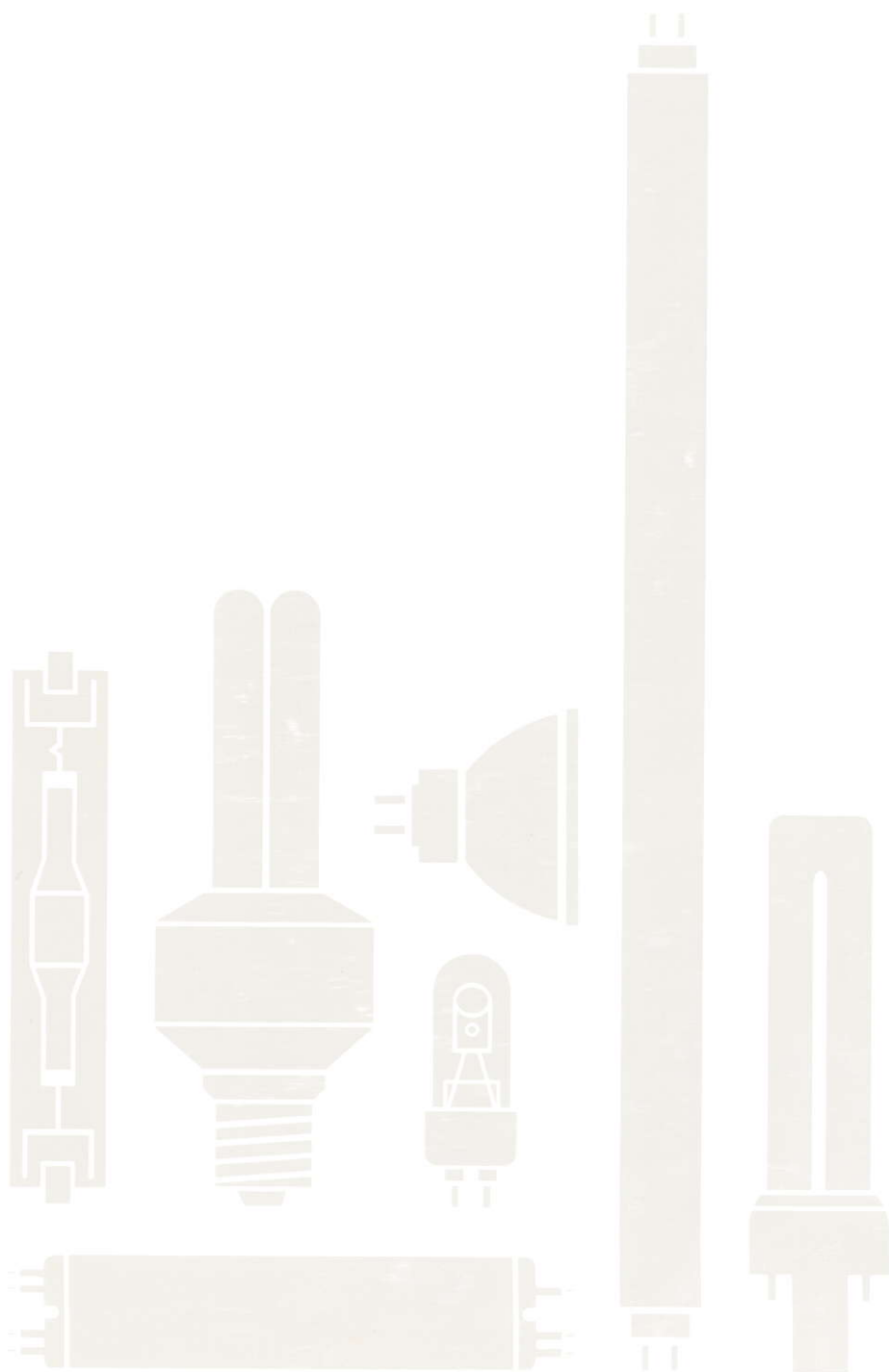


General Lighting Products 1992-1993



OSRAM

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Lighting design by Craig Roeder & Associates.
Tungsten Halogen AR111 lamps.



Baseball Hall of Fame, Cooperstown, New York.
HQI®-DE lamps with POWERTRONIC™ electronic ballasts.

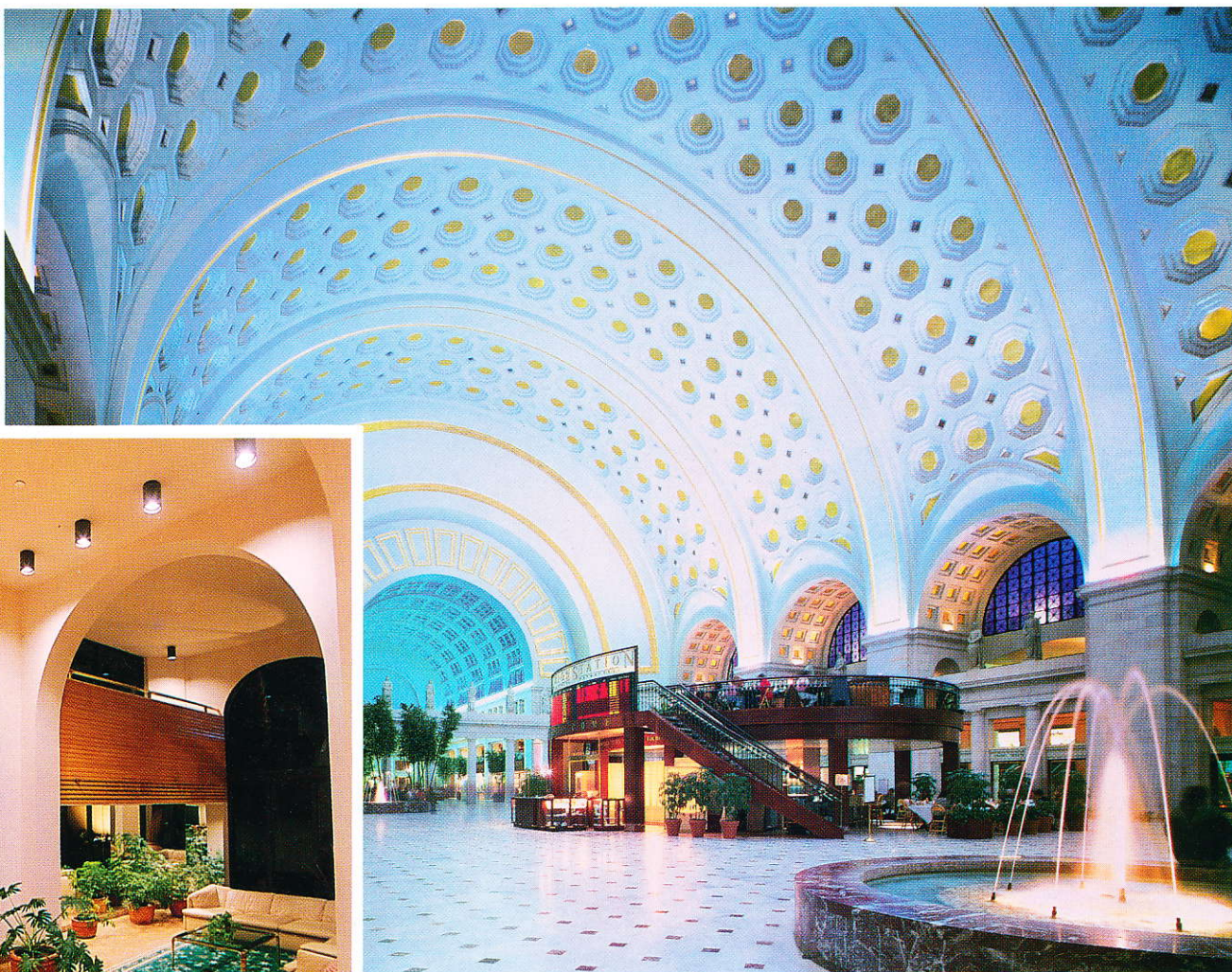
OSRAM — THE COMPANY

OSRAM, the world's third largest lamp manufacturer, is a wholly owned subsidiary of Siemens, one of the biggest and best known names in electrical and electronic engineering.

OSRAM Corporation in the United States is one of 27 OSRAM subsidiaries worldwide. Headquarters are in Montgomery, NY, with manufacturing facilities in nearby Maybrook, NY.

OSRAM serves three specific market categories with over 3,500 different lamps known for advanced design, improved efficiencies, and optimum performance.

- General lighting lamps for commercial, industrial and residential applications
- Lights for photographic, scientific and entertainment applications
- Automotive lighting



Washington, DC's transportation center, Union Station.
HQI®-DE lamps for energy efficiency and color reproduction.



Condominium complex with energy efficient
DULUX® EL Reflector lamps.

OSRAM — THE INNOVATOR

Since its beginnings in 1906, OSRAM has been an innovator in lighting technology. Today, nearly 40% of sales come from lighting products created over the past five years. OSRAM DULUX® energy saving lamps, for instance, use as little as 20% of the energy needed by comparable incandescent lamps. OSRAM T8 fluorescent lamps, combined with the QUICKTRONIC® electronic ballast family provides economical, optimum light output without sacrifices in lamp life or lumen maintenance. OSRAM low voltage halogen lamps, with improved dichroic reflector and axial filament burner, now have a 66% increase in beam candlepower. Diode-free halogen lamp technology eliminates flicker from OSRAM HALOGEN-PAR lamps. Ongoing developments in metal halide and sodium technologies provide a full line of OSRAM HID lamps.

In addition to general lighting, OSRAM innovations in automotive lighting helped create the revolutionary D-1 gas discharge lamp, and innovations in stage and screen lamps have won OSRAM two Oscars. Well known for its special application lamps, OSRAM also produces high UV output mercury short arc lamps for microchip manufacture, lamps for special laboratory applications, and for laser excitation.

Tungsten Halogen & Incandescent Lamps



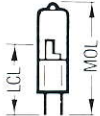
BI-PIN HALOGEN LOW VOLTAGE LAMPS

The outstanding feature of these lamps is their high luminous efficacy of up to 25 lumens per watt. With their sturdy and compact construction, these innovative lamps are ideal for compact fixtures with integral reflectors. The high light output from a small package makes for innovative fixture designs.

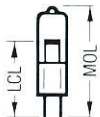
- Platinum coated pins for better contact and fit
- Long life heat resistant contact foils

Axial filament halogen lamps (Refer to page 35, Notes 1, 2, 3)

OSRAM has developed high performance tungsten halogen lamps with axial filament positioning. These lamps enable the design of more efficient and focusable reflector systems, which results in greater light on the object. The axial filament design allows for ease of optical focusing.



Volts	Watts	Base	OSRAM Order Code	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
6	35	GY6.35	AH050	64430AX	100	2000	600	1 3/4 (44)	1 3/16 (30)
12	20	G4	AH045	64425AX	100	2000	350	1 5/16 (33)	7/8 (22)
12	20	GY6.35	AH047	64427AX	100	2000	350	1 3/4 (44)	1 3/16 (30)
12	35	GY6.35	AH048	64432AX	100	2000	650	1 3/4 (44)	1 3/16 (30)
12	50	GY6.35	AH085	64440AX	100	2000	1000	1 3/4 (44)	1 3/16 (30)
12	75	GY6.35	AH112	64450AX	100	2000	1350	1 3/4 (44)	1 3/16 (30)
12	100	GY6.35	AH115	64458AX	100	2000	2300	1 3/4 (44)	1 3/16 (30)
24	50	GY6.35	AH110	64445AX	100	2000	850	1 3/4 (44)	1 3/16 (30)
24	75	GY6.35	AH113	64455AX	100	2000	1500	1 3/4 (44)	1 3/16 (30)
24	100	GY6.35	AH122	64460AX	100	2000	2200	1 3/4 (44)	1 3/16 (30)
24	150	GY6.35	AH130	64465AX	100	2000	3200	1 3/4 (44)	1 3/16 (30)



Transverse filament halogen lamps (Refer to page 35, Notes 1, 2, 3)

Volts	Watts	Base	OSRAM Order Code	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
6	10	G4	AH020	64410	100	2000	120	1 1/4 (31)	3/4 (19.5)
12	5	G4	AH010	64405	100	2000	60	1 1/4 (31)	3/4 (19.5)
			AH005	64405 FR*	100	2000	55	1 1/4 (31)	3/4 (19.5)
12	10	G4	AH025	64415	100	2000	140	1 1/4 (31)	3/4 (19.5)
			AH027	64415 FR*	100	2000	130	1 1/4 (31)	3/4 (19.5)
12	20	G4	AH030	64425	100	2000	350	1 1/4 (31)	3/4 (19.5)
12	50	GY6.35	AH070	64440	100	2000	950	1 3/4 (44)	1 3/16 (30)
24	20	G4	AH060	64435	100	1000	350	1 1/4 (31)	3/4 (19.5)
24	50	GY6.35	AH111	64445	100	2000	850	1 3/4 (44)	1 3/16 (30)
24	75	GY6.35	AH125	64455	100	2000	1500	1 3/4 (44)	1 3/16 (30)
24	100	GY6.35	AH120	64460	100	2000	2200	1 3/4 (44)	1 3/16 (30)

*Frosted

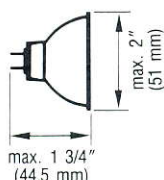
Tungsten Halogen & Incandescent Lamps

MR16, MR11 — LOW VOLTAGE HALOGEN LAMPS WITH DICHROIC REFLECTOR

MR lamps feature a sturdy, highly efficient low voltage halogen lamp in a faceted dichroic reflector, with a bi-pin base.

The dichroic reflector reduces approximately 2/3 of the heat in the beam by passing it back through the glass reflector. An additional aesthetic appeal of attractive color effects is produced by refracting the light in the dichroic reflector.

- Improved reflector design and axial filament provide up to 66% higher CBCP
- Decorative faceted reflector design for iridescent color effects
- Small, attractive light source for display and accent lighting
- Excellent color rendering
- Fully dimmable with no lamp blackening
- 75W MR16 lamps feature chromized contact foils for high temperature operation
- Made in USA



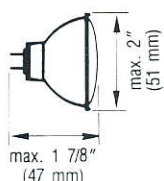
MR16 (Refer to page 35, Notes 1, 2, 3)

Watts	Volts	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Candle Power	Beam Spread
20	12	GX5.3	ESX	AK610	41860NSP	10	3000	4100	12°
			BAB	AK600	41860FL	10	3000	850	36°
35	12	GX5.3	FRB	AK630	41865NSP	10	3000	13000	8°
			FRA	AK620	41865SP	10	3000	4000	18°
			FMW	AK625	41865FL	10	3000	1550	38°
50	12	GX5.3	EXT	AK710	41870NSP	10	3000	12500	12°
			EXZ	AK700	41870NFL	10	3000	4400	24°
			EXK	AK711	41870MFL	10	3000	3500	30°
			EXN	AK705	41870FL	10	3000	2500	38°
75	12	GX5.3	FNV	AK703	41870VWFL	10	3000	1000	60°
			EYF	AK810	41880NSP	10	3500	15000	14°
			EYJ	AK800	41880MFL	10	3500	5400	24°
			EYC	AK805	41880FL	10	3500	2950	38°

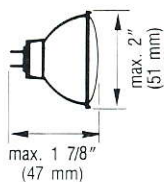
BI-COLOR MR16 (Refer to page 35, Notes 1, 3)

An innovation in dichroic reflector technology has made possible the OSRAM MR16 in four fantastic colors. Ideal for use in display windows, showrooms, trade show booths and entertainment clubs. Dramatically highlights architectural details.

