	Frosted
ESN	30759-5	100	100Q/CL	120	Mini-Can	2¾	—	1¾	1900	1000	CC-2V	3000	Clear
ESP	44265-7	150	150Q/CL/DC	120	D.C. Bay.	27/16	—	1¾	2800	1000	CC-2V	3000	Clear
ESS	31584-6	250	250Q/CL/DC	120	D.C. Bay.	3	—	1¾	5000	2000	CC-8	3000	Clear
ETB	31581-2	250	250Q/DC	120	D.C. Bay.	3	—	1¾	4700	2000	CC-8	3000	Frosted
ETC	26676-7	150	150QCL/DC	120	D.C. Bay.	2¾	—	1½	2800	200	CC-8	2900	Clear
ETE	30760-3	100	100Q	120	Mini-Can	2¾	—	1¾	1850	1000	CC-2V	3000	Frosted
ETF	29850-5	150	150Q/DC	120	D.C. Bay.	2¾	—	1½	2700	2000	CC-8	2900	Frosted
ETG	34754-2	150	150Q/CL	120	Mini-Can	3	—	1½	2800	2000	CC-8	2900	Clear
ETH	29856-2	150	150Q	120	Mini-Can	3	—	1½	2700	2000	CC-8	2900	Frosted
EVR	38079-0	500	500Q/CL	120	Mini-Can	3¾	—	2	10000	2000	CC-8	3000	Clear
EYV	35604-8	500	500Q	130	Mini-Can	3¾	—	—	9800	2000	CC-8	3000	Frosted

□ Exclusive Product

† New Since Last Printing

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Stage/Studio/TV Lamps

ANSI Code	NAED Number 04-6677-	Watts	Description	Volts	Base	M.O.L. (In.)	L.L. (In.)	L.C.L. (In.)	Mean Lumens	Average Rated Life (Hrs.)	Filament	Color Temp. (K)	Envelope Finish
EYW	36335-8	500	500Q/CL	130	Mini-Can	3 $\frac{3}{4}$	—	2	10800	2000	CC-8	3000	Clear
EYX	35605-5	500	500Q	120	Mini-Can	3 $\frac{3}{4}$	—	—	9800	2000	CC-8	3000	Frosted
FAD	31182-9	650	650T4Q	120	R7s	3 $\frac{1}{8}$	$\frac{5}{8}$	—	16500	100	CC-8	3200	Clear
X FBX	31159-7	650	650T4Q	120	R7s	3 $\frac{1}{8}$	—	—	16500	100	CC-8	3200	Frosted
FBY	31221-5	1000	1000T5Q/1	120	R7s	3 $\frac{3}{4}$	—	—	26000	150	CC-8	3200	Frosted
X FBZ	31211-6	1000	1000T5Q	120	R7s	3 $\frac{3}{4}$	—	—	33000	30	CC-8	3400	Frosted
X FCA	31179-5	650	650T4Q/2	120	R7s	3 $\frac{1}{8}$	—	—	20000	25	CC-8	3400	Frosted
FCB	31919-4	600	(12260R)	120	R7s	3 $\frac{3}{4}$	$1\frac{1}{16}$	—	17000	75	CC-8	3200	Clear
FCL	20010-5	500	500T3Q/CL	120	R7s	4 $1\frac{1}{16}$	2	—	10500	2600	C-8	3000	Clear
FCM	33269-2	1000	1000T3Q/CL	120	R7s	4 $1\frac{1}{16}$	2 $\frac{1}{2}$	—	28000	300	C-8	3200	Clear
X FCV	29857-0	1000	1000Q	120	Med. Two-Pin	4	—	2 $\frac{3}{8}$	26500	300	CC-8	3200	Frosted
FCZ	36774-8	500	500T3Q	120	R7s	4 $1\frac{1}{16}$	—	—	10000	2000	C-8	3000	Frosted
FDA	20285-3	400	—	120	R7s	3 $\frac{1}{8}$	$\frac{5}{8}$	—	10400	250	CC-8	3200	Clear
FDT	31653-9	100	—	12	Pin	2 $\frac{1}{4}$	—	1 $\frac{1}{4}$	2900	100	C-6F	3300	Clear
FDF	20255-6	500	500T2 $\frac{1}{2}$ Q/CL	120	R7s	4 $1\frac{1}{16}$	2 $\frac{1}{4}$	—	13250	400	C-8	3200	Clear
FDN	31271-0	500	500T2 $\frac{1}{2}$ Q	120	R7s	4 $1\frac{1}{16}$	—	—	12800	400	C-8	3200	Frosted
FEL	26979-5	1000	1000Q/CL	120	Med. Two-Pin	4	—	2 $\frac{3}{8}$	27500	300	CC-8	3200	Clear
X FEP	31899-8	1000	—	220	Med. Two-Pin	4	—	2 $\frac{3}{8}$	26000	200	CC-8	3200	Clear
FEP	31903-8	1000	—	240	Med. Two-Pin	4	—	2 $\frac{3}{8}$	26000	200	CC-8	3200	Clear
FER/EHS	31240-5	1000	1000T6Q/4CL	120	R7s	5 $\frac{3}{8}$	$\frac{3}{4}$	—	27500	500	CC-8	3200	Clear
FEV	31904-6	200	200Q/CL/DC	120	D.C. Bay.	2 $\frac{7}{16}$	—	1 $\frac{3}{8}$	5500	50	CC-2V	3200	Clear
X FEX	31915-2	2000	—	240	R7s	5 $\frac{3}{8}$	1 $\frac{1}{4}$	—	42500	300	CC-8	3200	Clear
FEY	31916-0	2000	—	120	R7s	5 $\frac{3}{8}$	1 $\frac{1}{4}$	—	57000	400	CC-8	3200	Clear
† FFM	44235-0	420	—	120	R7s	3 $\frac{1}{8}$	$\frac{1}{2}$	—	11000	75	CC-8	3200	Clear
FFN	34350-9	1000	1000PAR64QVNSP	120	Ext. Mog. End	—	—	—	400000	800	—	3200	Clear
FFP	34351-7	1000	1000PAR64QNSP	120	Ext. Mog. End	—	—	—	330000	800	—	3200	Clear
FFR	34352-5	1000	1000PAR64QMFL	120	Ext. Mog. End	—	—	—	125000	800	—	3200	Clear
FFS	34353-3	1000	1000PAR64QWFL	120	Ext. Mog. End	—	—	—	40000	800	—	3200	Clear
FFT	31921-0	1000	—	120	R7s	6 $\frac{3}{8}$	2 $\frac{3}{16}$	—	27000	300	C-8	3200	Clear
FHM	31155-5	1000	1000T3Q	120	R7s	4 $1\frac{1}{16}$	—	—	27300	400	C-8	3200	Frosted
X FKK	31917-8	2000	—	220	Mog. Bipost	8 $\frac{1}{4}$	—	5	54000	400	C-13D	3200	Clear
—	29852-1	75	75Q/CL	28	Mini-Can	2 $\frac{1}{4}$	—	1 $\frac{3}{16}$	1400	2000	CC-6	3000	Clear
—	22886-6	250	250Q/CL	130	Mini-Can	3 $\frac{3}{32}$	—	1 $\frac{5}{8}$	5000	2000	CC-8	3000	Clear
—	31674-5	300	300T4Q/CL	130	R7s	3 $\frac{1}{8}$	$\frac{5}{8}$	—	5600	2000	CC-8	3000	Clear
—	39162-3	400	400T4Q/CL	130	R7s	3 $\frac{1}{8}$	$\frac{5}{8}$	—	7800	2000	CC-8	3000	Clear
—	31586-1	500	500Q/CL/DC	120	D.C. Bay.	3 $\frac{7}{16}$	—	2 $\frac{1}{8}$	10000	2000	CC-8	3000	Clear

