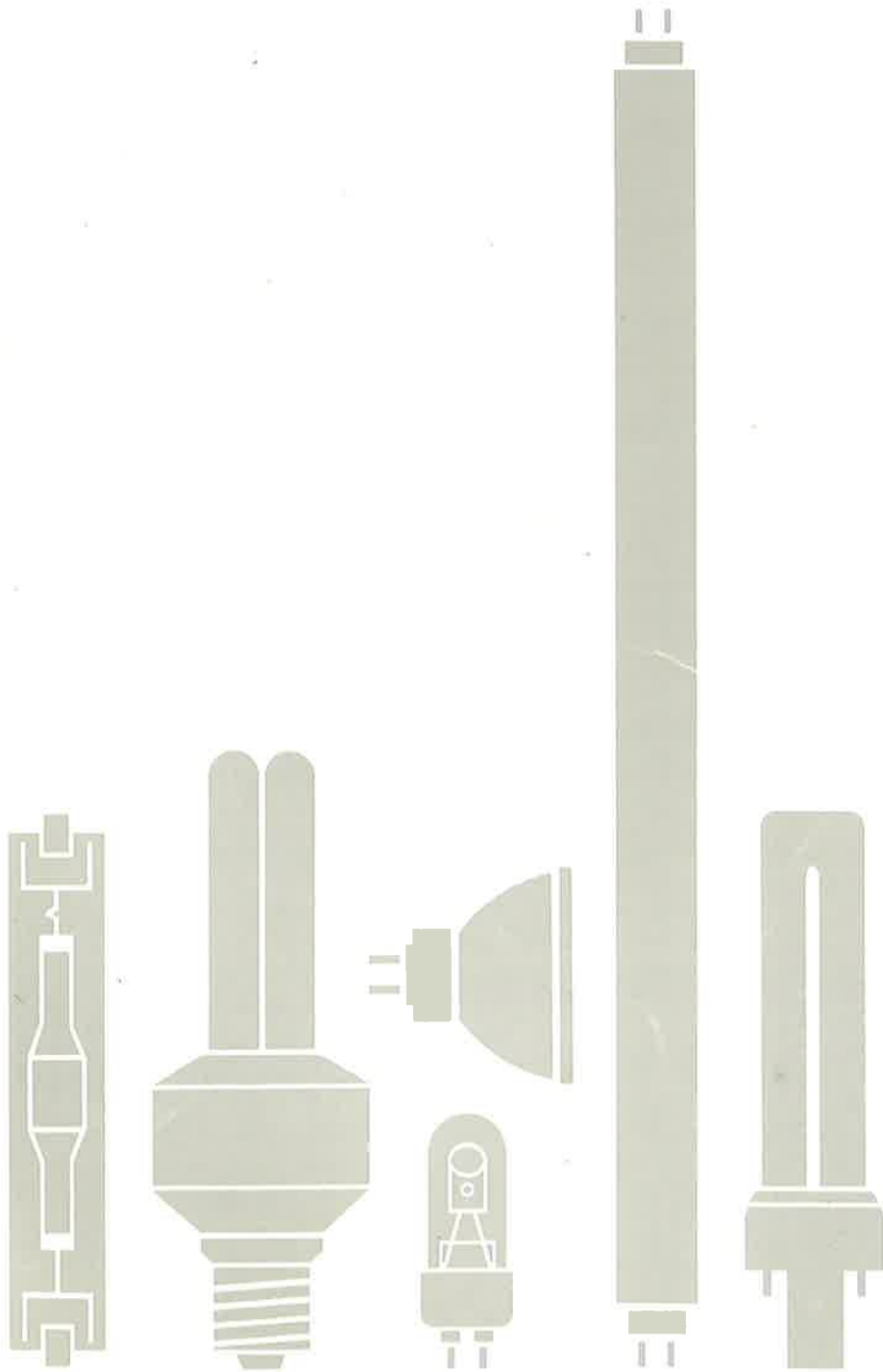
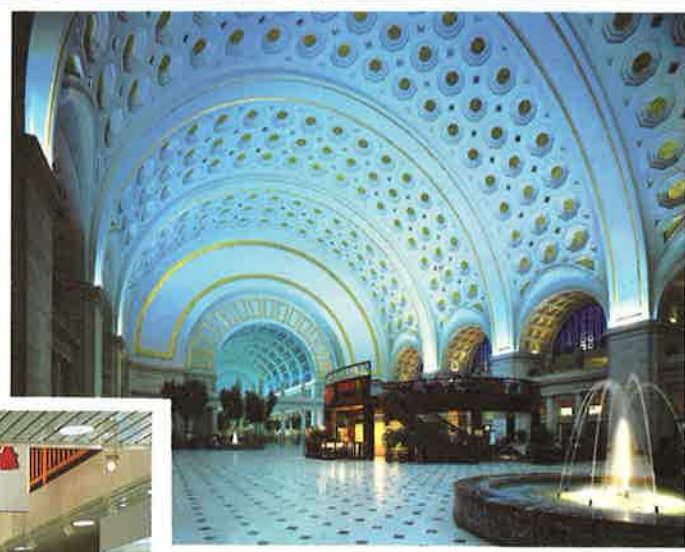