- Four colors available for dazzling display effects
- Glass front lens protects lamp and dichroic reflector from dust and fingerprints
- Color complement shows through back of reflector



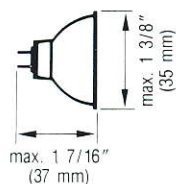
Watts	Volts	Base	Color	OSRAM Order Code	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Candle Power	Beam Spread
50	12	GX5.3	Blue	AK960	44871NSP	10	3000	1020	12°
50	12	GX5.3	Green	AK961	44872NSP	10	3000	3580	12°
50	12	GX5.3	Yellow	AK962	44873NSP	10	3000	8100	12°
50	12	GX5.3	Red	AK963	44874NSP	10	3000	1870	12°



MR16 with protective glass lens (Refer to page 35, Notes 1, 3)

- Glass front lens protects lamp, as well as dichroic reflector from dust and fingerprints
- Available in beam spreads comparable to standard MR16 lamps

Watts	Volts	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Candle Power	Beam Spread
20	12	GX5.3	ESX/C	AK900	44860NSP	10	3000	4000	12°
			BAB/C	AK910	44860FL	10	3000	800	38°
35	12	GX5.3	FRB/C	AK915	44865NSP	10	3000	12000	8°
			FRA/C	AK920	44865SP	10	3000	4000	18°
			FMW/C	AK925	44865FL	10	3000	1450	38°
50	12	GX5.3	EXT/C	AK930	44870NSP	10	3000	11000	12°
			EXZ/C	AK935	44870NFL	10	3000	4200	24°
			EXK/C	AK937	44870MFL	10	3000	3400	30°
			EXN/C	AK940	44870FL	10	3000	2250	38°
75	12	GX5.3	EYF/C	AK945	44880NSP	10	3500	14500	14°
			EYJ/C	AK950	44880MFL	10	3500	5400	24°
			EYC/C	AK955	44880FL	10	3500	2950	38°



MR11 (Refer to page 35, Notes 1, 2, 3)

- Same features as MR16
- Perfect for design oriented, very small fixtures or applications

Watts	Volts	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Candle Power	Beam Spread
20	12	GZ4	FTB	AK500	41890SP	10	2000	5500	10°
			FTC	AK510	41890MFL	10	2000	1750	20°
			FTD	AK505	41890FL	10	2000	700	30°
35	12	GZ4	FTE	AK515	41892SP	10	3000	8500	10°
			FTF	AK525	41892MFL	10	3000	3000	20°
			FTH	AK520	41892FL	10	3000	1500	30°
50	12	GZ4	—	AK530	41894SP	10	3000	11000	10°
			—	AK540	41894MFL	10	3000	4400	20°
			—	AK535	41894FL	10	3000	2600	30°

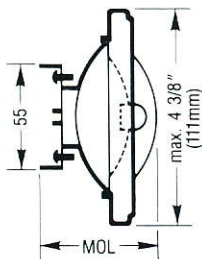
Tungsten Halogen & Incandescent Lamps

AR111 (PAR 36), AR70, AR58, AR48 LOW VOLTAGE HALOGEN LAMPS WITH METAL REFLECTOR

Halogen reflector lamps designed for display and accent lighting. The lamp and the faceted reflector together form a precision engineered optimized light source. AR metal reflector lamps feature a central cap to prevent glare from the direct light beam. In addition, the central cap makes it easier to install the lamp.

Halogen reflector lamps range from an extremely concentrated 3° beam spread to a super, wide angle 60° beam spread. Some are available with silver and gold colored reflectors.

- Photometrically optimized combination of lamp and reflector
- Lightweight aluminum reflector
- Fully dimmable with no lamp blackening
- Excellent color rendition
- Two reflector colors: gold (2600K) and silver (3000K)
- AR58 series available with front lens

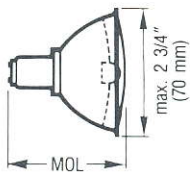


AR111 (PAR 36) with axial filament and faceted aluminum reflector

(Refer to page 35, Notes 1, 2, 3)

Watts	Volts	Base	OSRAM Order Code	Reference	Pkg. Qty.	Reflector Color	Beam Spread	Candle Power	MOL inches (mm)	Avg. Rated Life (Hrs.)
35	6	G53 *	AI005	41830SSP	6	Silver	3°	45000	1 3/4 (45)	2000
50	12	G53 *	AI020	41835NSP	6	Silver	5°	50000	1 3/4 (45)	2000
			AI010	41835SP	6	Silver	10°	20000	1 3/4 (45)	2000
			AI015	41835FL	6	Silver	30°	3000	1 15/16 (50)	2000
75	12	G53 *	AI025	41840SP	6	Silver	10°	25000	1 3/4 (45)	2000
			AI030	41840FL	6	Silver	30°	4500	1 15/16 (50)	2000
			AI035	41840WFL	6	Silver	60°	1300	1 15/16 (50)	2000
100	12	G53 *	AI040	41850SP	6	Silver	10°	45000	1 3/4 (45)	2000
			AI045	41850FL	6	Silver	30°	7000	1 15/16 (50)	2000
			AI050	41850WFL	6	Silver	60°	2000	1 15/16 (50)	2000

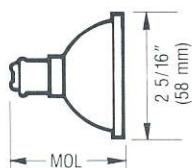
* M4 screw



AR70 with axial filament and faceted aluminum reflector

(Refer to page 35, Notes 1, 2, 3)

Watts	Volts	Base	OSRAM Order Code	Reference	Pkg. Qty.	Reflector Color	Beam Spread	Candle Power	MOL inches (mm)	Avg. Rated Life (Hrs.)
20	12	BA15d	AJ080	41970SP	10	Silver	10°	7000	2 (50)	2000
			AJ090	41970FL	10	Silver	30°	1000	2 (50)	2000
50	12	BA15d	AJ100	41990SP	10	Silver	10°	15000	2 (50)	2000
			AJ110	41990FL	10	Silver	30°	2000	2 (50)	2000
			AJ120	41995SP	10	Gold	10°	13500	2 (50)	2000
			AJ130	41995FL	10	Gold	30°	1800	2 (50)	2000
75	12	BA15d	AJ095	41980SP	10	Silver	10°	19000	2 (50)	2000
			AJ096	41980FL	10	Silver	30°	4000	2 (50)	2000

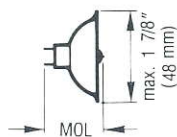


AR58 with front lens and faceted aluminum reflector

(Refer to page 35, Notes 1, 3)

Watts	Volts	Base	OSRAM Order Code	Reference	Pkg. Qty.	Reflector Color	Beam Spread	Candle Power	MOL inches (mm)	Avg. Rated Life (Hrs.)
50	12	BA15d	AJ900	AR58SP *	10	Silver	8°	11000	2 1/16 (53)	2000
			AJ905	AR58FL	10	Silver	16°	4650	2 3/16 (56)	2000
			AJ910	AR58WFL	10	Silver	32°	1100	2 1/4 (57)	2000

* Smooth reflector



AR48 with axial filament and faceted aluminum reflector

(Refer to page 35, Notes 1, 2, 3)

Watts	Volts	Base	OSRAM Order Code	Reference	Pkg. Qty.	Reflector Color	Beam Spread	Candle Power	MOL inches (mm)	Avg. Rated Life (Hrs.)
20	12	G4	AJ022	41900SP	10	Silver	10°	5000	1 7/16 (36)	2000
			AJ032	41900FL	10	Silver	15°	2000	1 7/16 (36)	2000
			AJ042	41905SP	10	Gold	10°	4500	1 7/16 (36)	2000
			AJ052	41905FL	10	Gold	15°	1500	1 7/16 (36)	2000
20	24	G4	AJ062	41930SP	10	Silver	10°	4500	1 7/16 (36)	2000

Light Distribution Charts

Application Range for Low Voltage Tungsten Halogen Lamps with Reflector.

PAR36 (AR111)	41830SSP 6V/35W	41835NSP 12V/50W	41850SP 12V/100W	41840SP 12V/75W	41835SP 12V/50W	41850FL 12V/100W	41840FL 12V/75W	41835FL 12V/50W	41850WFL 12V/100W	41840WFL 12V/75W
3 ft	3°	5°	10°	10°	10°	30°	30°	30°	60°	60°
6 ft					550 fc	165 fc	220 fc	140 fc	130 fc	140 fc
9 ft	550 fc	615 fc	550 fc	440 fc	φ12.6"	φ38.5"	φ29"	φ29"	φ41.5"	φ41.5"
12 ft	φ5.5"	φ9.4"	φ19"	φ16"	200 fc	74 fc	80 fc	80 fc	60 fc	60 fc
15 ft	200 fc	220 fc	200 fc	170 fc	φ22"	φ58"	φ48"	φ38.5"	φ62"	φ62"
	φ9.4"	φ15.7"	φ31.5"	φ25.2"						

AR70	41980SP 12V/75W silver	41990SP 12V/50W silver	41995SP 12V/50W gold	41970SP 12V/20W silver	41980FL 12V/75W silver	41990FL 12V/50W silver	41995FL 12V/50W gold	41970FL 12V/20W silver
3 ft	10°	10°	10°	10°	30°	30°	30°	30°
6 ft	525 fc	740 fc	665 fc	770 fc	440 fc	220 fc	200 fc	110 fc
9 ft	φ12.5"	φ9.5"	φ9.5"	φ6.3"	φ19.3"	φ19.3"	φ19.3"	φ19.3"
12 ft	130 fc	150 fc	165 fc	120 fc	70 fc	55 fc	50 fc	45 fc
	φ25.2"	φ22"	φ19"	φ15.7"	φ48"	φ38.5"	φ38.5"	φ29"

AR58	AR58SP 12V/50W	AR58FL 12V/50W	AR58WFL 12V/50W
1.5 ft	8°	16°	32°
3 ft	1200 fc	510 fc	500 fc
4.5 ft	φ5"	φ10"	φ10"
6 ft	300 fc	225 fc	120 fc
	φ10"	φ15"	φ20.5"

AR48	41900SP 12V/20W silver	41930SP 24V/20W silver	41905SP 12V/20W gold	41900FL 12V/20W silver	41905FL 12V/20W gold
1.5 ft	10°	10°	10°	15°	15°
3 ft	555 fc	500 fc	500 fc	885 fc	665 fc
4.5 ft	φ6.3"	φ6.3"	φ6.3"	φ4.7"	φ4.7"
6 ft	135 fc	125 fc	125 fc	220 fc	165 fc
	φ12.6"	φ12.6"	φ12.6"	φ9.5"	φ9.5"

MR16 Open Lens	ESX 41860NSP 12V/20W	BAB 41860FL 12V/20W	FRB 41865NSP 12V/35W	FRA 41865SP 12V/35W	FMW 41865FL 12V/35W	EXT 41870NSP 12V/50W	EXZ 41870NFL 12V/50W
1.5 ft	12°	36°	8°	18°	38°	12°	24°
3 ft	455 fc	375 fc	1440 fc	440 fc	685 fc	1385 fc	485 fc
4.5 ft		90 fc			75 fc		
6 ft	110 fc	φ26.4"	360 fc	110 fc	φ44.0"	345 fc	120 fc
7.5 ft	φ14.6"			φ23.4"			φ33.0"
9 ft			160 fc			150 fc	
			φ13.4"			φ22.0"	

MR16 Open Lens (Cont'd)	EXK 41870MFL 12V/50W	EXN 41870FL 12V/50W	EYF 41880NSP 12V/75W	EYJ 41880MFL 12V/75W	EYC 41880FL 12V/75W	FNV 41870VWFL 12V/50W
1.5 ft	30°	38°	14°	24°	38°	60°
3 ft	385 fc	1110 fc	1665 fc	600 fc	1310 fc	364 fc
4.5 ft		120 fc			145 fc	91 fc
6 ft	95 fc	φ44.0"	415 fc	150 fc	φ44.0"	41 fc
7.5 ft	φ42.2"			φ36.7"		φ54.0"
9 ft			185 fc			
			φ27.5"			

MR16 Shielded Lens	ESX/C 44860NSP 12V/20W	BAB/C 44860FL 12V/20W	FRB/C 44865VNSP 12V/35W	FRA/C 44865SP 12V/35W	FMW/C 44865FL 12V/35W	EXT/C 44870NSP 12V/50W	EXZ/C 44870NFL 12V/50W	EXK/C 44870MFL 12V/50W	EXN/C 44870FL 12V/50W	EYF/C 44880NSP 12V/75W	EYJ/C 44880MFL 12V/75W	EYC/C 44880FL 12V/75W
1.5 ft	12°	36°	8°	18°	38°	12°	24°	32°	38°	14°	24°	38°
3 ft	440 fc	355 fc	1330 fc	440 fc	640 fc	1220 fc	465 fc	375 fc	1000 fc	1610 fc	600 fc	1310 fc
4.5 ft		85 fc			70 fc				110 fc			145 fc
6 ft	110 fc	φ26.4"	330 fc	110 fc	φ44.0"	305 fc	115 fc	90 fc	φ44.0"	400 fc	150 fc	φ44.0"
7.5 ft	φ14.6"			φ23.4"			φ33.0"	φ42.2"			φ36.7"	
9 ft			145 fc			135 fc				180 fc		
			φ13.4"			φ22.0"				φ27.5"		

MR11 Open Lens	FTB 41890SP 12V/20W	FTC 41890MFL 12V/20W	FTD 41890FL 12V/20W	FTE 41892SP 12V/35W	FTF 41892MFL 12V/35W	FTH 41892FL 12V/35W	41894SP 12V/50W	41894MFL 12V/50W	41894FL 12V/50W
1.5 ft	10°	20°	30°	10°	20°	30°	10°	20°	30°
3 ft	610 fc	200 fc	310 fc	950 fc	330 fc	670 fc	1220 fc	485 fc	1155 fc
4.5 ft			80 fc						
6 ft	150 fc	85 fc	φ22.3"	240 fc	150 fc	75 fc	300 fc	215 fc	125 fc
	φ12.8"	φ26.2"		φ12.8"	φ26.2"	φ40.6"	φ12.8"	φ26.2"	φ40.6"

Note: fc = Footcandles shown are at beam center. Footcandles at edge of beam are 50% of center.

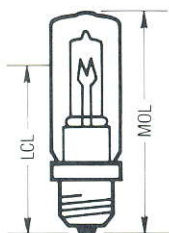
□ = Practical range of application.

Tungsten Halogen & Incandescent Lamps

TUNGSTEN HALOGEN LINE VOLTAGE LAMPS SINGLE ENDED

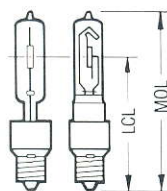
Single ended halogen lamps are available in a wide variety of wattages. These lamps feature a sturdy ceramic base for reliable operation and an internal fuse.

- White, tungsten halogen color temperature of 3000K
- Medium base and miniature candelabra base for ease of handling and relamping
- Fully dimmable without lamp blackening
- Universal burning position
- Compact light source
- Medium base lamp available in both clear and frosted versions



MEDIUM BASE (E26) with double envelope (Refer to page 35, Notes 1, 2, 3, 4)

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Description	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
75	Med.	AL140	120	64484CL	15	Clear	2000	1200	4 1/8 (105)	2 15/16 (75)
	Med.	AL145	120	64484FR	15	Frosted	2000	1160	4 1/8 (105)	2 15/16 (75)
100	Med.	AL150	120	64486CL	15	Clear	2000	1600	4 1/8 (105)	2 15/16 (75)
	Med.	AL155	120	64486FR	15	Frosted	2000	1550	4 1/8 (105)	2 15/16 (75)
150	Med.	AL065	120	64488CL	15	Clear	2000	2760	4 1/8 (105)	2 15/16 (75)
	Med.	AL075	120	64488FR	15	Frosted	2000	2680	4 1/8 (105)	2 15/16 (75)
250	Med.	AL125	120	64490CL	15	Clear	2000	4750	4 1/8 (105)	2 15/16 (75)
	Med.	AL135	120	64490FR	15	Frosted	2000	4610	4 1/8 (105)	2 15/16 (75)



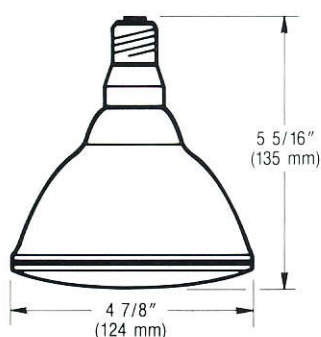
MINICAN BASE (E11) with axial filament (Refer to page 35, Notes 1, 2, 3, 4)

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
75	E11	AL001	120	Q75CL/MC/120	10	2000	1200	2 9/16 (66)	1 15/16 (49)
100	E11	AL002	120	Q100CL/MC/120	10	2000	1600	2 9/16 (66)	1 15/16 (49)
150	E11	AL004	120	Q150CL/MC/120	10	2000	2500	2 9/16 (66)	1 15/16 (49)

HALOGEN-PAR TUNGSTEN HALOGEN LINE VOLTAGE LAMPS

(Refer to page 35, Notes 1, 4, 5)

Halogen-PAR lamps feature an efficient halogen burner which produces a brighter, whiter light than incandescent PARs, with all the energy saving benefits of halogen technology for comparable light output. Every lamp has a high performance halogen capsule contained in the medium base PAR envelope, assuring excellent color reproduction and high luminous efficacy.