Philips SureSpot™

□ BKD	21175-5	750	—	120	Med. Bipost	5 $\frac{1}{2}$	—	2 $\frac{1}{2}$	18000	150	C-13D	3200	Clear
□ BKE	21177-1	1000	—	120	Med. Bipost	5 $\frac{1}{2}$	—	2 $\frac{1}{2}$	25000	175	C-13D	3200	Clear
□ CZM	21173-0	2000	—	120	Mog. Bipost	8 $\frac{1}{2}$	—	5	55000	250	C-13	3200	Clear

MSR Lamps Single Ended Gas Discharge

Description	NAED Number 04-6677	Watts	Lamp Voltage	Lamp Current (Amps)	Lumens	Average Rated Life (Hours)	Operating Position	Base	Color Temperature (K)
† □ Standard									
MSR 400	30268-7	400	67	6.9	30000	500 (1)	Any	GX 9.5	5600
† □ MSR 700	30267-9	700	72	11	56000	750 (1)	Any	Med. Bipost	5600
† □ MSR 1200	30266-1	1200	100	13.8	110000	750 (1)	Any	Med. Bipost	5600
† □ Hot Restrike									
MSR 575/HR	31160-5	575	95	6.95	49000	750 (2)	Any	Med. Bipost(3)	5600
† □ MSR 1200/HR	30270-3	1200	115	13.8	110000	750 (2)	Any	Mog. Bipost(3)	5600
† □ MSR 2500/HR	30265-3	2500	115	25.6	240000	500 (2)	Any	Mog. Bipost(3)	5600

MSI Lamps (HMI Types) Gas Discharge

MSI 200	30709-0	200	200	3.1	16000	300	Horiz $\pm 15^\circ$	X515	5600
MSI 575	30710-8	575	200	7.0	49000	750	Any	SFc 10-4	5600
MSI 1200	30711-6	1200	200	13.8	110000	750	Any	SFc 15.5-6	5600
MSI 2500	30716-5	2500	210	25.6	240000	500	Horiz $\pm 15^\circ$	SFa 21-12	5600
MSI 4000	30718-1	4000	360	24.0	410000	500	Horiz $\pm 15^\circ$	SFa 21-12	5600
MSI 6000	34337-6	6000	200	55.0	630000	350	Horiz $\pm 15^\circ$	K 25 s	5600

□ Exclusive Product
† New Since Last Printing

(1) Based on cycle 3 hours on/1 hour off, nominal wattage. Shorter life at short cycle operation.

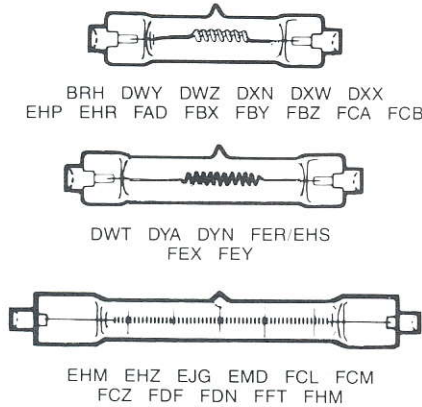
(2) Based on cycle 3 hours on/1 hour off, nominal wattage. Can be hot re-struck every 15 minutes.

(3) Lamps must be used in fixtures designed for hot-restrike.

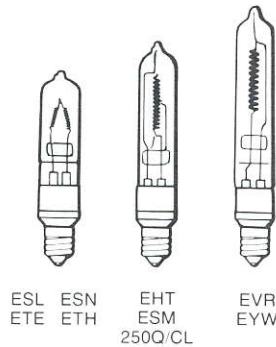
X—Orders will be shipped until inventory is depleted; no longer manufactured.

Base Types and Bulb Shapes (Not Actual Sizes)

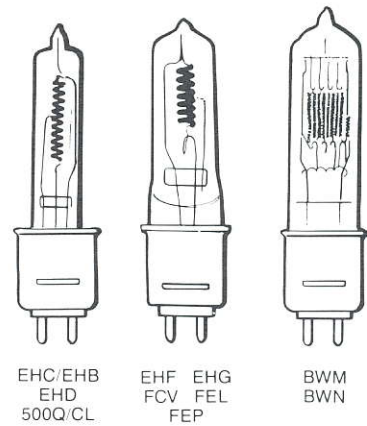
Double Ended Tungsten Halogen Lamps 3/8, 3/4, 4/8, 4 1/16, 5 5/8 and 6 5/8 MOL R7s Base



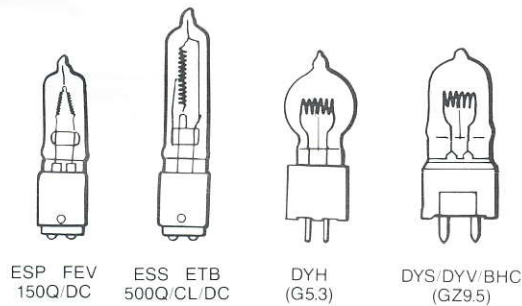
Mini-Can Base Single Ended Tungsten Halogen Lamps