HPAR 38

- Diode-free; no lamp flickering; fully dimmable
- White, tungsten halogen 3000K color temperature
- 40% less power consumption than standard PAR 38
- 45W HPAR 38 replaces standard 75W PAR 38
- 90W HPAR 38 replaces standard 150W PAR 38
- Made in USA

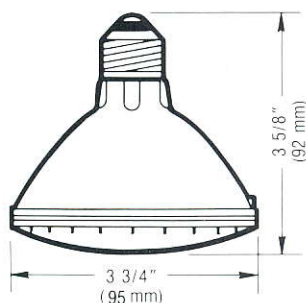
Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Candle Power	Beam Spread
45	Med.	AL194	120	45 HPAR38/NSP	12	2000	8600	9°
	Med.	AL195	130	45 HPAR38/NSP	12	2000	8600	9°
	Med.	AL198	120	45 HPAR38/SP	12	2000	4500	15°
	Med.	AL196	130	45 HPAR38/SP	12	2000	4500	15°
	Med.	AL199	120	45 HPAR38/FL	12	2000	1900	32°
	Med.	AL197	130	45 HPAR38/FL	12	2000	1900	32°
	Med.	AL192	120	45 HPAR38/WFL	12	2000	900	55°
	Med.	AL193	130	45 HPAR38/WFL	12	2000	900	55°
90	Med.	AL216	120	90 HPAR38/NSP	12	2000	21000	9°
	Med.	AL217	130	90 HPAR38/NSP	12	2000	21000	9°
	Med.	AL210	120	90 HPAR38/SP	12	2000	11000	15°
	Med.	AL200	130	90 HPAR38/SP	12	2000	11000	15°
	Med.	AL215	120	90 HPAR38/FL	12	2000	4000	32°
	Med.	AL205	130	90 HPAR38/FL	12	2000	4000	32°
	Med.	AL218	120	90 HPAR38/WFL	12	2000	1700	55°
	Med.	AL219	130	90 HPAR38/WFL	12	2000	1700	55°

Tungsten Halogen & Incandescent Lamps

HALOGEN-PAR 30 and HPAR 20

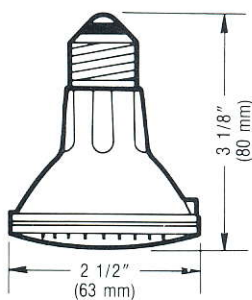
(Refer to page 35, Notes 1, 4, 5)

- Diode-free; no lamp flickering; fully dimmable
- White, tungsten halogen 3000K color temperature
- 40% less power consumption than standard "R" lamps
- Compatible with most R30 and R20 fixtures
- Made in USA



HPAR 30

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Candle Power	Beam Spread
50	Med.	AL256	120	50 HPAR30/NSP	15	2000	9900	9°
	Med.	AL257	130	50 HPAR30/NSP	15	2000	9900	9°
	Med.	AL250	120	50 HPAR30/NFL	15	2000	1900	30°
	Med.	AL255	130	50 HPAR30/NFL	15	2000	1900	30°
75	Med.	AL276	120	75 HPAR30/NSP	15	2000	15500	9°
	Med.	AL277	130	75 HPAR30/NSP	15	2000	15500	9°
	Med.	AL270	120	75 HPAR30/NFL	15	2000	3400	30°
	Med.	AL275	130	75 HPAR30/NFL	15	2000	3400	30°



HPAR 20

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Candle Power	Beam Spread
50	Med.	AL236	120	50 HPAR20/NSP	15	2000	6200	9°
	Med.	AL237	130	50 HPAR20/NSP	15	2000	6200	9°
	Med.	AL230	120	50 HPAR20/NFL	15	2000	700	30°
	Med.	AL235	130	50 HPAR20/NFL	15	2000	700	30°

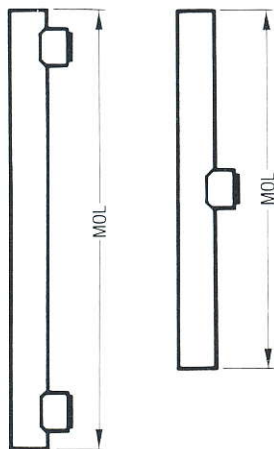


TUNGSTEN HALOGEN LINE VOLTAGE LAMPS DOUBLE ENDED (Refer to page 35, Notes 1, 2, 3)

The family of OSRAM double ended line voltage tungsten halogen lamps are the perfect choice for either outdoor or indoor floodlight installations.

- Design wattages from 100W to 1500W
- Sturdy filament construction
- White, tungsten halogen color temperature of 3000K
- Excellent color rendition
- Fully dimmable
- Universal burning position up to and including 500W
- 1500W restricted to horizontal $\pm 15^\circ$ burning position

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Description	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
100	RSC	AM130	120	Q100T3/CL	12	64689	2000	1600	3 1/8 (79)
150	RSC	AM135	120	Q150T3/CL	12	64694	2000	2800	3 1/8 (79)
200	RSC	AM150	120	Q200T3/CL	10	64697	2000	3600	4 11/16 (119)
300	RSC	AM070	120	Q300T3/CL	10	64703	2000	6000	4 11/16 (119)
		AM075	125/130	Q300T3/CL	10	64703	2000	5600	4 11/16 (119)
500	RSC	AM005	120	Q500T3/CL	10	64700	2000	11100	4 11/16 (119)
		AM020	125/130	Q500T3/CL	10	64700	2000	10500	4 11/16 (119)
1500	RSC	AM110	240/250	Q1500T3/CL	10	64760	2000	33000	10 1/16 (256)



LINESTRA® — LINEAR INCANDESCENT LAMPS

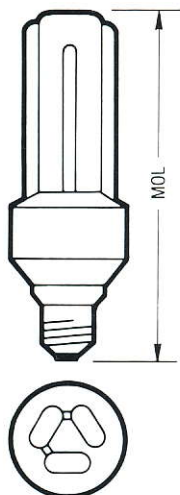
LINESTRA lamps are linear opal finished line voltage incandescent lamps. Their warm, pleasant light makes them ideal as a glare-free light source without harsh shadows. LINESTRA lamps are dimmable.

- Linear shape for even illumination and continuous runs of light
- Line voltage lamp with the shape of tubular fluorescent lamps
- No ballast or transformer required
- Warm, pleasant light color, easily mixed with incandescent
- Excellent color rendition
- Fully dimmable

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	For Socket	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
35	2-base S14s	LI020	125/130	1603	25	662	2000	240	11 13/16 (300)
	1-base S14d	LI090	125/130	1613	25	670	2000	240	11 13/16 (300)
60	2-base S14s	LI040	125/130	1604	25	662	2000	460	19 11/16 (500)
	1-base S14d	LI095	125/130	1614	25	670	2000	460	19 11/16 (500)
150	2-base S14s	LI010	125/130	1106	16	662	2000	930	39 3/8 (1000)

Compact Fluorescent Lamps





NEW! EXCLUSIVE FROM OSRAM!

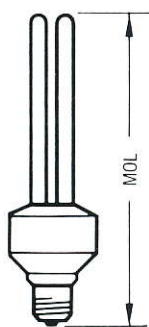
DULUX® EL 23W WITH MEDIUM BASE

The DULUX EL 23W is the most technologically advanced compact fluorescent lamp in the world. Its distinctive triple tube delta design and highly efficient integral ballast provide a complete energy saving lighting system in one trim package. The DULUX EL 23W uses 75 percent less energy and has up to a 13 times longer life than the 100W incandescent it was designed to replace — all in the most compact package available.

- Smaller size fits most fixtures
- Highest efficacy, 67 lumens per watt, of any integrally ballasted compact fluorescent lamp
- Up to 75% energy savings compared to a 100W incandescent
- Medium base
- 5.5 oz. for easy replacement
- Warm, pleasant incandescent-like light
- Trichrome phosphor for excellent color rendition (82 CRI)
- Improved harmonics and power factor
- Long life 10000 hours — lasts 13 times longer than incandescent lamps
- Made in USA

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
23	Med.	DB200	120	DULUX EL 23W	6	2700K	10000	1550	6 15/16 (176)

NOTE: Available early 1993. Contact OSRAM for details.



DULUX® EL — THE ELECTRONIC LIGHT BULB WITH A MEDIUM BASE

DULUX EL represents the state-of-the-art technology in energy saving lighting. Combined with an electronic ballast, DULUX EL guarantees a flicker-free instant start and delivers energy cost savings of up to 75% when compared to incandescent lamps. Small in size, high in lumen output and long in lamp life, DULUX EL is an outstanding performer.

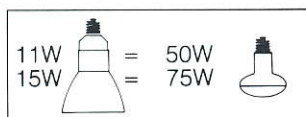
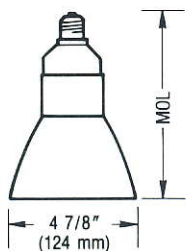
- UL listed
- Up to 75% less energy cost compared to incandescent lamps
- Long life of 10000 hours — lasts up to 13 times longer than incandescent lamps
- Medium base for easy replacement
- Flicker-free starting
- Warm, pleasant incandescent-like light
- Trichrome phosphor for excellent color rendition (82 CRI)
- Made in USA

7W	=	25W
11W	=	40W
15W	=	60W
20W	=	75W

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
7	Med.	DB010	120	DULUX EL 7W	6	2700K	10000	400	5 1/2 (140)
11	Med.	DB020	120	DULUX EL 11W	6	2700K	10000	600	5 1/2 (140)
15	Med.	DB030	120	DULUX EL 15W	6	2700K	10000	900	6 3/4 (172)
20	Med.	DB040	120	DULUX EL 20W	6	2700K	10000	1200	8 (203)

Note: Minimum starting temperature 0°F/-18°C. DULUX EL cannot be installed on dimming circuits. Outdoor application only in enclosed fixtures.

Compact Fluorescent Lamps



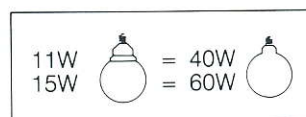
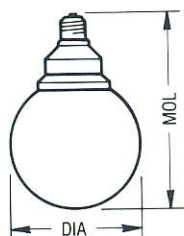
DULUX® EL REFLECTOR

The DULUX EL REFLECTOR combines the convenience and efficiency of the outstanding DULUX EL lamp with a high performance parabolic reflector. With five times longer lamp life and up to 75% less power consumption, DULUX EL REFLECTOR is the energy saving alternative to R30 and R40 incandescent lamps.

- UL listed
- New textured reflector softens and evenly distributes light output
- Long life of 10000 hours — lasts up to five times longer than R-lamps
- Up to 75% energy savings compared to R-lamps
- Medium base for easy replacement
- Warm, pleasant incandescent-like light
- Trichrome phosphor for excellent color rendition (82 CRI)
- Less stress on track installations with the lightweight DULUX EL REFLECTOR
- Made in USA

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	Candle Power	MOL inches (mm)
11	Med.	DB060	120	DULUX EL-R 11W	6	2700K	10000	600	315	5 7/8 (148)
15	Med.	DB065	120	DULUX EL-R 15W	6	2700K	10000	900	335	7 1/4 (183)

Note: Minimum starting temperature 0°F/-18°C. DULUX EL Reflector cannot be installed on dimming circuits. Outdoor application only in enclosed fixtures.

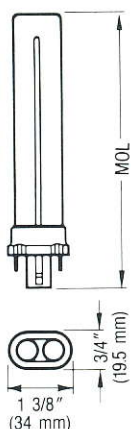




DULUX® EL GLOBE

The DULUX EL Globe combines the convenience and efficiency of the outstanding DULUX EL lamp with a decorative protective globe. With 4 times longer life than comparable incandescent globes and up to 75% less power consumption, DULUX EL Globe is the energy saving alternative to decorative incandescent globes.

- UL listed
- Long life of 10000 hours — lasts up to 4 times longer than incandescent globes
- Up to 75% energy savings compared to incandescent globes
- Medium base for easy replacement
- Warm, pleasant incandescent-like light through an opal finished globe
- Trichrome phosphor for excellent color rendition (82 CRI)
- Lightweight
- Made in USA

Watts	Base	OSRAM Order Code	Volts	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	Globe Dia. inches (mm)	MOL inches (mm)
11	Med.	DB070	120	DULUX EL-G 11W	6	2700K	10000	450	4 (100)	6 5/8 (168)
15	Med.	DB072	120	DULUX EL-G 15W	6	2700K	10000	700	4 3/4 (120)	7 3/8 (188)



5W		=	25W	
7W		=	40W	
9W		=	50W	
13W		=	60W	

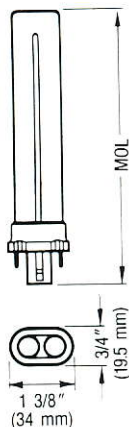
DULUX® S — TWIN TUBE COMPACT FLUORESCENT LAMP

The single ended twin tube DULUX S features a small tube diameter of only 1/2" and is the ideal lamp for creative fixture design and modern lighting systems. The starter is integrated into the lamp base.

- Up to 75% less energy cost and heat compared to incandescent lamps
- High luminous efficacy of up to 69 lumens per watt
- Long life of 10000 hours — lasts up to 13 times longer than incandescents
- Four colors available (2700K, 3500K, 4100K, 5000K)
- Trichrome phosphor for excellent color rendition (up to 86 CRI)
- Single ended plug-in base with integral starter and interference suppressor
- Made in USA

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
5	T4	G23	DS005	F5TT/27K	50	2700K	10000	250	4 1/8 (105)
			DS032	F5TT/41K	50	4100K	10000	250	4 1/8 (105)
7	T4	G23	DS010	F7TT/27K	50	2700K	10000	400	5 5/16 (135)
			DS094	F7TT/35K	50	3500K	10000	400	5 5/16 (135)
			DS033	F7TT/41K	50	4100K	10000	400	5 5/16 (135)
			DS091	F7TT/50K	50/10	5000K	10000	400	5 5/16 (135)
9	T4	G23	DS020	F9TT/27K	50	2700K	10000	600	6 1/2 (165)
			DS095	F9TT/35K	50	3500K	10000	600	6 1/2 (165)
			DS034	F9TT/41K	50	4100K	10000	600	6 1/2 (165)
			DS092	F9TT/50K	50/10	5000K	10000	600	6 1/2 (165)
13	T4	GX23	DS030	F13TT/27K	50	2700K	10000	900	7 1/2 (190)
			DS096	F13TT/35K	50	3500K	10000	900	7 1/2 (190)
			DS035	F13TT/41K	50	4100K	10000	900	7 1/2 (190)
			DS093	F13TT/50K	50/10	5000K	10000	900	7 1/2 (190)

Compact Fluorescent Lamps



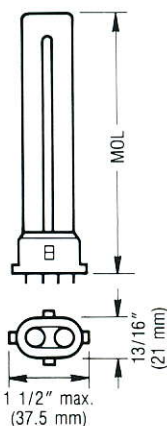
DULUX® S — COLORED TWIN TUBE COMPACT FLUORESCENT LAMP

For decorative illumination and special effects, the 9W DULUX S lamp is available in red, green and blue colors.

The inside of the lamps are coated with special phosphors and provide new opportunities in creative design.

Colored DULUX S are an excellent choice for night clubs, discos, restaurants, stage lighting, warning and direction signs as well as landscape lighting.

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg Qty.	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
9	T4	G23	DS016	DULUX S 9W/Red	10	10000	400	6 1/2 (165)
			DS014	DULUX S 9W/Blue	10	10000	150	6 1/2 (165)
			DS015	DULUX S 9W/Green	10	10000	740	6 1/2 (165)



DULUX® S/E — TWIN TUBE COMPACT FLUORESCENT LAMP FOR DIMMING AND ELECTRONIC BALLASTS

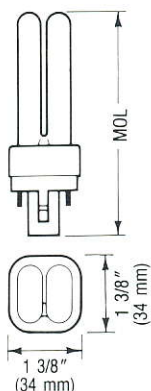
DULUX S/E lamps have features similar to DULUX S but are designed for operation on electronic ballasts and electronic dimming circuits.

- Dimmable twin tube fluorescent lamp*
- Replaces up to 60W incandescent lamps
- Long life of 10000 hours — lasts up to 13 times longer than incandescent lamps
- Flicker-free instant start on electronic ballast
- Trichrome phosphor with 2700K and 4100K color temperatures
- Made in USA
- See Electronic Ballast section for OSRAM systems

* Contact OSRAM for details.

5W	=	25W
7W	=	40W
9W	=	50W
13W	=	60W

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
5	T4	2G7	DS498	DULUX S/E 5W/27K	50	2700K	10000	250	3 3/8 (85)
			DS516	DULUX S/E 5W/41K	50	4100K	10000	250	3 3/8 (85)
7	T4	2G7	DS500	DULUX S/E 7W/27K	50	2700K	10000	400	4 5/8 (115)
			DS518	DULUX S/E 7W/41K	50	4100K	10000	400	4 5/8 (115)
9	T4	2G7	DS502	DULUX S/E 9W/27K	50	2700K	10000	600	5 3/4 (145)
			DS520	DULUX S/E 9W/41K	50	4100K	10000	600	5 3/4 (145)
13	T4	2GX7	DS504	DULUX S/E 13W/27K	50	2700K	10000	900	6 7/8 (175)
			DS522	DULUX S/E 13W/41K	50	4100K	10000	900	6 7/8 (175)



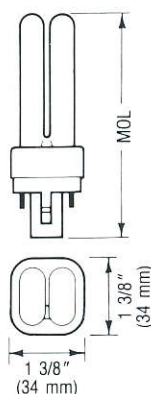
9W		=	50W	
13W		=	60W	

DOUBLE DULUX® — QUAD TUBE COMPACT FLUORESCENT LAMP

DOUBLE DULUX lamps are a shorter, more compact quad tube lamp which can be operated on the same ballasts as the twin tube DULUX S. DOUBLE DULUX can be utilized in either energy efficient fixtures or energy saving retrofit units.

- Up to 70% less energy costs compared to incandescents
- Long life of 10000 hours for increased replacement intervals
- Trichrome phosphor for excellent color rendition (up to 85 CRI)
- Symmetrical luminous intensity with 2700K and 3500K color temperatures
- Single ended plug-in base with integral starter and interference suppressor
- Made in USA

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
9	T4	G23-2	DD085	F9DTT/27K	50	2700K	10000	575	4 3/8 (111)
			DD086	F9DTT/35K	50	3500K	10000	575	4 3/8 (111)
13	T4	GX23-2	DD090	F13DTT/27K	50	2700K	10000	860	4 4/5 (123)
			DD091	F13DTT/35K	50	3500K	10000	860	4 4/5 (123)



10W		=	50W	
13W		=	60W	
18W		=	75W	
26W		=	100W	

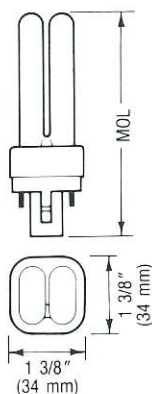
DULUX® D — HIGH PERFORMANCE QUAD TUBE COMPACT FLUORESCENT LAMP

DULUX D are quad-tube lamps which offer, the widest range of high lumen output. DULUX D is designed to replace up to 100W incandescent lamps.

- Up to 75% less power consumption compared to incandescent lamps
- Long life of 10000 hours — lasts up to 13 times longer than incandescents
- High luminous efficacy of up to 69 lumens per watt
- Trichrome phosphor with 2700K, 3500K, and 4100K color temperatures
- Color rendering up to 85 CRI
- Single ended plug-in base with integral starter and interference suppressor
- Made in USA

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
10	T4	G24d-1	DD010	DULUX D 10W/27K	50	2700K	10000	600	4 5/8 (118)
			DD041	DULUX D 10W/41K	50	4100K	10000	600	4 5/8 (118)
13	T4	G24d-1	DD020	DULUX D 13W/27K	50	2700K	10000	900	6 (153)
			DD021	DULUX D 13W/35K	50	3500K	10000	900	6 (153)
			DD042	DULUX D 13W/41K	50	4100K	10000	900	6 (153)
18	T4	G24d-2	DD030	DULUX D 18W/27K	50	2700K	10000	1250	6 3/4 (173)
			DD095	DULUX D 18W/35K	50	3500K	10000	1250	6 3/4 (173)
			DD043	DULUX D 18W/41K	50	4100K	10000	1250	6 3/4 (173)
26	T4	G24d-3	DD040	DULUX D 26W/27K	50	2700K	10000	1800	7 1/2 (193)
			DD096	DULUX D 26W/35K	50	3500K	10000	1800	7 1/2 (193)
			DD044	DULUX D 26W/41K	50	4100K	10000	1800	7 1/2 (193)

Compact Fluorescent Lamps



10W	=	50W	
13W	=	60W	
18W	=	75W	
26W	=	100W	

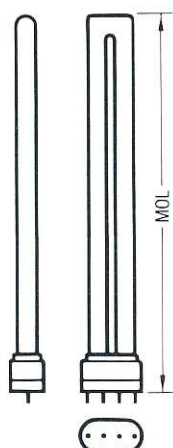
DULUX® D/E — QUAD TUBE COMPACT FLUORESCENT LAMP FOR DIMMING AND ELECTRONIC BALLASTS

DULUX D/E lamps have features similar to DULUX D but are designed for operation on electronic ballasts and electronic dimming circuits.

- Dimmable quad tube fluorescent lamp*
- Replaces up to 100W incandescent lamps
- Lamp life of 10000 hours
- Flicker-free instant start on electronic ballast
- Trichrome phosphor with 2700K, 3500K, and 4100K color temperatures
- Made in USA
- See Electronic Ballast section for OSRAM systems

*Contact OSRAM for details.

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
10	T4	G24q-1	DD050	DULUX D/E 10W/27K	10	2700K	10000	600	4 5/8 (118)
			DD098	DULUX D/E 10W/35K	10	3500K	10000	600	4 5/8 (118)
			DD081	DULUX D/E 10W/41K	10	4100K	10000	600	4 5/8 (118)
13	T4	G24q-1	DD060	DULUX D/E 13W/27K	10	2700K	10000	900	6 (153)
			DD099	DULUX D/E 13W/35K	10	3500K	10000	900	6 (153)
			DD082	DULUX D/E 13W/41K	10	4100K	10000	900	6 (153)
18	T4	G24q-2	DD070	DULUX D/E 18W/27K	10	2700K	10000	1250	6 3/4 (173)
			DD100	DULUX D/E 18W/35K	10	3500K	10000	1250	6 3/4 (173)
			DD083	DULUX D/E 18W/41K	10	4100K	10000	1250	6 3/4 (173)
26	T4	G24q-3	DD080	DULUX D/E 26W/27K	10	2700K	10000	1800	7 1/2 (193)
			DD101	DULUX D/E 26W/35K	10	3500K	10000	1800	7 1/2 (193)
			DD084	DULUX D/E 26W/41K	10	4100K	10000	1800	7 1/2 (193)



DULUX® L — T5 TWIN TUBE HIGH LUMEN COMPACT FLUORESCENT LAMP

DULUX L are single ended, high lumen twin tube fluorescent lamps. Available in 18W to 40W, DULUX L lamps provide the same lumen output of linear lamps of twice the length. DULUX L offers high lamp efficacy of up to 81 lumens per watt, and are available in Trichrome phosphor 3000K, 3500K and 4100K color temperatures.

- Designed for operation on rapid start, pre-heat and electronic ballasts
- Lamp life similar to linear fluorescent lamps (up to 20000 hours)
- Excellent color rendition of up to 82 CRI
- Single ended 4-pin base
- Dimmable*

*Contact OSRAM for details.

DULUX L for Rapid Start Operation

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
18*	T5	2G11	DL010	DULUX L 18W/30K/RS	10	3000K	20000	1250	10 1/2 (267)
			DL005	DULUX L 18W/35K/RS	10	3500K	20000	1250	10 1/2 (267)
			DL000	DULUX L 18W/41K/RS	10	4100K	20000	1250	10 1/2 (267)
27	T5	2G11	DL012	DULUX L 27W/30K	10	3000K	12000	1800	12 3/4 (326)
			DL014	DULUX L 27W/35K	10	3500K	12000	1800	12 3/4 (326)
			DL011	DULUX L 27W/41K	10	4100K	12000	1800	12 3/4 (326)
39	T5	2G11	DL015	DULUX L 39W/30K	10	3000K	12000	2900	16 1/2 (422)
			DL017	DULUX L 39W/35K	10	3500K	12000	2900	16 1/2 (422)
			DL020	DULUX L 39W/41K	10	4100K	12000	2900	16 1/2 (422)
40	T5	2G11	DL025	DULUX L 40W/30K/RS	10	3000K	20000	3150	22 1/2 (573)
			DL027	DULUX L 40W/35K/RS	10	3500K	20000	3150	22 1/2 (573)
			DL030	DULUX L 40W/41K/RS	10	4100K	20000	3150	22 1/2 (573)

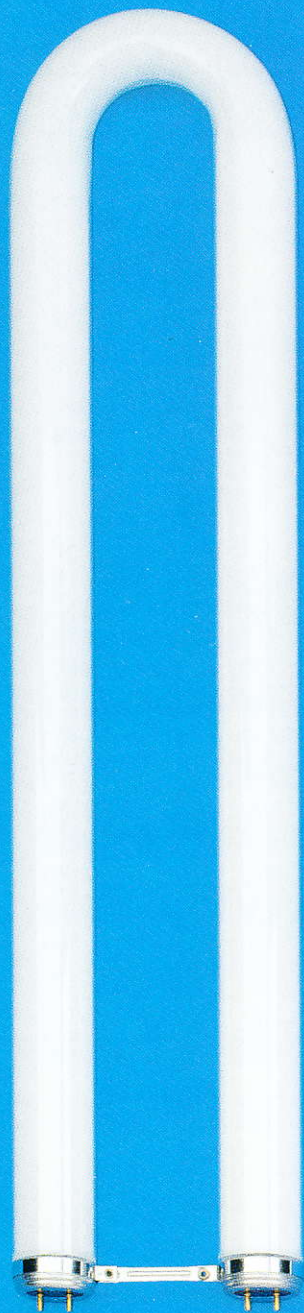
* Not compatible with the DULUX L 18W (9") pre-heat start circuits.

DULUX L for Pre-Heat Start

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
18*	T5	2G11	DL060	DULUX L 18W/30K	10	3000K	12000	1250	9 (229)
			DL065	DULUX L 18W/35K	10	3500K	12000	1250	9 (229)
			DL070	DULUX L 18W/41K	10	4100K	12000	1250	9 (229)
27	T5	2G11	DL012	DULUX L 27W/30K	10	3000K	12000	1800	12 3/4 (326)
			DL014	DULUX L 27W/35K	10	3500K	12000	1800	12 3/4 (326)
			DL011	DULUX L 27W/41K	10	4100K	12000	1800	12 3/4 (326)
39	T5	2G11	DL015	DULUX L 39W/30K	10	3000K	12000	2900	16 1/2 (422)
			DL017	DULUX L 39W/35K	10	3500K	12000	2900	16 1/2 (422)
			DL020	DULUX L 39W/41K	10	4100K	12000	2900	16 1/2 (422)

* Not compatible with the DULUX L 18W/RS (10 1/2") lamp circuits.

Fluorescent Lamps





T8 TRICHROME FLUORESCENT LAMPS

The OSRAM range of T8 fluorescent lamps are designed to be operated on T8 rapid start and electronic ballasts. With both 75 CRI and 85 CRI versions available, OSRAM T8 Trichrome fluorescent lamps retain the benefits of both economy and luminous efficacy, with the additional improvements of excellent color rendition.

- Up to 25% less energy costs compared to traditional T12 fluorescent lamps
- Three color temperatures available, 3000K, 3500K and 4100K
- Full range of sizes 2', 3', 4', 5'
- Long life of 20000 hours on T8 rapid start ballasts at 3 hours/start
- 15000 hour life on high frequency, instant start electronic ballasts
- T8 lamps can be used in combination with OSRAM QUICKTRONIC® Ballasts; see pages 38-40

TC 700 SERIES: 75 CRI

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	CRI	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	Nominal MOL inches (mm)
17	T8	Med. Bipin	TC700	FO17W/730K	25	3000K	75	20000	1325	24 (610)
			TC705	FO17W/735K	25	3500K	75	20000	1325	24 (610)
			TC710	FO17W/741K	25	4100K	75	20000	1325	24 (610)
25	T8	Med. Bipin	TC715	FO25W/730K	25	3000K	75	20000	2125	36 (915)
			TC720	FO25W/735K	25	3500K	75	20000	2125	36 (915)
			TC725	FO25W/741K	25	4100K	75	20000	2125	36 (915)
32	T8	Med. Bipin	TC730	FO32W/730K	25	3000K	75	20000	2850	48 (1220)
			TC735	FO32W/735K	25	3500K	75	20000	2850	48 (1220)
			TC741	FO32W/741K	25	4100K	75	20000	2850	48 (1220)
40	T8	Med. Bipin	TC745	FO40W/730K	25	3000K	75	20000	3600	60 (1524)
			TC750	FO40W/735K	25	3500K	75	20000	3600	60 (1524)
			TC755	FO40W/741K	25	4100K	75	20000	3600	60 (1524)

TC 800 SERIES: 85 CRI

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	CRI	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	Nominal MOL inches (mm)
17	T8	Med. Bipin	TC800	FO17W/830K	25	3000K	85	20000	1400	24 (610)
			TC805	FO17W/835K	25	3500K	85	20000	1400	24 (610)
			TC810	FO17W/841K	25	4100K	85	20000	1400	24 (610)
25	T8	Med. Bipin	TC815	FO25W/830K	25	3000K	85	20000	2250	36 (915)
			TC820	FO25W/835K	25	3500K	85	20000	2250	36 (915)
			TC825	FO25W/841K	25	4100K	85	20000	2250	36 (915)
32	T8	Med. Bipin	TC830	FO32W/830K	25	3000K	85	20000	3050	48 (1220)
			TC835	FO32W/835K	25	3500K	85	20000	3050	48 (1220)
			TC841	FO32W/841K	25	4100K	85	20000	3050	48 (1220)
40	T8	Med. Bipin	TC845	FO40W/830K	25	3000K	85	20000	3800	60 (1524)
			TC850	FO40W/835K	25	3500K	85	20000	3800	60 (1524)
			TC855	FO40W/841K	25	4100K	85	20000	3800	60 (1524)

Fluorescent Lamps



36W T8 TRICHROME FLUORESCENT LAMPS

The OSRAM 36W T8 lamp and the QUICKTRONIC® SYSTEM 36 ballast provide up to 30% more light per lamp than standard 32W T8s while maintaining high efficiency. Refer to page 40 for further details.

- 3000K, 3500K and 4100K color temperatures
- 20000 hour life on a rapid start system at 3 hours/start
- 15000 hour life on an instant start system at 3 hours/start

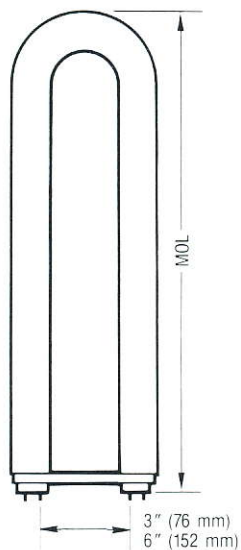
Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	CRI	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	Nominal MOL inches (mm)
36	T8	Med. Bipin	AQ180	F36/30K	25	3000K	85	20000	3450	48 (1220)
			AQ185	F36/35K	25	3500K	85	20000	3450	48 (1220)
			AQ190	F36/41K	25	4100K	85	20000	3450	48 (1220)



T5 MINIATURE FLUORESCENT LAMPS

T5 miniature fluorescent lamps are available in two standard light colors: cool white and warm white. With their small T5 tube diameter and length from 6" to 20", they fulfill all requirements for task lights, exit signs and under-counter lighting.