Medium Two Pin Tungsten Halogen Lamps (G.9.5)

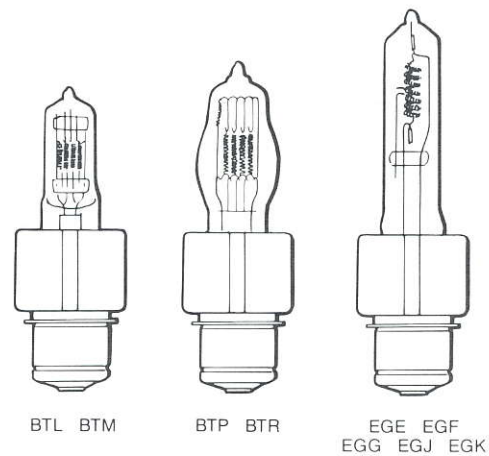


Double Contact Bayonet Bases (BA 15d) Tungsten Halogen-Miniature Two-Pin Base (G5.3) Tungsten Halogen-Two Pin Prefocus Base (GZ 9.5)

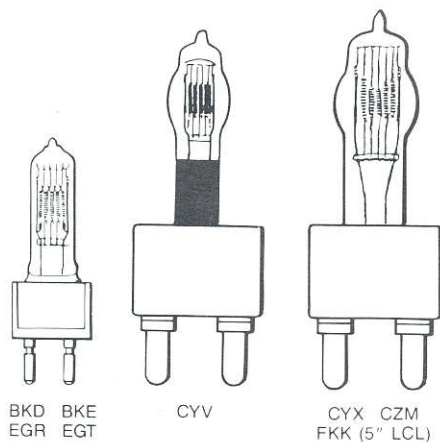


Medium Prefocus Lamps With 2 3/16" LCL (P28s)

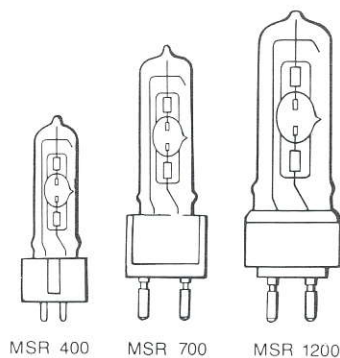
Medium Prefocus Lamps With 3 1/2" LCL (P28s)



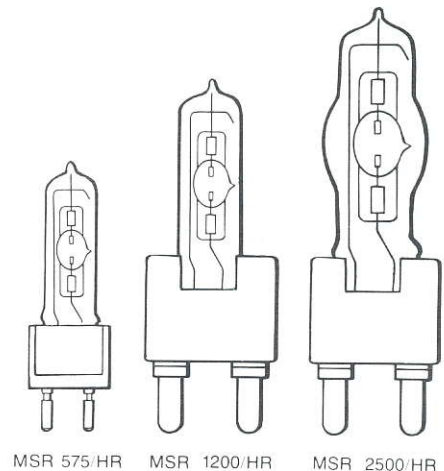
Medium Bipost Lamps With 2 1/2" LCL (G 22) Mogul Bipost Lamps With 5" And 6 1/2" LCL (G 38)



MRS Lamps (Medium Source Rare Earth Lamps)



MSR/HR Lamps (Medium Source Rare Earth Lamps Hot-Restrike Version)



Specialty Lamps

Compact Source Lamps — CS, CSI, CSX, TIN Halide

NAED Number 04-6677-	Description	Wattage	Supply Voltage	Lumens	Fig. No.
31046-6	CS 50W/3	50	55 DC	1300	△
31045-8	CS 100W/2	100	50 DC	2000	△
31044-1	CS 150W/2	150	150 DC	7500	△
31043-3	CS 150W/4	150	200 DC	7500	△
31035-9	CS 200W/2	20	120 DC	10000	△
31033-4	CS 200W/4	200	200 AC	9500	△
□ 31020-1	CSI 250W	250	220 AC	15000	△
□ 31019-3	CSI 250W/1	250	220 AC	15000	△
30625-8	CSX 75W/2/OF	75	50 DC	1000	△
30640-7	CSX 450W/OF	450	70 DC	12000	△
□ 30811-4	SN 250-505	220	75 AC	12,000	△
□ 30810-6	SN 500-507	440	75 AC	27,000	△
□ 44386-1	SN 1000-510	880	75 AC	56,000	△

Short Arc Lamps

NAED Number 04-6677-	Description	Nominal Watts	Lamp Voltage	Lumens†	Base	L.C.L. (In.)	M.O.L. (In.)	Fig. No.
□ 31645-5	SAH250A*A.C. Operation only††	250	37	10000	Med. Pf.	2.80	6	△
□ 31644-8	SAH250B*D.C. Operation only†††	250	42	10000	Med. Pf.	2.80	6	△

*Heat resisting glass bulb.

†Values for vertical operation of lamp.

††Should only be operated on a control circuit which supplies alternating current to the lamp.

†††Should only be operated on a control circuit which supplies direct current to the lamp.

Special Mercury Lamps

NAED Number 04-6677-	Description	Nominal Wattage	Lamp Voltage	Base	Length (mm)	Fig. No.
□ 30866-8	HPR 125W	125	120	E27	222	△
□ 30867-6	HPK 125W	125	125	BA15d	101	△
□ 30865-0	HPW 125WT	125	120	E27	177	△

Medium Pressure Metal Halide Lamps

NAED Number 04-6677-	Description	Nominal Wattage	Lamp Voltage	Nominal Length (mm)	Diameter (mm)	Fig. No.
44441-4	HPM 10	400	125	97	17	1-S
44431-5	HPM 10/B	400	125	97	17	1-S
37617-8	HPM 10/C	400	125	97	17	2-S
30832-0	HPM 12	460	120	98	22	2-S
44440-6	HPM 13	1000	135	149	27.5	1-S
44432-3	HPM 14	1200	525	200	17.5	2-S
34335-0	HPM 14/C	1200	525	200	17.5	2-S
30831-2	HPM 15	1000-4000	240	201	35	2-S
30829-6	HPM 17	1000-4000	220	177	30	2-S
30828-8	HPM 19	2000	210	153	26	1-S
35708-7	HPM 19C	2000	210	153	26	2-S
30827-0	HPM 20	3000	350	209	30	1-S
44439-8	HPM 20C	3000	250	209	30	2-S
44448-9	HPA 400S	380	135	108.5	17	3-S
44447-1	HPA 400/30S	380	135	93	18	6-S
34441-6	HPA 1000	930	133	149	28.5	7-S
34442-4	HPA 1000/20	1100	120	132	28.5	4-S
34443-2	HPA 2000	1750	265	177	28.5	5-S

Low Pressure Pulsed Xenon Discharge Lamps

NAED Number 04-6677-	Description	Nominal Wattage	Lamp Voltage	Max. Length (mm)	Width or Diameter (mm)	Height (mm)	Fig. No.
30750-4	XOP 7 O/F	750	52	241	16.2	—	10-S
30749-6	XOP 15 O/F	1500	105	395	16.2	—	10-S
30738-9	XOP 25 O/F	2000	115	540	16.2	—	10-S
30737-1	XOP 30 O/F	3000	210	698	16.2	—	10-S
30734-8	XOP 40 O/F	4000	210	64	67	118	8-S
30721-5	XOP 80 O/F	8000	420	109	67	118	9-S

□ Exclusive Product

△ Not Shown

Spectral Lamps

NAED Number 04-6677-	Description	Philips Type Number	Base	Isolated Wavelength (nm)	Fig. No.
\$ 30977-3	Argon	93100	E27	*	11-S
\$ 30985-6	Cadmium (Quartz)	93107	E27	326.1	11-S
\$ 30997-1	Cadmium	93162	E27	467.8	11-S
\$ 30983-1	Caesium	93105	E27	699.0	11-S
\$ 30962-5	Helium	93098	E27	588.0	11-S
\$ 30999-7	Indium	103778	E27	*	11-S
\$ 30978-1	Krypton	93101	E27	*	11-S
\$ 30987-2	Quartz Mercury (High Pressure)	93110	E27	312.6	11-S
\$ 30990-6	Mercury (High Pressure)	93136	E27	404.7	11-S
\$ 30986-4	Quartz Mercury (Low Pressure)	93109	E27	253.7	11-S
\$ 30989-8	Mercury (Low Pressure)	93123	E27	404.7	11-S
\$ 30991-4	Mercury (Cadmium-Zinc)	93145	E27	*	11-S
\$ 30996-3	Quartz Mercury (Cadmium-Zinc)	93146	E27	*	11-S
\$ 30974-0	Neon	93099	E27	*	11-S
\$ 30982-3	Rubidium	93104	E27	*	11-S
\$ 30988-0	Sodium	93122	E27	589.0	11-S
\$ 30961-7	Sodium Polarimeter	4348	E14	589.0	12-S
\$ 30981-5	Xenon	93102	E27	*	11-S
\$ 30998-9	Zinc	103137	E27	472.0	11-S
\$ 30984-9	Zinc	93106	E27	307.6	11-S

Fluorescent Lamps with Super Actinic Radiation

NAED Number 04-6677-	Description	Nominal Wattage	Nominal Current (Amps.)	Diameter (mm)	Nominal Length (cm) (In)	Fig. No.
† □ 29747-3	TLD15W/03	15	0.55	26	45 18	—
□ 30800-7	TL20W/03	20	0.37	38	60 24	13-S
† □ 30372-7	TL30W/03	30	0.43	38	92 36	—
□ 30805-6	TLD30W/03	30	0.84	26	45 18	14-S
□ 30801-5	TL40W/03	40	0.43	38	122 48	13-S
□ 30807-2	TLK40W/03	40	0.88	38	61 24	13-S
□ 30803-1	TL60W/03	60	0.80	38	120 48	13-S
□ 30808-0	TL140W/03	140	1.33	38	150 60	13-S

Fluorescent Lamps with Actinic Radiation

30815-5	TL6W/05	6	0.16	16	23 12	15-S
30825-4	TLD15W/05	15	0.31	26	46 18	14-S
30823-9	TL20W/05	20	0.37	38	61 24	13-S
X 30818-9	TLDK30W/05	30	0.84	38	46 18	13-S
30817-1	TL40W/05	40	0.43	38	122 48	13-S
30812-2	TLK40W/05	40	0.88	38	61 24	13-S
30814-8	TL65-80W/05	65/80	0.67/0.88	38	150 60	13-S

Germicidal Sterilamp® Tubes

NAED Number 04-6677-	Description	Nominal Wattage ⁽¹⁾	Diameter	Base	Ozone	Nominal Length (In.)	Fig. No.
-------------------------	-------------	-----------------------------------	----------	------	-------	-------------------------	-------------

● Hot Cathode

29930-5	G8T5	8	T-5	Min. Bipin	Negligible	12 ⁽³⁾	16-S
30864-3	G15T8	15	T-8	Md. Bipin	Negligible	18 ⁽³⁾	16-S
30850-2	G30T8	30	T-8	Mid. Bipin	Negligible	36 ⁽³⁾	16-S

● Cold Cathode

28807-6	782L-10	12 ⁽⁵⁾	T-5	Single Pin	Negligible	16 ^{7/8} ⁽³⁾	17-S
20339-8	782H-10	12	T-5	Single Pin	High	16 ^{7/8} ⁽³⁾	17-S
20340-6	782L-20	14	T-5	Single Pin	Negligible	26 ^{7/8} ⁽³⁾	17-S
28884-5	782L-30	17	T-5	Single Pin	Negligible	36 ^{7/8} ⁽³⁾	17-S
28885-2	782H-30	17	T-5	Single Pin	High	36 ^{7/8} ⁽³⁾	17-S

● Slimline

21642-4	G10T5½L	15 ⁽⁴⁾	T-5½	Single Pin	Negligible	16 ^{7/8} ⁽³⁾	17-S
20344-8	G10T5½H	15 ⁽⁴⁾	T-5½	Single Pin	High	16 ^{7/8} ⁽³⁾	17-S
28888-6	G36T6L	39 ⁽²⁾	T-6	Single Pin	Negligible	36 ^{7/8} ⁽³⁾	17-S
28887-8	G36T6H	39 ⁽²⁾	T-6	Single Pin	High	36 ^{7/8} ⁽³⁾	17-S
28887-4	G37T6VH	39	T-6	Single Pin	Very High	37 ⁽³⁾	17-S

†New Since Last Printing

□ Exclusive Product

*None Specific

S = Check Customer Service For Availability

See footnotes on next page.