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Description	CRI	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	Nominal MOL inches (mm)
4	T5	Min. Bipin	AZ005	F4T5/CW	25	Cool White	62	7500	140	6 (152)
6	T5	Min. Bipin	AZ010	F6T5/CW	25	Cool White	62	7500	290	9 (229)
			AZ020	F6T5/WW	25	Warm White	52	7500	290	9 (229)
8	T5	Min. Bipin	AZ030	F8T5/CW	25	Cool White	62	7500	400	11 5/16 (288)
			AZ040	F8T5/WW	25	Warm White	52	7500	400	11 5/16 (288)
13	T5	Min. Bipin	AZ060	F13T5/CW	25	Cool White	62	7500	860	20 5/16 (517)
			AZ067	F13T5/WW	25	Warm White	52	7500	880	20 5/16 (517)

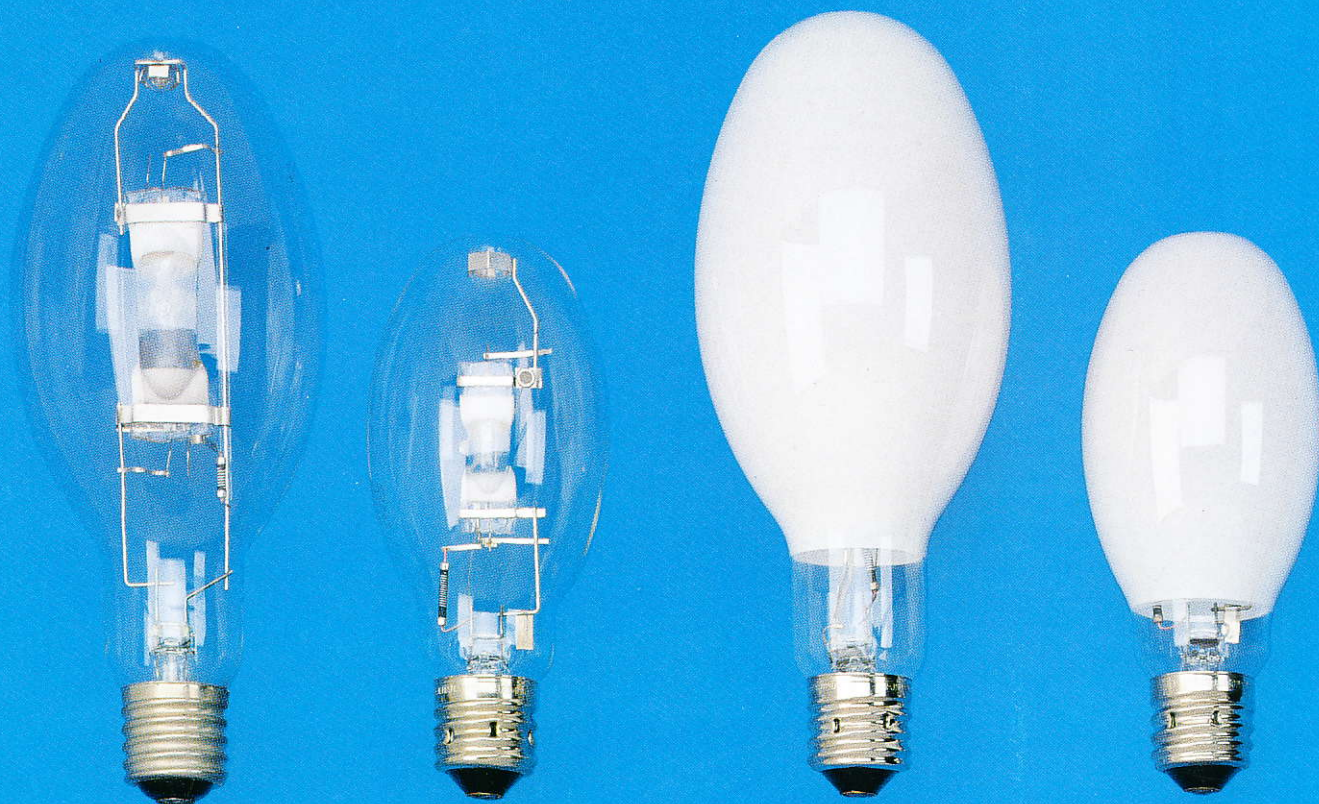


U-SHAPED FLUORESCENT LAMPS

OSRAM U-bend lamps with 3" or 6" leg spacing fulfill all economical conditions for compact and space saving illumination systems. They are the ideal light sources for 2' x 2' recessed or surface mounted fixtures.

Watts	Bulb	Base	OSRAM Order Code	Reference	Pkg. Qty.	Description	CRI	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)
40	T12	Med. Bipin	BB035	FB40CW/U3	12	Cool White	62	12000	2725	22 1/2 (570)
			AT120	FB40WW/U3	12	Warm White	52	12000	2825	22 1/2 (570)
40	T12	Med. Bipin	BB055	FB40CW/U6	12	Cool White	62	12000	2800	22 1/2 (570)
			BB050	FB40WW/U6	12	Warm White	52	12000	2900	22 1/2 (570)

Metal Halide Lamps



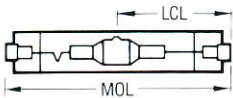
OSRAM HQI® METAL HALIDE LAMPS WITH HIGH CRI

OSRAM HQI lamps have set a new standard in metal halide lamps with CRI of up to 93. They feature high luminous efficacy and excellent color rendering properties.

OSRAM HQI lamps are available with single ended or double ended base in 3000K, 4200K and 5400K color temperatures.

With design wattages from 70W to 1000W, OSRAM HQI lamps provide a wide variety of lumen packages for display lighting, illumination of stores, offices and commercial buildings in both indoor and outdoor applications.

- Outstanding color rendition of up to 93 CRI
- Designed with a small tubular envelope and a compact arc for operation in highly efficient reflector systems
- Long service life
- High lumen output
- Various color temperatures
- HQI-DE 70W with the OSRAM POWERTRONIC™ electronic ballast provides optimum lamp performance (refer to page 41)



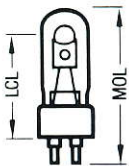
Double Ended HQI Compact Metal Halide Lamps 70W and 150W

(Refer to page 35, Notes 1, 6, 7)

Watts	Bulb	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	CRI	Service Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
70	T6 1/2	RSC	M85	HQ050	HQI-DE70/WDX*	12	3000K	81	10000**	5000	4 1/2 (114)	2 1/4 (57)
		RSC	M85	HQ040	HQI-DE70/NDX*	12	4200K	85	10000**	5500	4 1/2 (114)	2 1/4 (57)
150	T7 1/2	RSC	M81	HQ055	HQI-DE150/WDX*	12	3000K	81	10000	11000	5 3/16 (132)	2 5/8 (65)
		RSC	M81	HQ060	HQI-DE150/NDX*	12	4200K	85	10000	11250	5 3/16 (132)	2 5/8 (65)

*Burning Position: HOR $\pm 45^\circ$.

**12000 hour life with Powertronic electronic ballast (refer to page 41).



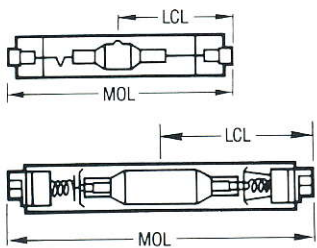
Single Ended HQI Compact Metal Halide Lamps 70W and 150W

(Refer to page 35, Notes 1, 6, 7)

Watts	Bulb	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	CRI	Service Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
70	T8	G12	M85	HQ035	HQI-SE70/WDX*	12	3000K	81	6000	5200	3 5/16 (84)	2 3/16 (56)
150	T8	G12	M81	HQ061	HQI-SE150/WDX*	12	3000K	81	6000	12000	3 5/16 (84)	2 3/16 (56)

*Universal burning position.

Metal Halide Lamps

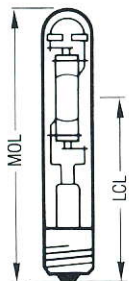


Double Ended HQI Compact Metal Halide Lamps 250W and 400W

(Refer to page 35, Notes 1, 6, 7)

Watts	Bulb	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	CRI	Service Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
250	T9 1/2	RSC	M80	HR085	HQI-DE250/NDX*	12	4200K	85	10000	20000	6 1/2 (165)	3 1/4 (82)
		Fc2	M80	HR080	HQI-DE250/NDX*	12	4200K	85	10000	20000	6 7/16 (163)	3 3/16 (81)
		Fc2	M80	HR070	HQI-DE250/DX*	12	5400K	93	10000	19000	6 7/16 (163)	3 3/16 (81)
400	T10	Fc2	M86	HR090	HQI-DE400/DX*	12	5400K	93	10000	25000	8 1/8 (206)	4 1/16 (103)

* Burning Position: HOR $\pm 45^\circ$.



Mogul Base HQI Metal Halide Lamps 250W and 400W

(Refer to page 35, Notes 1, 7, 8)

- Substitute for equivalent high pressure sodium where good color rendering is required
- LCL's same as equivalent HPS lamps
- 400W operates on most HPS ballast*

Watts	Bulb	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Color Temperature	CRI	Service Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
250	T14 1/2	MOG	M80	HR010	HQI-SE250/DX**	12	5400K	90	9000	19000	8 5/8 (220)	5 7/8 (150)
400	T14 1/2	MOG	S51	HR030	HQI-SE400/DX**	12	5400K	90	9000	33000	9 7/8 (250)	5 3/4 (146)

* Contact OSRAM for details.

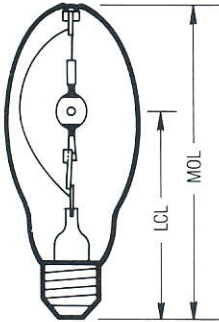
** Universal burning position.

STANDARD METAL HALIDE LAMPS (Refer to page 35, Notes 1, 7)

With a color rendition of up to 70 CRI, standard metal halide lamps fulfill the requirements for industrial, warehouse and street lighting where a lower CRI is acceptable.

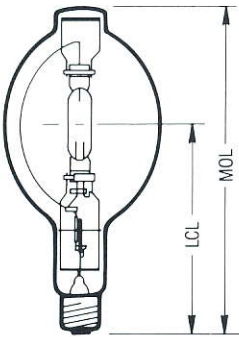
Standard metal halide lamps are available in a full range of wattages from 70W to 1000W, both clear and coated.

- Universal burning position
- Made in USA



Medium Base Metal Halide

Watts	Bulb	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Description	CRI	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches	LCL inches
70	ED-17	M98	HC010	MH70/U/Med	12	Clear, 4000K	65	5000	5000	5 7/16	3 7/16
70	ED-17	M98	HC015	MH70/C/U/Med	12	Coated, 3700K	70	5000	5000	5 7/16	N/A
100	ED-17	M90	HC020	MH100/U/Med	12	Clear, 4000K	65	10000	7800	5 7/16	3 7/16
100	ED-17	M90	HC025	MH100/C/U/Med	12	Coated, 3700K	70	10000	7800	5 7/16	N/A
175	ED-17	M57	HC030	MH175/U/Med	12	Clear, 4000K	65	10000	14000	5 7/16	3 7/16
175	ED-17	M57	HC035	MH175/C/U/Med	12	Coated, 3700K	70	10000	14000	5 7/16	N/A

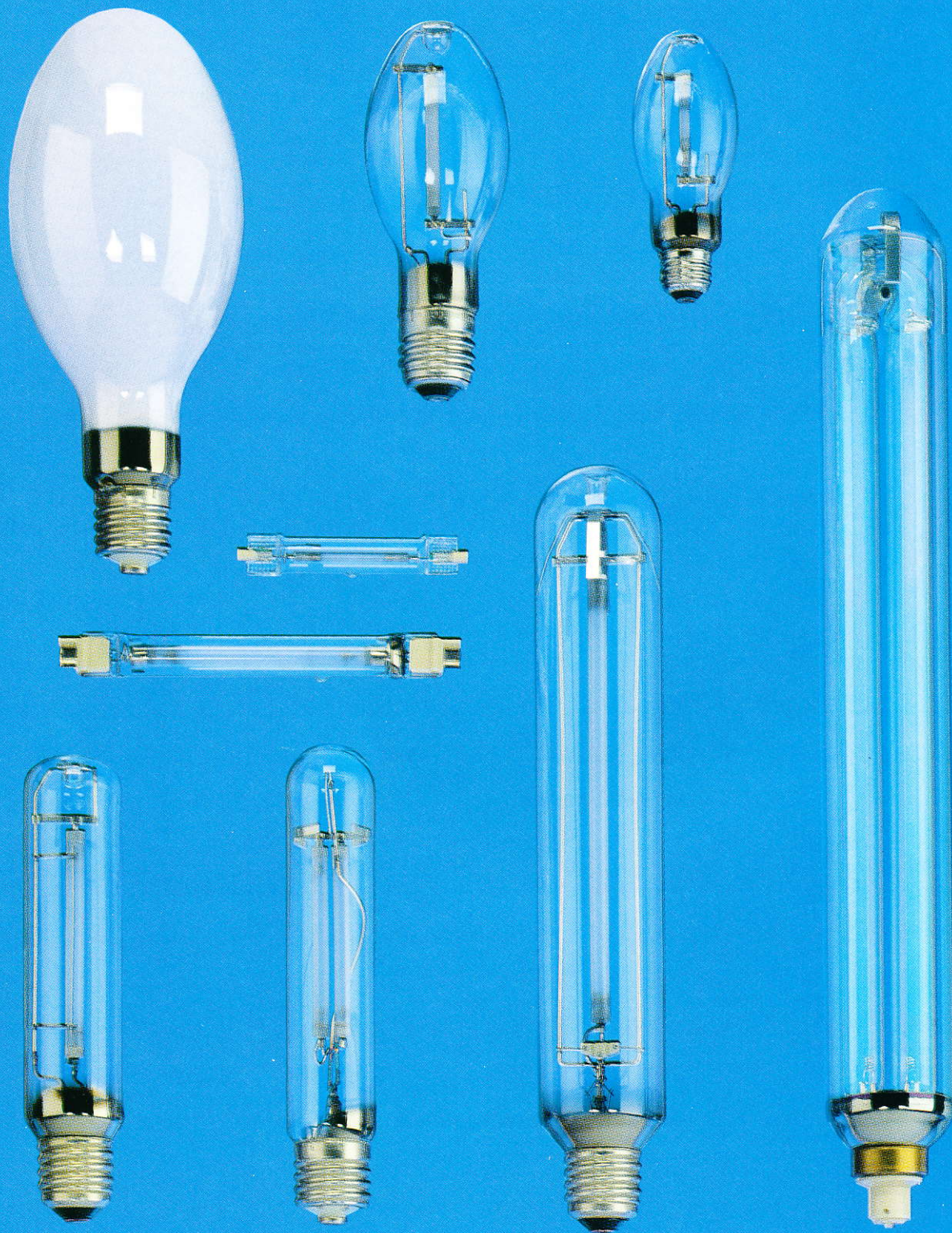


Mogul Base Metal Halide

Watts	Bulb	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Description	CRI	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches	LCL inches
175	BT28	M57	HQ300	MH175/U	12	Clear, 4300K	65	10000	14000	8 1/4	5
		M57	HQ305	MH175/C/U	12	Coated, 4100K	70	10000	14000	8 1/4	N/A
250	BT28	M58	HR300	MH250/U	12	Clear, 4300K	65	10000	20500	8 1/4	5
		M58	HR305	MH250/C/U	12	Coated, 3900K	70	10000	20500	8 1/4	N/A
400	BT37	M59	HR310	MH400/U	6	Clear, 4000K	65	20000	36000	11 5/16	7
		M59	HR315	MH400/C/U	6	Coated, 3700K	70	20000	36000	11 5/16	N/A
1000	BT56	M47	HS300	MH1000/U	6	Clear, 3900K	65	12000	110000	15 3/8	9 1/2
		M47	HS305	MH1000/C/U	6	Coated, 3400K	70	12000	110000	15 3/8	N/A

NOTE: All standard metal halide lamps can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if outer envelope of the lamp is broken or punctured, and the arc tube continues to operate. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain types of lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.