X — Orders will be shipped until inventory is depleted; no longer manufactured.

Specialty Lamps

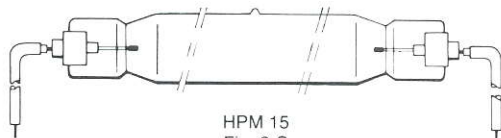
Footnotes — Specialty Lamps

- (1) Wattages shown are for operation from a transformer or ballast, currently standard, under specified test conditions.
- (2) Wattage shown is for lamp operating current of 420 ma. Wattage will vary at other operating currents as follows:
120 ma. — 17 watts; 200 ma. — 25 watts; 300 ma. — 32 watts.
- (3) Approximate overall length including two standard lamp holders.
- (4) Wattage shown is for lamp operating at 400 ma.
- (5) Wattage shown is for lamp operating at 60 ma. Lamp may also be operated at 100 ma. — 20 watts.

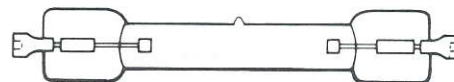
Bulb Shapes (Not Actual Sizes)



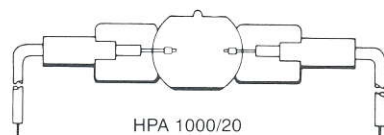
HPM 10/B
Fig. 1-S



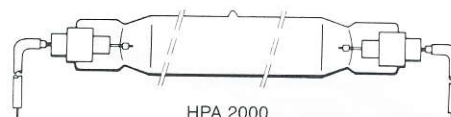
HPM 15
Fig. 2-S



HPA 400
Fig. 3-S



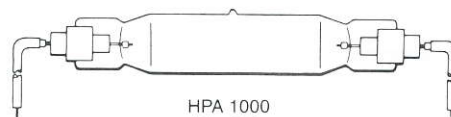
HPA 1000/20
Fig. 4-S



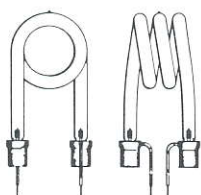
HPA 2000
Fig. 5-S



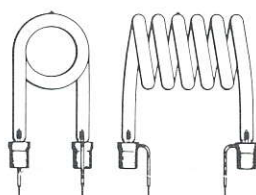
HPA 400/30
Fig. 6-S



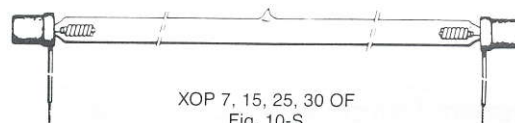
HPA 1000
Fig. 7-S



XOP 40 OF
Fig. 8-S



XOP 80 OF
Fig. 9-S



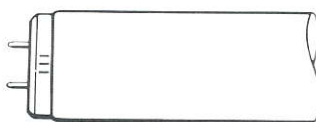
XOP 7, 15, 25, 30 OF
Fig. 10-S



SPECTRAL Lamps
Fig. 11-S



Fig. 12-S



T-12 Med. Bipin
Fig. 13-S



T-8 Med. Bipin
Fig. 14-S



T-5 Min. Bipin
Fig. 15-S



Hot Cathode Sterilamp
Fig. 16-S



Cold Cathode Slimline Sterilamp
Fig. 17-S

Philips Energy-Saving Lamp Substitution Guide

Philips Lighting offers many incandescent, halogen and fluorescent lamps engineered to reduce power consumption, yet still maintain adequate lighting levels to suit your needs. These energy-saving lamps can be found throughout this Specification and Application Guide and are indicated with the \$\$\$ symbol.

The following Substitution Table is a quick reference for determining the amount of savings you'll receive *simply by replacing a lamp*.

First, survey your lighting system. Determine what type of lamps — and how many — you're presently using. Then, look up the energy-saving substitute on the chart to pinpoint your annual savings per socket. Multiply by the number of lamps in use to calculate total energy savings per year — You'll be amazed at the results.

QUICK REFERENCE TABLE LAMP ENERGY-SAVING SUBSTITUTIONS				
Present Lamp	Suggested Substitute Energy-Saving Lamps	Approx. Light Levels(1)	Watts Saved Per Socket	Annual Energy Cost Savings Per Socket(2)
Incandescent Lamps				
BC-7C7/W	\$\$\$ BC-4C7/W	55%	3	\$ 1.20
40A	\$\$\$ 40A-34A/EW	85%	6	2.40
40A/99	\$\$\$ 40A-34A/99/EW	90%	6	2.40
50R20	\$\$\$ 30RM19/25°	90%	20	8.00
60A	\$\$\$ 60A-52A/EW	90%	8	3.20
60A/99	\$\$\$ 60A-52A/99/EW	90%	8	3.20
60A19/35	\$\$\$ 54A19/35	90%	6	2.40
60T/SW	\$\$\$ 55T/W/ES	90%	5	2.00
67A21/99TS	\$\$\$ K60A19/TS/EW	100%	7	2.80
69A21/TS	\$\$\$ K60A19/TS/EW	90%	9	3.60
75A	\$\$\$ 75A-67A/EW	90%	7	2.80
75A/99	\$\$\$ 75A-67A/99/EW	85%	7	2.80
75PAR/FL	\$\$\$ 75-65 PAR/FL/EP or \$\$\$ 45PAR38/H/FL	100%	10 30	4.00 12.00
75PAR/SP	\$\$\$ 75-65PAR/SP/EP or \$\$\$ 45PAR38/H/SP	100%	10 30	4.00 12.00
75R20	\$\$\$ 50RM19/25°	100%	25	10.00
75R/FL	\$\$\$ 50ER30	200%●	25	10.00
75T/SW	\$\$\$ 70T/W/ES	90%	5	2.00
100A	\$\$\$ 100A-90A/EW	95%	10	4.00
100A/99	\$\$\$ 100A-90A/99/EW	90%	10	4.00
100A21/35	\$\$\$ 90A21/35	85%	10	4.00
100R/FL	\$\$\$ 75ER30	175%●	25	10.00
100T/SW	\$\$\$ 95T/W/ES	95%	5	2.00
150A	\$\$\$ 150A-135A/EW	90%	15	6.00
150A/99	\$\$\$ 150A-135A/99/EW	90%	15	6.00
150A25/35	\$\$\$ 135A25/35	85%	15	6.00
150PAR/FL	\$\$\$ 150-120PAR/FL/EP or \$\$\$ 90PAR38/H/FL	100%	30 60	12.00 24.00
150PAR/SP	\$\$\$ 150-120PAR/SP/EP or \$\$\$ 90PAR38/H/SP	100%	30 60	12.00 24.00
150R/FL	\$\$\$ 75ER30	100%●	75	30.00
250R40/HR	\$\$\$ 175PAR38/HEAT/R	*	75	30.00
250R40/1	\$\$\$ 175PAR38/HEAT	*	75	30.00
250R40/4	\$\$\$ 175PAR38/HEAT	*	75	30.00
250R40/5	\$\$\$ 175PAR38/HEAT	*	75	30.00
300PAR56/MFL	\$\$\$ 200PAR56/MFL	60%	100	40.00
300PAR56/NSP	\$\$\$ 200PAR56/NSP	60%	100	40.00
300R/FL	\$\$\$ 120ER40	100%●	180	72.00

(1) Light level is illumination, or footcandles, not the lumen output of the lamp, and is expressed as % of present level.

(2) Based on 4,000 operating hours/year and \$0.10/KWH.
● In deep recessed luminaires
* Heat energy approximately equivalent

Philips Energy-Saving Lamp Substitution Guide

QUICK REFERENCE TABLE LAMP ENERGY-SAVING SUBSTITUTIONS				
Present Lamp	Suggested Substitute Energy-Saving Lamps	Approx. Light Levels(1)	Watts Saved Per Socket	Annual Energy Cost Savings Per Socket(2)
Tungsten Halogen Lamps				
500T3Q/CL	\$\$\$ 400T3Q/CL	88%	100	\$40.00
1500T3Q/CL	\$\$\$ 1200T3Q/CL	88%	300	120.00
EXN	\$\$\$ 39MR-16/SQ/FL38	100%	11	4.40
EXT	\$\$\$ 39MR-16/SQ/SP12	100%	11	4.40
EXZ	\$\$\$ 39MR-16/SQ/FL24	100%	11	4.40
EYC	\$\$\$ 49MR-16/SQ/FL38	100%	26	10.40
EYF	\$\$\$ 49MR-16/SQ/SP12	100%	26	10.40
Compact Fluorescent Lamps				
75 Watt Lamps	\$\$\$ Earth Light SL*18	93%(3)	57	\$22.80
75PAR38 and 75R/FL	\$\$\$ SL*18/R40W/27	94%	57	22.80
60 Watt Lamps	\$\$\$ SL* Magnetic	87%(3)	42	16.80
25 Watt Lamps	\$\$\$ PL-S 5/27/SYS	106%(3)	16	6.40
40 Watt Lamps	\$\$\$ PL-S 7/27/SYS	82%(3)	30	12.00
40 Watt to 60 Watt Lamps	\$\$\$ PL-S 9/27/SYS	122%(3)	28	11.20
60 Watt Lamps	\$\$\$ PL-C 13/27/USA/SYS	81%(3)	46	18.40
Fluorescent Lamps				
F30T12/CW/RS	\$\$\$ F30T12/CW/RS/EW-II	87%	5	\$2.00
F30T12/WW/RS	\$\$\$ F30T12/WW/RS/EW-II	87%	5	2.00
F40CW	\$\$\$ F40CW/RS/EW-II	87%(4)	6	2.40
F40CWX	\$\$\$ F40CW/RS/EW-II	88%	6	2.40
F40D	\$\$\$ F40D/RS/EW-II	90%	6	2.40
F40SPEC30	\$\$\$ F40SPEC30/RS/EW-II	88%	6	2.40
F40SPEC35	\$\$\$ F40SPEC35/RS/EW-II	88%	6	2.40
F40SPEC41	\$\$\$ F40SPEC41/RS/EW-II	88%	6	2.40
F40WW	\$\$\$ F40WW/RS/EW-II	87%	6	2.40
F40WWX	\$\$\$ F40WWX/RS/EW-II	88%	6	2.40
F40/30U	\$\$\$ F40/30U/RS/EW-II	88%	6	2.40
F40/35U	\$\$\$ F40/35U/RS/EW-II	88%	6	2.40
F40/41U	\$\$\$ F40/41U/RS/EW-II	88%	6	2.40
F40/50U	\$\$\$ F4050U/RS/EW-II	88%	6	2.40
F96T12/CW/HO	\$\$\$ F96T12/CW/HO/EW	91%(4)	15	6.00
F96T12/D/HO	\$\$\$ F96T12/D/HO/EW	87%	15	6.00
F96T12/SPEC30/HO	\$\$\$ F96T12/SPEC30/HO/EW	91%	15	6.00
F96T12/SPEC35/HO	\$\$\$ F96T12/SPEC35/HO/EW	91%	15	6.00
F96T12/SPEC41/HO	\$\$\$ F96T12/SPEC41/HO/EW	91%	15	6.00
F96T12/W/HO	\$\$\$ F96T12/W/HO/EW	91%	15	6.00
F96T12/WW/HO	\$\$\$ F96T12/WW/HO/EW	91%	15	6.00
F96T12/30U/HO	\$\$\$ F96T12/30U/HO/EW	91%	15	6.00
F96T12/41U/HO	\$\$\$ F96T12/41U/HO/EW	91%	15	6.00
F96T12/CW/VHO	\$\$\$ F96T12/CW/VHO/EW	93%(4)	30	12.00
F48T12/CW	\$\$\$ F48T12/CW/EW	83%	8.5	3.40
F48T12/SPEC35	\$\$\$ F48T12/SPEC35/EW	86%	8.5	3.40
F96T12/CW	\$\$\$ F96T12/CW/EW	89%(4)	15	6.00
F96T12/CWX	\$\$\$ F96T12/CWX/EW	89%	15	6.00
F96T12/D	\$\$\$ F96T12/D/EW	93%	15	6.00
F96T12/SPEC30	\$\$\$ F96T12/SPEC30/EW	89%	15	6.00

(1) Light level is illumination, or footcandles, not the lumen output of the lamp, and is expressed as % of present level.

(2) Based on 4,000 operating hours/year and \$0.10/KWH.