High Pressure/Low Pressure Sodium Lamps

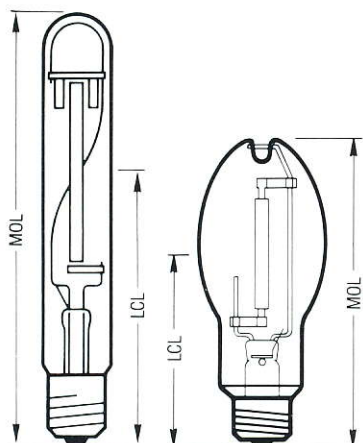


VIALOX® HIGH PRESSURE SODIUM LAMPS

High luminous efficacy (up to 140 lumens per watt) and a long service life make VIALOX HPS lamps an ideal choice for outdoor, roadway and industrial applications.

VIALOX lamps are available in a wide range of wattages and shapes for a variety of applications.

- Nickel plated brass base for better contact and fit
- Date coded base for ease of maintenance
- Universal burning position
- LU350 and LU600 Super lamps are energy saving alternatives with higher efficacy and improved lumen maintenance
- 2100K color temperature

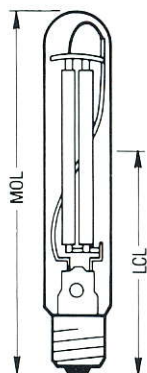


Single Ended High Pressure Sodium Lamps

(Refer to page 35, Note 1, 7)

Watts	Bulb	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Description	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
35	E17	MED	S76	NL005	LU35/MED	12	Clear	16000	2250	5 7/16 (138)	3 7/16 (87)
50	E23 1/2	MOG	S68	NL015	LU50	12	Clear	24000	4000	7 7/16 (189)	4 15/16 (125)
	E17	MED	S68	NL025	LU50/MED	12	Clear	24000	4000	5 7/16 (138)	3 7/16 (87)
70	E23 1/2	MOG	S62	NL035	LU70	12	Clear	24000	6300	7 7/16 (189)	4 15/16 (125)
	E17	MED	S62	NL045	LU70/MED	12	Clear	24000	6300	5 7/16 (138)	3 7/16 (87)
100	E23 1/2	MOG	S54	NL055	LU100	12	Clear	24000	9500	7 7/16 (189)	4 15/16 (125)
	E17	MED	S54	NL065	LU100/MED	12	Clear	24000	9500	5 7/16 (138)	3 1/2 (89)
150	E23 1/2	MOG	S55	NL075	LU150	12	Clear	24000	16000	7 7/16 (189)	4 15/16 (125)
	E17	MED	S55	NL085	LU150/MED	12	Clear	24000	16000	5 7/16 (138)	3 1/2 (89)
250	T14 1/2	MOG	S50	NC095	LU250	12	Clear	24000	29000	9 3/4 (248)	5 3/4 (146)
	E28	MOG	S50	NC200	LU250/D	12	Diffuse	24000	26000	9 (226)	N/A N/A
350	T14 1/2	MOG	—	NC220	LU350 Super	10	Clear	18000*	50000	9 3/4 (248)	5 3/4 (146)
400	T14 1/2	MOG	S51	NC100	LU400	12	Clear	24000	50000	9 3/4 (248)	5 3/4 (146)
	E37	MOG	S51	NC210	LU400/D	12	Diffuse	24000	47500	11 7/16 (290)	N/A N/A
600	T16	MOG	S106	NC250	LU600 Super	10	Clear	18000*	90000	11 3/16 (285)	6 5/8 (168)
1000	T21	MOG	S52	NC090	LU1000	6	Clear	24000	140000	14 7/8 (378)	8 3/4 (222)

* Average rated life depends on ballasting system.



Single Ended Double Arc Tube High Pressure Sodium Lamps

(Refer to page 35, Notes 1, 7)

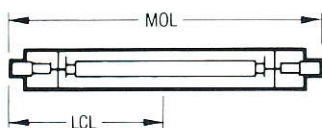
Designed with a double arc tube for standby operation, these high pressure sodium lamps combine their high efficacy with the convenience of instantaneous restart in case of power interruption. The burning position of these lamps is universal.

Watts	Bulb	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Description	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
400	T14 1/2	MOG	S51	NC111	LU400W/SBY	12	Clear	24000+	50000	9 3/4 (248)	5 3/4 (146)

High Pressure/Low Pressure Sodium Lamps

Double Ended High Pressure Sodium Lamps (Refer to page 35, Notes 1, 7)

An extremely small diameter enables the range of VIALOX® double ended lamps to achieve excellent light control in high performance reflectors. These products are physically and electrically interchangeable with the HQI®-DE 70W or HQI-DE 150W metal halide lamp.



Burning Position: Horizontal $\pm 45^\circ$

- Hot restrike capability with special ignitor
- Clear, 2000K color temperature
- LU-DE 70W with the OSRAM POWERTRONIC™ electronic ballast provides optimum lamp performance

Watts	Bulb	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
70	T7	RSC	S88	NC060	LU-DE70W	12	10000	7000	4 1/2 (114)	2 1/4 (57)
150	T7	RSC	N/A	NC065	LU-DE150W*	12	10000	15000	5 3/16 (132)	2 5/8 (65)

* Consult factory for availability.



SOX LOW PRESSURE SODIUM LAMPS (Refer to page 35, Notes 1, 7)

SOX lamps have a luminous efficacy of up to 183 lumens per watt. The emitted light is monochromatic yellow. They are the most economical light sources for street, tunnel, security and outdoor flood lighting.

SOX lamps feature reliable ignition and constant lumen output within a wide temperature range of -5°F to 180°F .

SOX-E is an improved energy saving version of the standard SOX lamp. SOX-E lamps have high luminous efficacies of up to 203 lumens per watt, 10% higher than standard SOX. For maximum efficiency, use a ballast designed for SOX-E lamps.

SOX Low Pressure Sodium Lamps

Watts	Bulb	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	Burning Position	MOL inches (mm)
18	T17	BY22d	L69RA-18	NA005	SOX18W	25	18000	1800	$V \pm 150^\circ$	8 1/2 (216)
35	T17	BY22d	L70RB-35	NA010	SOX35W	25	18000	4800	$V \pm 110^\circ$	12 3/16 (310)
55	T17	BY22d	L71RC-55	NA020	SOX55W	25	18000	8000	$V \pm 110^\circ$	16 3/4 (425)
90	T21	BY22d	L72RD-90	NA023	SOX90W	12	18000	13500	$H \pm 20^\circ$	20 3/4 (527)
135	T21	BY22d	L73RE-135	NA025	SOX135W	12	18000	22500	$H \pm 20^\circ$	30 1/2 (775)
180	T21	BY22d	L74RF-180	NA028	SOX180W	9	18000	33000	$H \pm 20^\circ$	44 1/8 (1120)

SOX-E Low Pressure Sodium Lamps

Watts	Bulb	Base	ANSI Code	OSRAM Order Code	Reference	Pkg. Qty.	Avg. Rated Life (Hrs.)	Approx. Initial Lumens	Burning Position	MOL inches (mm)
26	T17	BY22d	—	NA032	SOX-E26	25	18000	4100	$V \pm 110^\circ$	12 3/16 (310)
36	T17	BY22d	—	NA034	SOX-E36	25	18000	6200	$V \pm 110^\circ$	16 3/4 (425)
66	T21	BY22d	—	NA036	SOX-E66	12	18000	11000	$H \pm 20^\circ$	20 3/4 (527)
91	T21	BY22d	—	NA038	SOX-E91	12	18000	16500	$H \pm 20^\circ$	30 1/2 (775)
131	T21	BY22d	—	NA040	SOX-E131	9	18000	26600	$H \pm 20^\circ$	44 1/8 (1120)

NOTES:

- 1) Read and understand caution notices and instructions included with lamp.
- 2) Tungsten halogen lamps operate at high temperature and at internal gas pressures above atmospheric pressure. Consequently, a lamp could shatter. Certain lamps may also emit some amount of ultraviolet radiation. Therefore, a suitable protective shield, screening technique, or both must be used with the luminaire to protect people and surroundings from both hazards.
- 3) Temperature limits must not be exceeded in intended fixture design.
- 4) Use only with porcelain socket or in equipment designed for this lamp.
- 5) Do not aim at, nor use close to combustible materials or materials affected by heat or drying.
- 6) WARNING: This lamp emits ultraviolet radiation which can cause serious skin burn and eye inflammation. Additionally, this lamp operates under high pressure at very high temperatures. Should the lamp break there can exist a danger of personal injury and/or fire from the broken lamp particles being discharged. This lamp should only be used in a fully enclosed fixture with ultraviolet (UV) filter tempered plate glass lens capable of containing any particles discharged by breakage. Do not use the lamp if the filter lens is damaged or missing. This lamp should only be used in fixtures equipped with safety interlock lens switches.
- 7) Use only with auxiliary equipment that complies with ANSI specifications.
- 8) For use in enclosed fixtures only.

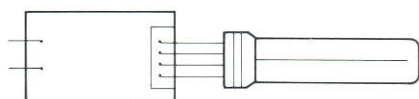
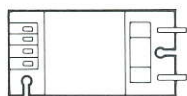
Electronic Ballasts

ACCUTRONIC™ — ELECTRONIC LOW VOLTAGE SYSTEMS

New! The ACCUTRONIC is designed to operate the DULUX® S/E and D/E lamps on low voltage systems. Anywhere a low voltage supply is present, compact fluorescents can now be used.

FEATURES:

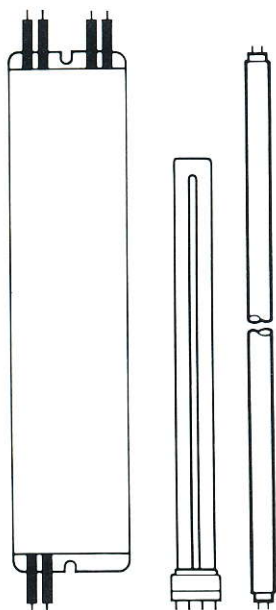
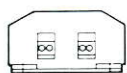
- 12V and 24V DC models
- Very low power consumption
- Extremely long lamp life
- Low operating temperature capabilities
- Variety of power supplies
 - batteries
 - solar power
 - emergency systems
- Variety of applications
 - cars — boats — campers
 - isolated buildings
 - remote field equipment
 - beacons, exit signs
- Radio interference suppression



SYSTEM PERFORMANCE

OSRAM Order Code	Description	Lamp Type	Number of Lamps	Supply Voltage Range	Input Watts	Temperature Range
AT300	AT 7-9/12	DULUX S/E 7W	1	10.5-14.5V	8	0-120°F
		DULUX S/E 9W	1	10.5-14.5V	10	0-120°F
		DULUX D/E 10W	1	10.5-14.5V	11	25-120°F
AT310	AT 7-9/24	DULUX S/E 7W	1	22.5-26.5V	8	0-120°F
		DULUX S/E 9W	1	22.5-26.5V	10	0-120°F
		DULUX D/E 10W	1	22.5-26.5V	11	25-120°F

Electronic Ballasts



QUICKTRONIC® SYSTEM 32

QUICKTRONIC SYSTEM 32 is designed for use with linear OSRAM TRICHROME T8 lamps and the OSRAM DULUX® L 40W T5 Twin lamps.

FEATURES:

- Lightweight electronics
- Up to a 40% reduction in energy consumption
- Equivalent light levels compared to F40T12
- Improved light quality and better color
- Virtually eliminates lamp flickering
- High ballast factor for maximum light output
- Parallel circuit — if one lamp burns out, others remain lit
- High power factor — greater than 97%
- Low harmonic distortion — less than 20% THD
- UL Listed, Class P, Type 1
- FCC — CSA

TECHNICAL DATA

Ignition Sequence:	Instant Start
Lamp Circuit Type:	Parallel
Current Crest Factor:	Less than 1.7
Operating Frequency:	20-27kHz
Input Frequency:	50/60Hz
Starting Temperature:	50°F Minimum*
Maximum Case Temperature:	70°C
Sound Rating:	Quieter than Class A
Transient Protection:	IEEE 587A (ANSI C62.41)
EMI Filtering:	FCC Part 18C Class A
Protected Output:	Against lamp rectification or shorted output leads

*Lower starting temperatures possible. Contact OSRAM for details.

NOTE: Quicktronic ballasts are dimensionally compatible with standard magnetic ballasts.

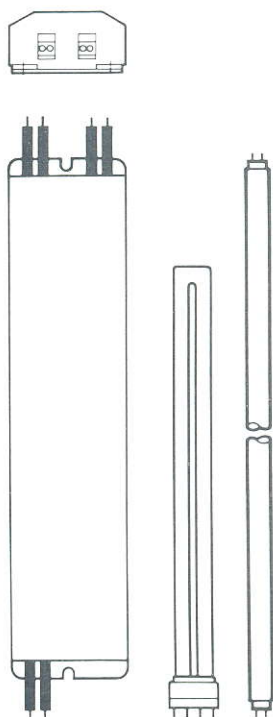
SYSTEM 32 PERFORMANCE

OSRAM Order Code	Description	Pkg. Qty.	Lamp Type	Number of Lamps	Ballast Factor	Input Watts	Input Current	Line Voltage	THD
QT010	QT1X32/120 IS	20	FO17T8	1	.97	18	.15A	120	< 30%
			FO25T8	1	.96	25	.21A	120	< 25%
			FO32T8	1	.94	31	.26A	120	< 20%
			FO40T8	1	.92	35	.30A	120	< 20%
			DULUX® L 40	1	.90	34	.29A	120	< 20%
QT015	QT1X32/277 IS	20	FO17T8	1	.97	18	.07A	277	< 30%
			FO25T8	1	.96	25	.09A	277	< 25%
			FO32T8	1	.94	31	.11A	277	< 20%
			FO40T8	1	.92	35	.13A	277	< 20%
			DULUX® L 40	1	.90	34	.13A	277	< 20%
QT160	QT2X32/120 IS	20	FO17T8	2	.97	35	.31A	120	< 30%
			FO25T8	2	.96	50	.44A	120	< 25%
			FO32T8	2	.94	62	.52A	120	< 20%
			FO40T8	2	.92	70	.59A	120	< 20%
			DULUX® L 40	2	.90	67	.56A	120	< 20%
QT140	QT2X32/277 IS	20	FO17T8	2	.97	35	.13A	277	< 30%
			FO25T8	2	.96	50	.19A	277	< 25%
			FO32T8	2	.94	62	.23A	277	< 20%
			FO40T8	2	.92	70	.26A	277	< 20%
			DULUX® L 40	2	.90	67	.25A	277	< 20%
QT020	QT3X32/120 IS	20	FO17T8	3	.98	54	.48A	120	< 30%
			FO25T8	3/2*	.96	70	.61A	120	< 25%
			FO32T8	3/2*	.94	88	.75A	120	< 20%
			FO40T8	3/2*	.92	107	.91A	120	< 20%
			DULUX® L 40	3/2*	.90	101	.86A	120	< 20%
QT040	QT3X32/277 IS	20	FO17T8	3	.98	54	.21A	277	< 30%
			FO25T8	3/2*	.96	70	.26A	277	< 25%
			FO32T8	3/2*	.94	88	.32A	277	< 20%
			FO40T8	3/2*	.92	107	.39A	277	< 20%
			DULUX® L 40	3/2*	.90	101	.37A	277	< 20%
QT100	QT4X32/120 IS	20	FO17T8	4/3*	.95	62	.54A	120	< 30%
			FO25T8	4/3*	.89	85	.75A	120	< 25%
			FO32T8	4/3*	.87	108	.92A	120	< 20%
			FO40T8	3/2*	.92	108	.92A	120	< 20%
			DULUX® L 40	3/2*	.90	101	.86A	120	< 20%
QT080	QT4X32/277 IS	20	FO17T8	4/3*	.95	62	.26A	277	< 30%
			FO25T8	4/3*	.89	85	.32A	277	< 25%
			FO32T8	4/3*	.87	108	.39A	277	< 20%
			FO40T8	3/2*	.92	108	.39A	277	< 20%
			DULUX® L 40	3/2*	.90	101	.37A	277	< 20%

*When fewer lamps are used on a ballast, the harmonic distortion and ballast factor will increase. Contact OSRAM for details.

NOTE: Performance data given is for maximum number of lamps noted.