(3) Light levels based on comparison to T-19 Soft White Bulbs.

(4) By substituting Lite White lamps, the light levels will be 90% for the F40LW/RS/EW-II, 91% for the F96T12/LW/EW, 94% for the F96T12/LW/HO/EW and 95% for the F96T12/LW/VHO/EW. The watts saved will be the same.

Philips Energy-Saving Lamp Substitution Guide

QUICK REFERENCE TABLE LAMP ENERGY-SAVING SUBSTITUTIONS

Present Lamp	Suggested Substitute Energy-Saving Lamps	Approx. Light Levels(1)	Watts Saved Per Socket	Annual Energy Cost Savings Per Socket(2)
Fluorescent Lamps (continued)				
F96T12/SPEC35	\$\$\$ F96T12/SPEC35/EW	89%	15	\$6.00
F96T12/SPEC41	\$\$\$ F96T12/SPEC41/EW	89%	15	6.00
F96T12/W	\$\$\$ F96T12/W/EW	84%	15	6.00
F96T12/WW	\$\$\$ F96T12/WW/EW	89%	15	6.00
F96T12/C50	\$\$\$ F96T12/C50/EW	88%	15	6.00
F96T12/30U	\$\$\$ F96T12/30U/EW	89%	15	6.00
F96T12/35U	\$\$\$ F96T12/35U/EW	89%	15	6.00
F96T12/41U	\$\$\$ F96T12/41U/EW	89%	15	6.00
F96T12/50U	\$\$\$ F96T12/50U/EW	90%	15	6.00
FB40CW/6	\$\$\$ FB40CW/6/EW-II	91%	6	2.40
FB40WW/6	\$\$\$ FB40WW/6/EW-II	89%	6	2.40

- (1) Light level is illumination, or footcandles, not the lumen output of the lamp, and is expressed as % of present level.
 (2) Based on 4,000 operating hours/year and \$0.10/KWH.

Energy-Cost Table

One Watt for One Year

		COST PER KILOWATT HOUR (\$)												
HOURS USED DAILY		.04	.05	.06	.07	.08	.09	.10	.11	.12	.13	.14	.15	.16
	8	.10	.12	.15	.17	.20	.22	.25	.27	.30	.32	.35	.37	.40
	10	.12	.16	.19	.22	.25	.28	.31	.34	.37	.41	.44	.47	.50
	12	.15	.19	.22	.26	.30	.34	.37	.41	.45	.49	.52	.56	.60
	14	.17	.22	.26	.31	.35	.39	.44	.48	.52	.57	.61	.66	.70
	18	.22	.28	.34	.39	.45	.51	.56	.62	.67	.73	.79	.84	.90

Annual Cost Per Consumed Watt Based on 6 Day Usage

(Add 1/6 for 7 days . . . Subtract 1/6 for 5 days.)

EXAMPLE: 7¢ per KW x 12 hours of daily usage =
26¢ per watt, per year.

COST PER WATT (\$) — 24 HOURS • 7 DAYS 52 WEEKS (8736 HOURS)														
.35	.44	.52	.61	.70	.79	.87	.96	1.05	1.14	1.22	1.31	1.40		

One (1) Kilowatt = 1,000 Watts
 One (1) Kilowatt Hour (KWH) = 1,000 Watts
 used one hour

It's true. It's documented. And you can prove it for yourself. By using the "Energy Cost Table" and the simple formula provided below, you can prove how much costly energy can be saved simply by changing from standard lamps to energy-saving Philips lamps.

Electricity represents, on average, 86% of your total life-cycle lighting costs. Lamps represent 3% of your total costs. So it only stands to reason that the most significant savings can be achieved through energy-cost reductions. And those savings translate directly into additional bottom-line profit for your business.

See for yourself how much you can save by changing just one light bulb.

You're Presently Using

Lamps _____ Consuming _____ Watts/Lamp

Philips Recommends:

Lamp _____ Consuming _____ Watts/Lamp

Eliminating _____ Watts/Lamp

How You Save

Watts Eliminated/Lamp X Cost/Watt (¢) From Energy-Cost Table = \$ Savings Per Lamp
 X Number of Lamps

Annual Savings

= \$ _____

PHILIPS LIGHTING COMPANY HEADQUARTERS

City	Address	Telephone No.	FAX No.
SOMERSET, NJ	200 Franklin Square Drive, P.O. Box 6800, Somerset, NJ 08875-6800	(908) 563-3000	(908) 563-3641

SALES OFFICES AND LAMP TECHNICAL INFORMATION**I/C DIVISION**

City	Address	Telephone No.	FAX No.
ATLANTA, GA	4875 Westpark Drive, Atlanta, GA 30336	(404) 346-2100	(404) 346-2138
BALTIMORE, MD	3300 Northridge Road, Suite 155, Ellicott City, MD 21043	(301) 465-6902	(301) 465-7079
BOSTON, MA	Point West Place, 111 Speen Street, Framingham, MA 01701	(508) 879-9070	(508) 875-2176
CHARLOTTE, NC	5445 77 Center Drive, Suite 81, Charlotte, NC 28217	(704) 523-7777	(704) 525-0072
CHICAGO, IL	440 North Medinah Road, Roselle, IL 60172	(708) 307-3220	(708) 307-3293
DALLAS, TX	1435 Bradley Lane, Carrollton, TX 75007	(214) 323-8209	(214) 245-1248
DENVER, CO	141 Union Boulevard, Suite 120, Lakewood, CO 80228	(303) 980-9180	(303) 986-4085
DETROIT, MI	32605 Twelve Mile Road, Suite 303, Farmington Hills, MI 48018	(313) 553-6040	(313) 553-6058
HOUSTON, TX	10500 Richmond Avenue, Suite 200, P.O. Box 42178, Houston, TX 77242-2178	(713) 974-0885	(713) 974-0880
LOS ANGELES, CA	2100 E. Valencia Drive, Suite E, Fullerton, CA 92631	(714) 447-5367	(714) 447-5377
MIAMI, FL	1551 NW 24th Street, Suite 100, Pompano Beach, FL 33064	(305) 970-9206	(305) 970-9208
NEW ORLEANS, LA	1000 River Bend Boulevard, Suite P, St. Rose, LA 70087	(504) 466-0281	(504) 466-0296
NEW YORK, NY	1 Expressway Plaza, Bldg. 1, Suite 201, Roslyn Heights, NY 11577	(516) 484-3064	(516) 484-5450
PHILADELPHIA, PA	489 Devon Park Drive, Suite 310, Wayne, PA 19087	(215) 293-1310	(215) 293-1314
SAN FRANCISCO, CA	210 Porter Drive, Suite 230, San Ramon, CA 94583	(415) 743-2650	(415) 743-2690
SOUTH BRUNSWICK, NJ	Docks Corner Road, P.O. Box 668, Dayton, NJ 08810-0030	(908) 329-3800	(908) 329-8727
ST. LOUIS, MO	2200 West Port Plaza Drive, Suite 202, St. Louis, MO 63146	(314) 576-4002	(314) 576-4099