Electronic Ballasts



QUICKTRONIC® SYSTEM 36

New! Only from OSRAM: QUICKTRONIC SYSTEM 36 is designed for use with the OSRAM F36T8 to provide higher light levels than a standard 32W T8 system. SYSTEM 36 also operates the DULUX® L 39.

FEATURES:

- Up to 30% more lumen output than standard T8 systems
- High system efficacy: over 92 lumens per watt
- Fewer lamps/ballasts/fixtures required to achieve specified footcandles
- Improved light quality and better color
- Reduces or eliminates lamp flickering
- High power factor — greater than 97%
- Low harmonic distortion — less than 20% THD
- UL Listed, Class P, Type 1
- FCC

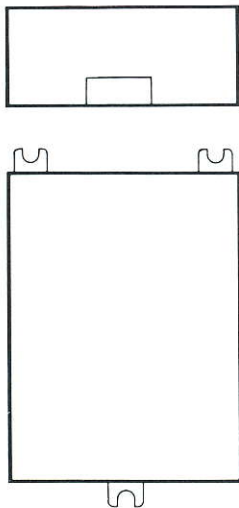
SYSTEM PERFORMANCE

OSRAM Order Code	Description	Pkg. Qty.	Lamp Type	Number of Lamps	Ballast Factor	Input Watts	Input Current	Line Voltage	THD
QT060	QT2X36/120 IS	20	F36T8	2	1.05	78	.66A	120	< 20%
			DULUX L 39	2	.94	64	.55A	120	< 20%
			DULUX L 39	1	1.15	42	.36A	120	< 30%
QT120	QT2X36/277 IS	20	F36T8	2	1.05	78	.29A	277	< 20%
			DULUX L 39	2	.94	64	.24A	277	< 20%
			DULUX L 39	1	1.15	42	.16A	277	< 30%

LAMP SPECIFICATIONS

OSRAM Order Code	Description	Pkg. Qty.	Lamp Watts	Bulb	Initial Lumens	Color Temperature	Average Rated Life (Hrs.)
AQ180	F36/30K	25	36	T8	3450	3000K	20000*
AQ185	F36/35K	25	36	T8	3450	3500K	20000*
AQ190	F36/41K	25	36	T8	3450	4100K	20000*
DL015	DULUX L 39/30K	10	39	T5 Twin	2900	3000K	20000*
DL017	DULUX L 39/35K	10	39	T5 Twin	2900	3500K	20000*
DL020	DULUX L 39/41K	10	39	T5 Twin	2900	4100K	20000*

*15000 hrs on instant start electronic system at 3 hours/start.



POWERTRONIC™ — ELECTRONIC REGULATING BALLAST FOR HID LAMPS

The POWERTRONIC is a single electronic unit containing a ballast, ignitor, and phase correcting circuitry. It is designed for use with OSRAM HQI®-DE and LU-DE lamps. By utilizing smart electronics, POWERTRONIC senses both line fluctuation and lamp aging which results in high quality illumination and constant lamp wattage to extend lamp life.

The compact size and its lightweight makes POWERTRONIC ideal for applications in retail and display lighting.

FEATURES:

- Compact, lightweight fully integrated ballast
- Power load reduced by 15%
- High power factor > .98
- Constant wattage for 95V to 135V line voltage
- Increased lamp life
- Stabilized lamp color
- Safety starter with automatic shut-off
- UL listed product
- CSA — FCC

Model	OSRAM Order Code	Line Voltage	For Lamp Type	Length inches (mm)	Width inches (mm)	Height inches (mm)
PT-DE 70/120	PT100	120	HQI-DE 70/WDX	4.63 (117.5)	3.45 (87.5)	1.57 (40)
	PT100	120	HQI-DE 70/NDX	4.63 (117.5)	3.45 (87.5)	1.57 (40)
	PT100	120	LU-DE 70	4.63 (117.5)	3.45 (87.5)	1.57 (40)
PT-DE 70/277	PT110	277	HQI-DE 70/WDX	4.63 (117.5)	3.45 (87.5)	1.57 (40)
	PT110	277	HQI-DE 70/NDX	4.63 (117.5)	3.45 (87.5)	1.57 (40)
	PT110	277	LU-DE 70	4.63 (117.5)	3.45 (87.5)	1.57 (40)

TECHNICAL DATA

Lamp Type:	OSRAM HQI-DE 70/WDX, OSRAM HQI-DE 70/NDX, OSRAM LU-DE 70
Number of Lamps:	1
Power Factor:	> .98
Input Wattage:	80W
Line Current Harmonics:	8% Total Harmonic Distortion
Transient Protection:	Meets ANSI C62.41C
Electromagnetic Interference:	Meets FCC Part 18C
UL Approved:	UL Listed Product
Internal Safety Starter:	Internal Starter with automatic turn-off
Thermal Shut Down:	POWERTRONIC will automatically shut off if case temperature exceeds 85°C/185°F
Lamp Ballast Separation:	Ballast may be removed from the lamp up to 10 feet (3 meters)

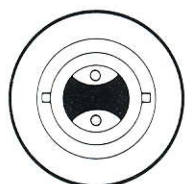
Base Table



E 26 Medium



E 39 Mogul



G 4



GX 53



GY 6.35



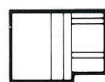
GZ 4



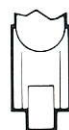
G 12



G 53
M 4 Screw



Fc 2



RSC



BA 15 d



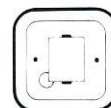
B 15 d



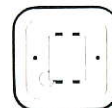
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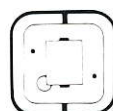
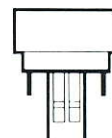
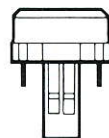
GX 23



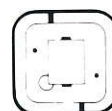
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GX 23-2



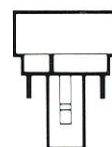
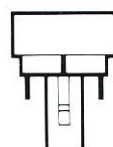
G 24 d-1



G 24 d-2



G 24 d-3



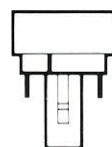
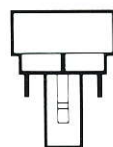
G 24 q-1



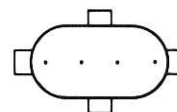
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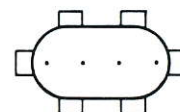
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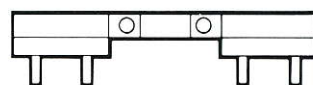
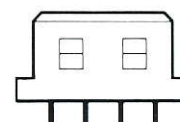
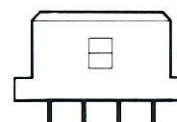
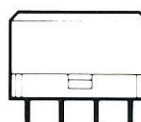
2 G 11



2 G 7



2 GX 7



2 G 13
3" or 6" Leg Spacing

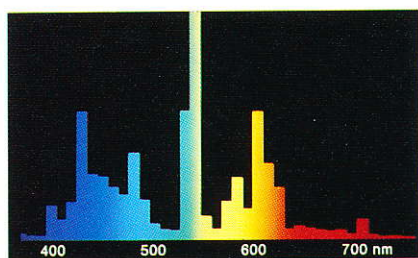


Medium
Bi-Pin

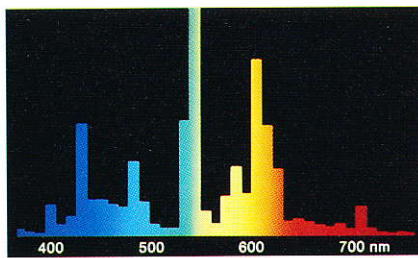


Miniature
Bi-Pin

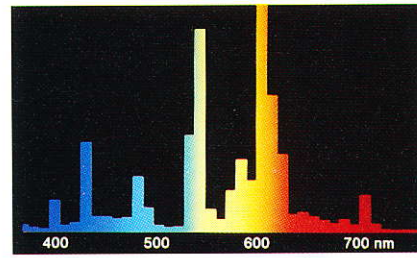
Spectral Power Distribution



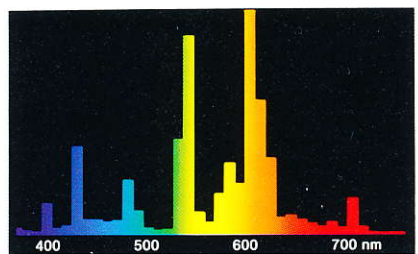
Trichrome 5000K; 86 CRI



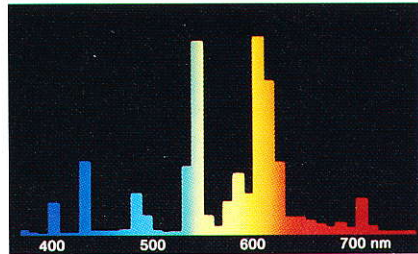
Trichrome 4100K; 85 CRI



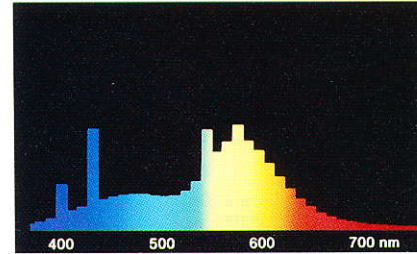
Trichrome 3500K; 85 CRI



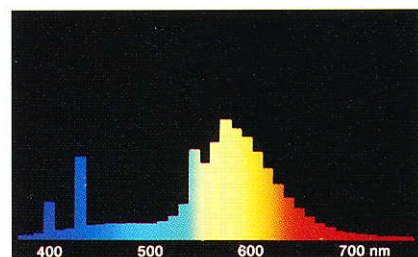
Trichrome 3000K; 86 CRI



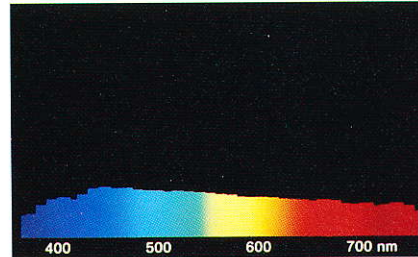
Trichrome 2700K; 82 CRI



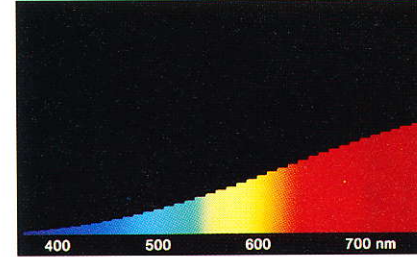
Cool White; 65 CRI



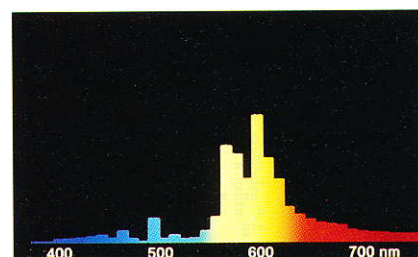
Warm White; 55 CRI



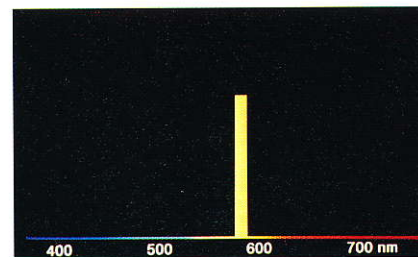
Daylight (D65); 100 CRI



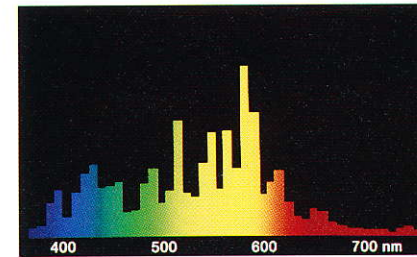
Tungsten Halogen and Incandescent Light



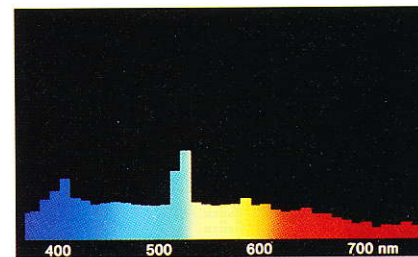
High Pressure Sodium — VIALOX®



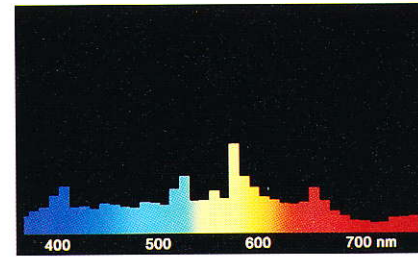
Low Pressure Sodium — SOX



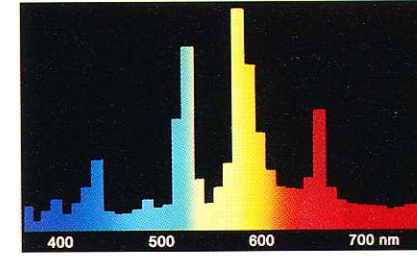
Standard Metal Halide; 65 CRI



HQI® Metal Halide 5400K; 93 CRI



HQI® Metal Halide 4200K; 85 CRI



HQI® Metal Halide 3000K; 81 CRI

General Lighting Cross Reference

DULUX® S

OSRAM DULUX	GE BIAX	SYLVANIA TWIN TUBE	PHILIPS PL
DULUX S 5W/27K	F5BX/SPX27	F5TT/27K	PL5/27
DULUX S 5W/41K	—	—	—
DULUX S 7W/27K	F7BX/SPX27	F7TT/27K	PL7/27
DULUX S 7W/35K	F7BX/SPX35	—	—
DULUX S 7W/41K	—	—	PL7/41
DULUX S 7W/50K	—	—	—
DULUX S 9W/27K	F9BX/SPX27	F9TT/27K	PL9/27
DULUX S 9W/35K	F9BX/SPX35	F9TT/D835	—
DULUX S 9W/41K	—	—	PL9/41
DULUX S 9W/50K	—	—	—
DULUX S 13W/27K	F13BX/SPX27	F13TT/27K	PL13/27
DULUX S 13W/35K	F13BX/SPX35	F13TT/D835	—
DULUX S 13W/41K	—	—	PL13/41
DULUX S 13W/50K	—	—	—

DOUBLE DULUX®

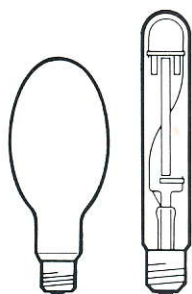
OSRAM DOUBLE DULUX	GE DOUBLE BIAx	SYLVANIA DOUBLE TWIN TUBE	PHILIPS PLC
DOUBLE DULUX 9W/27K	—	F9DTT/27K	—
DOUBLE DULUX 9W/35K	—	—	—
DOUBLE DULUX 13W/27K	F13DBX23T4/SPX27	F13DTT/27K	10MM/13W/27/USA
DOUBLE DULUX 13W/35K	F13DBX23T4/SPX35	F13DTT/D835	—

DULUX® D

OSRAM DULUX D	GE DOUBLE BIAx	SYLVANIA DOUBLE TWIN TUBE	PHILIPS PLC
DULUX D 10W/27K	—	—	10MM/10W/27
DULUX D 10W/41K	—	—	—
DULUX D 13W/27K	F13DBXT4/SPX27	—	10MM/13W/27
DULUX D 13W/35K	F13DBXT4/SPX35	—	—
DULUX D 13W/41K	F13DBXT4/SPX41	—	—
DULUX D 18W/27K	F18DBXT4/SPX27	F18DTT/27K	10MM/18W/27
DULUX D 18W/35K	F18DBXT4/SPX35	F18DTT/D835	—
DULUX D 18W/41K	F18DBXT4/SPX41	F18DTT/D841	—
DULUX D 26W/27K	F26DBXT4/SPX27	F26DTT/27K	10MM/26W/27
DULUX D 26W/35K	F26DBXT4/SPX35	F26DTT/D835	—
DULUX D 26W/41K	F26DBXT4/SPX41	F26DTT/D841	—

DULUX® L

OSRAM DULUX L	GE BIAx	PHILIPS PL
DULUX L 18W/30K	F18BX/SPX30	PL-L18/30
DULUX L 18W/35K	F18BX/SPX35	—
DULUX L 18W/41K	F18BX/SPX41	PL-L18/41
DULUX L 18W/30K/RS	F18BX/SPX30/RS	—
DULUX L 18W/35K/RS	F18BX/SPX35/RS	—
DULUX L 18W/41K/RS	F18BX/SPX41/RS	—
DULUX L 27W/30K	F27BX/SPX30	PL-L24/30
DULUX L 27W/35K	F27BX/SPX35	—
DULUX L 27W/41K	F27BX/SPX41	PL-L24/41
DULUX L 39W/30K	F39BX/SPX30	PL-L36/30
DULUX L 39W/35K	F39BX/SPX35	PL-L36/35
DULUX L 39W/41K	F39BX/SPX41	PL-L36/41
DULUX L 40W/30K/RS	F40BX/SPX30/RS	PL-L40/30
DULUX L 40W/35K/RS	F40BX/SPX35/RS	PL-L40/35
DULUX L 40W/41K/RS	F40BX/SPX41/RS	PL-L40/41



HIGH PRESSURE SODIUM

OSRAM VIALOX®	GE LUCALOX	SYLVANIA LUMALUX	PHILIPS CERAMALUX
LU35/MED	LU35/MED	LU35/MED	C35S76/M
LU50	LU50	LU50	C50S68
LU50/MED	LU50/MED	LU50/MED	C50S68/M
LU70	LU70	LU70	C70S62
LU70/MED	LU70/MED	LU70/MED	C70S62/M
LU100	LU100	LU100	C100S54
LU100/MED	LU100/MED	LU100/MED	C100S54/M
LU150	LU150/55	LU150/55	C150S55
LU150/MED	LU150/MED	LU150/55/MED	C150S55/M
LU250	LU250	LU250	C250S50
LU250/D	LU250/D	LU250/D	C250S50/D
LU250SBY	—	LU250SBY	C250S50/2
LU350 SUPER	—	—	—
LU400	LU400	LU400	C400S51
LU400/D	LU400/D	LU400/D	C400S51/D
LU400/SBY	—	LU400/SBY	C400S51/2
LU600	—	—	—
LU1000	LU1000	LU1000	C1000S52

T8 FLUORESCENT LAMP — 75 CRI

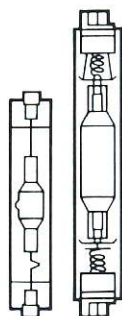
OSRAM TRICHROME	GE TRIMLINE	SYLVANIA OCTRON (80 CRI)	PHILIPS TL SERIES
FO17W/730K	F17T8/SP30/RS	FO17/31K	F17T8/TL730
FO17W/735K	F17T8/SP35/RS	FO17/35K	F17T8/TL735
FO17W/741K	F17T8/SP41/RS	FO17/41K	F17T8/TL741
FO25W/730K	F25T8/SP30/RS	FO25/31K	F25T8/TL730
FO25W/735K	F25T8/SP35/RS	FO25/35K	F25T8/TL735
FO25W/741K	F25T8/SP41/RS	FO25/41K	F25T8/TL741
FO32W/730K	F32T8/SP30/RS	FO32/31K	F32T8/TL730
FO32W/735K	F32T8/SP35/RS	FO32/35K	F32T8/TL735
FO32W/741K	F32T8/SP41/RS	FO32/41K	F32T8/TL741
FO40W/730K	F40T8/SP30/RS	FO40/31K	F40T8/TL730
FO40W/735K	F40T8/SP35/RS	FO40/35K	F40T8/TL735
FO40W/741K	F40T8/SP41/RS	FO40/41K	F40T8/TL741

T8 FLUORESCENT LAMP — 85 CRI

OSRAM TRICHROME	GE TRIMLINE	SYLVANIA OCTRON	PHILIPS TL SERIES
FO17W/830K	—	—	F17T8/TL830
FO17W/835K	—	—	F17T8/TL835
FO17W/841K	—	—	F17T8/TL841
FO25W/830K	—	—	F25T8/TL830
FO25W/835K	—	—	F25T8/TL835
FO25W/841K	—	—	F25T8/TL841
FO32W/830K	—	—	F32T8/TL830
FO32W/835K	—	—	F32T8/TL835
FO32W/841K	—	—	F32T8/TL841
FO40W/830K	—	—	F40T8/TL830
FO40W/835K	—	—	F40T8/TL835
FO40W/841K	—	—	F40T8/TL841

HQI®

OSRAM HQI METAL HALIDE	GE MQI MULTIVAPOR
HQI-DE70/WDX	MQI/70/T6/30
HQI-DE70/NDX	—
HQI-SE70/WDX	—
HQI-DE150/WDX	MQI/150/T7/43
HQI-DE150/NDX	—
HQI-SE150/WDX	—

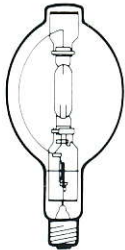


General Lighting Cross Reference



MEDIUM BASE METAL HALIDE

OSRAM METAL HALIDE	GE HALARC	SYLVANIA METALARC	PHILIPS METAL HALIDE	VENTURE METAL HALIDE
MH70/U/MED	—	M70/U/MED	MH70/U/M	MH70/U/MED
MH70/C/U/MED	—	M70/C/U/MED	MH70/C/U/M	MH70/C/U/MED
MH100/U/MED	MXR100/BU/BD	M100/U/MED	MH100/U/M	MH100/U/MED
MH100/C/U/MED	MXR100/C/BU/BD	M100/C/U/MED	MH100/C/U/M	MH100/C/U/MED
MH175/U/MED	MXR175	M175/U/MED	MH175/U/M	MH175/U/MED
MH175/C/U/MED	MXR175/C	M175/C/U/MED	MH175/C/U/M	MH175/C/U/MED

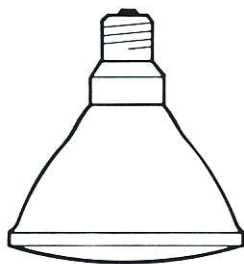


MOGUL BASE METAL HALIDE

OSRAM METAL HALIDE	GE MULTIVAPOR	SYLVANIA METALARC	PHILIPS METAL HALIDE
MH175/U	MVR175/U	M175/U	MH175/U
MH175/C/U	MVR175/C/U	M175/C/U	MH175/C/U
MH250/U	MVR250/U	M250/U	MH250/U
MH250/C/U	MVR250/C/U	M250/C/U	MH250/C/U
MH400/U	MVR400/U	M400/U	MH400/U
MH400/C/U	MVR400/C/U	M400/C/U	MH400/C/U
MH1000/U	MVR1000/U	M1000/U	MH1000/U
MH1000/C/U	MVR1000/C/U	M1000/C/U	MH1000/C/U

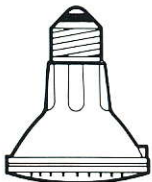
HALOGEN-PAR 38

OSRAM HPAR	GE HALOGEN PERFORMANCE PLUS	SYLVANIA CAPSYLITE	PHILIPS HALOGEN PAR MASTERLINE
45HPAR38/NSP 120V	45PAR/NSP/H 120V	45PAR38/CAP/NSP 120V	—
45HPAR38/NSP 130V	45PAR/NSP/H 130V	45PAR38/CAP/NSP 130V	—
45HPAR38/SP 120V	45PAR/SP/H 120V	45PAR38/CAP/SP 120V	45PAR38/H/SP 120
45HPAR38/SP 130V	45PAR/SP/H 130V	45PAR38/CAP/SP 130V	45PAR38/H/SP 130
45HPAR38/FL 120V	45PAR/FL/H 120V	45PAR38/CAP/FL 120V	45PAR38/H/FL 120
45HPAR38/FL 130V	45PAR/FL/H 130V	45PAR38/CAP/FL 130V	45PAR38/H/FL 130
45HPAR38/WFL 120V	—	—	—
45HPAR38/WFL 130V	—	—	—
—	—	45PAR38/CAP/VWFL 130V	—
90HPAR38/NSP 120V	90PAR/NSP/H 120V	90PAR38/CAP/NSP 120V	—
90HPAR38/NSP 130V	90PAR/NSP/H 130V	90PAR38/CAP/NSP 130V	—
90HPAR38/SP 120V	90PAR/SP/H 120V	90PAR38/CAP/SP 120V	90PAR38/H/SP 120
90HPAR38/SP 130V	90PAR/SP/H 130V	90PAR38/CAP/SP 130V	90PAR38/H/SP 130
90HPAR38/FL 120V	90PAR/FL/H 120V	90PAR38/CAP/FL 120V	90PAR38/H/FL 120
90HPAR38/FL 130V	90PAR/FL/H 130V	90PAR38/CAP/FL 130V	90PAR38/H/FL 130
90HPAR38/WFL 120V	—	—	—
90HPAR38/WFL 130V	—	—	—
—	—	90PAR38/CAP/VWFL 130V	—



HALOGEN-PAR 20 and HPAR 30

OSRAM HPAR	GE HALOGEN PERFORMANCE PLUS	SYLVANIA COMPACT CAPSYLITE	PHILIPS HALOGEN MASTERLINE
50HPAR20/NSP 120V	50PAR20/NSP/H 120V	50PAR20/CAP/NSP 120V	50PAR20/H/NSP9 120V
50HPAR20/NSP 130V	50PAR20/NSP/H 130V	50PAR20/CAP/NSP 130V	50PAR20/H/NSP9 130V
50HPAR30/NSP 120V	50PAR30/NSP/H 120V	50PAR30/CAP/NSP 120V	50PAR30/H/NSP9 120V
50HPAR30/NSP 130V	50PAR30/NSP/H 130V	50PAR30/CAP/NSP 130V	50PAR30/H/NSP9 130V
50HPAR30/NFL 120V	—	—	—
50HPAR30/NFL 130V	—	—	—
75HPAR30/NSP 120V	75PAR30/NSP/H 120V	75PAR30/CAP/NSP 120V	75PAR30/H/NSP9 120V
75HPAR30/NSP 130V	75PAR30/NSP/H 130V	75PAR30/CAP/NSP 130V	75PAR30/H/NSP9 130V
75HPAR30/NFL 120V	—	—	—
75HPAR30/NFL 130V	—	—	—



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AR58FL	AJ905	9
AR58WFL	AJ910	9
DULUX D 10W/27K	DD010	21
DULUX D 10W/41K	DD041	21
DULUX D 13W/27K	DD020	21
DULUX D 13W/35K	DD021	21
DULUX D 13W/41K	DD042	21
DULUX D 18W/27K	DD030	21
DULUX D 18W/35K	DD095	21
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DULUX D/E 13W/27K	DD060	22
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DULUX D/E 18W/27K	DD070	22
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DULUX EL GLOBE 11W	DB070	18
DULUX EL GLOBE 15W	DB072	18
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DULUX L 18W/35K	DL065	23
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DULUX L 18W/35K/RS	DL005	23
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DULUX L 39W/30K	DL015	23
DULUX L 39W/35K	DL017	23
DULUX L 39W/41K	DL020	23
DULUX L 40W/30K/RS	DL025	23
DULUX L 40W/35K/RS	DL027	23
DULUX L 40W/41K/RS	DL030	23
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DULUX S 7W/35K	DS094	19
DULUX S 7W/41K	DS033	19
DULUX S 7W/50K	DS091	19
DULUX S 9W/27K	DS020	19
DULUX S 9W/35K	DS095	19
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DULUX S 9W/50K	DS092	19

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DULUX S 13W/27K	DS030	19
DULUX S 13W/35K	DS096	19
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FB40CW/U3	BB035	27
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FO17W/730K	TC700	25
FO17W/735K	TC705	25
FO17W/741K	TC710	25
FO25W/730K	TC715	25
FO25W/735K	TC720	25
FO25W/741K	TC725	25
FO32W/730K	TC730	25
FO32W/735K	TC735	25
FO32W/741K	TC741	25
FO40W/730K	TC745	25
FO40W/735K	TC750	25
FO40W/741K	TC755	25
FO17W/830K	TC800	25
FO17W/835K	TC805	25
FO17W/841K	TC810	25
FO25W/830K	TC815	25
FO25W/835K	TC820	25
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FO32W/835K	TC835	25
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HQI-SE150/WDX	HQ061	29
HQI-SE250/DX	HR010	30
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HQI-DE70/NDX	HQ040	29
HQI-DE70/WDX	HQ050	29
HQI-DE150/NDX	HQ060	29
HQI-DE150/WDX	HQ055	29
HQI-DE250/NDX-RSC	HR085	30
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HQI-DE250/DX	HR070	30
HQI-DE400/DX	HR090	30
LU35/MED	NL005	33
LU50	NL015	33
LU50/MED	NL025	33
LU70	NL035	33
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LU100	NL055	33
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MH70/C/U/MED	HC015	31
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MH175/U/MED	HC030	31
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MR11 "FTB"	AK500	7
MR11 "FTC"	AK510	7
MR11 "FTD"	AK505	7
MR11 "FTE"	AK515	7
MR11 "FTF"	AK525	7
MR11 "FTH"	AK520	7
MR11 50W SP	AK530	7
MR11 50W MFL	AK540	7
MR11 50W FL	AK535	7
MR16 "ESX"	AK610	6
MR16 "BAB"	AK600	6
MR16 "FRB"	AK630	6
MR16 "FRA"	AK620	6
MR16 "FMW"	AK625	6
MR16 "EXT"	AK710	6
MR16 "EXZ"	AK700	6
MR16 "EXK"	AK711	6
MR16 "EXN"	AK705	6
MR16 "FNV"	AK703	6
MR16 "EYF"	AK810	6
MR16 "EYJ"	AK800	6
MR16 "EYC"	AK805	6
MR16/LENS "ESX/C"	AK900	7
MR16/LENS "BAB/C"	AK910	7
MR16/LENS "FRB/C"	AK915	7
MR16/LENS "FRA/C"	AK920	7
MR16/LENS "FMW/C"	AK925	7
MR16/LENS "EXT/C"	AK930	7
MR16/LENS "EXZ/C"	AK935	7
MR16/LENS "EXK/C"	AK937	7
MR16/LENS "EXN/C"	AK940	7
MR16/LENS "EYF/C"	AK945	7
MR16/LENS "EYJ/C"	AK950	7
MR16/LENS "EYC/C"	AK955	7
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MR16 GREEN 44872	AK961	6
MR16 YELLOW 44873	AK962	6
MR16 RED 44874	AK963	6
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POWERTRONIC 70/NDX 277V	PT110	41
POWERTRONIC LU-DE 70 277V	PT110	41
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SOX18W	NA005	34
SOX35W	NA010	34
SOX55W	NA020	34
SOX90W	NA023	34
SOX135W	NA025	34
SOX180W	NA028	34
SOX-E26	NA032	34
SOX-E36	NA034	34
SOX-E66	NA036	34
SOX-E91	NA038	34
SOX-E131	NA040	34
1106	LI010	15
1603	LI020	15
1604	LI040	15
1613	LI090	15
1614	LI095	15
41830SSP	AI005	8
41835NSP	AI020	8
41835SP	AI010	8
41835FL	AI015	8
41840SP	AI025	8
41840FL	AI030	8
41840WFL	AI035	8
41850SP	AI040	8
41850FL	AI045	8
41850WFL	AI050	8
41900SP	AJ022	9
41900FL	AJ032	9
41905SP	AJ042	9
41905FL	AJ052	9
41930SP	AJ062	9
41970SP	AJ080	9
41970FL	AJ090	9
41980SP	AJ095	9
41980FL	AJ096	9
41990SP	AJ100	9
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64405CL	AH010	5
64405FR	AH005	5
64410	AH020	5
64415CL	AH025	5
64415FR	AH027	5
64425	AH030	5
64425AX	AH045	5
64427AX	AH047	5
64430AX	AH050	5
64432AX	AH048	5
64435	AH060	5
64440	AH070	5
64440AX	AH085	5
64445	AH111	5
64445AX	AH110	5
64450AX	AH112	5
64455	AH125	5
64455AX	AH113	5
64458AX	AH115	5
64460	AH120	5
64460AX	AH122	5
64465AX	AH130	5
64484CL	AL140	12
64484FR	AL145	12
64486CL	AL150	12
64486FR	AL155	12
64488CL	AL065	12
64488FR	AL075	12
64490CL	AL125	12
64490FR	AL135	12
64689	AM130	15
64694	AM135	15
64697	AM150	15
64700 120V	AM005	15
64700 125/130V	AM020	15
64703 120V	AM070	15
64703 125/130V	AM075	15
64760	AM110	15

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