CONSUMER DIVISION

City	Address	Telephone No.	FAX No.
ATLANTA, GA	4875 Westpark Drive, Atlanta, GA 30336	(404) 346-2108	(404) 346-2118
CHICAGO, IL	440 North Medinah Road, Roselle, IL 60172	(708) 307-3000	(708) 307-3293
LOS ANGELES, CA	2100 E. Valencia Drive, Suite E, Fullerton, CA 92631	(714) 447-5358	(714) 447-5382
SO. BRUNSWICK, NJ	Docks Corner Road, P.O. Box 668, Dayton, NJ 08810	(908) 329-3800	(908) 329-8727

AUTOMOTIVE DIVISION

City	Address	Telephone No.	FAX No.
ATLANTA, GA	4875 Westpark Drive, Atlanta, GA 30336	(404) 346-2124	(404) 346-2118
LOS ANGELES, CA	2100 E. Valencia Drive, Suite E, Fullerton, CA 92631	(714) 447-5360	(714) 447-5382
SOMERSET, NJ	200 Franklin Square Drive, P.O. Box 6800 Automotive Dept., Somerset, NJ 08875-6800	(908) 563-3684	(908) 563-3451

CUSTOMER SERVICE / ORDER ENTRY LOCATIONS

City	Address	Telephone No.	FAX No.
ATLANTA, GA	4875 Westpark Drive, P.O. Box 105562, Atlanta, GA 30336	(404) 346-2100	1 (800) 445-6390
LAPALMA, CA	28 Centerpointe Drive, Suite 105, LaPalma, CA 90623	(714) 228-5500	1 (800) 627-9192
ROSELLE, IL	440 N. Medinah Road, Roselle, IL 60172	1 (800) 247-6090	(708) 307-3250
SOMERSET, NJ	200 Franklin Square Drive, P.O. Box 6800, Dept. 4026, Somerset, NJ 08875-6800	1 (800) 937-5483	1 (800) 635-3818

SALES OFFICES AND LAMP TECHNICAL INFORMATION**OEM, OLM DIVISION**

City	Address	Telephone No.	FAX No.
ATLANTA, GA	4875 Westpark Drive, Atlanta, GA 30336	(404) 346-2127	(404) 346-2118
CARROLLTON, TX	1435 Bradley Lane, P.O. Box 15070, Carrollton, TX 75007	(214) 323-8242	(214) 245-1248
CHICAGO, IL	440 North Medinah Road, Roselle, IL 60172	(708) 307-3000	(708) 307-3293

EXPORT SALES

SOMERSET, NJ	200 Franklin Square Drive, P.O. Box 6800, Dept. 4131, Somerset, NJ 08875-6800	(908) 563-3483	(908) 563-3155
--------------	---	----------------	----------------

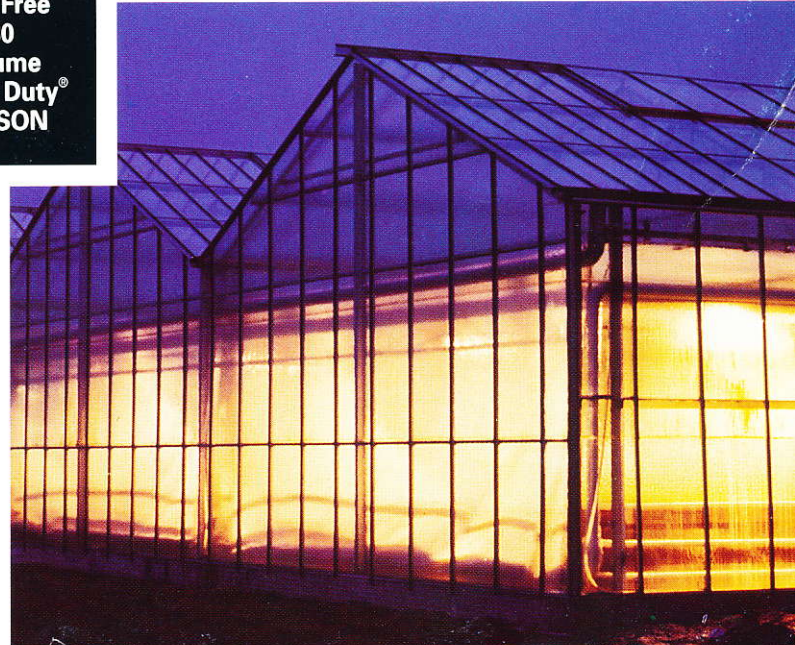
OEM, OLM, EXPORT CUSTOMER SERVICE LOCATION

SOMERSET, NJ	200 Franklin Square Drive, P.O. Box 6800, Dept. 4131, Somerset, NJ 08875-6800	1 (800) 832-2852	1 (800) 937-8989
--------------	---	------------------	------------------



The
following are
Trademarks
of the
Philips Lighting
Company:

Advantage X
Agro-Lite
Bug-A-Way®
Ceramalux
Colortone®
Director
Earth Light
Econolux
Econ-o-Par
Econ-o-watt®
HalogenA
Hi Accent
Lifeguard®
Masterline
Philinea
Plusline
Safe-TBeam®
Sterilamp®
Softone Pastels
Spatterproof®
Spotline
Style-Tone
SureSpot
Tangle Free
TL 80
Ultralume
Weather Duty®
White SON



Philips Lighting Company
200 Franklin Square Drive ■ P.O. Box 6800
Somerset, NJ 08875-6800

Telephone (908) 563-3000 FAX (908) 563-3641

A Division of North American Philips Corporation
Printed in USA 1/91 SAG-100



Philips Lighting



PHILIPS