General Lighting Products



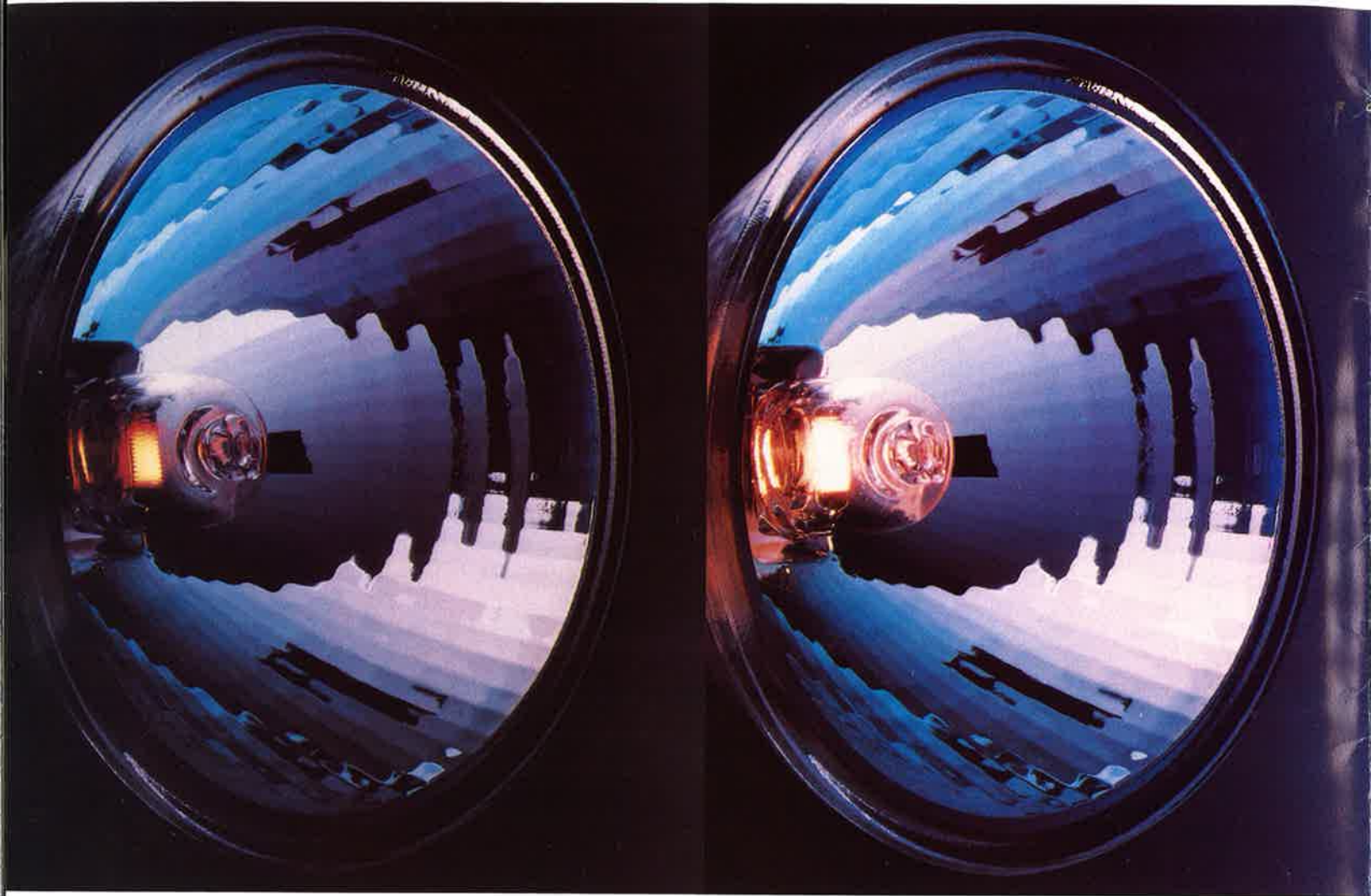
OSRAM

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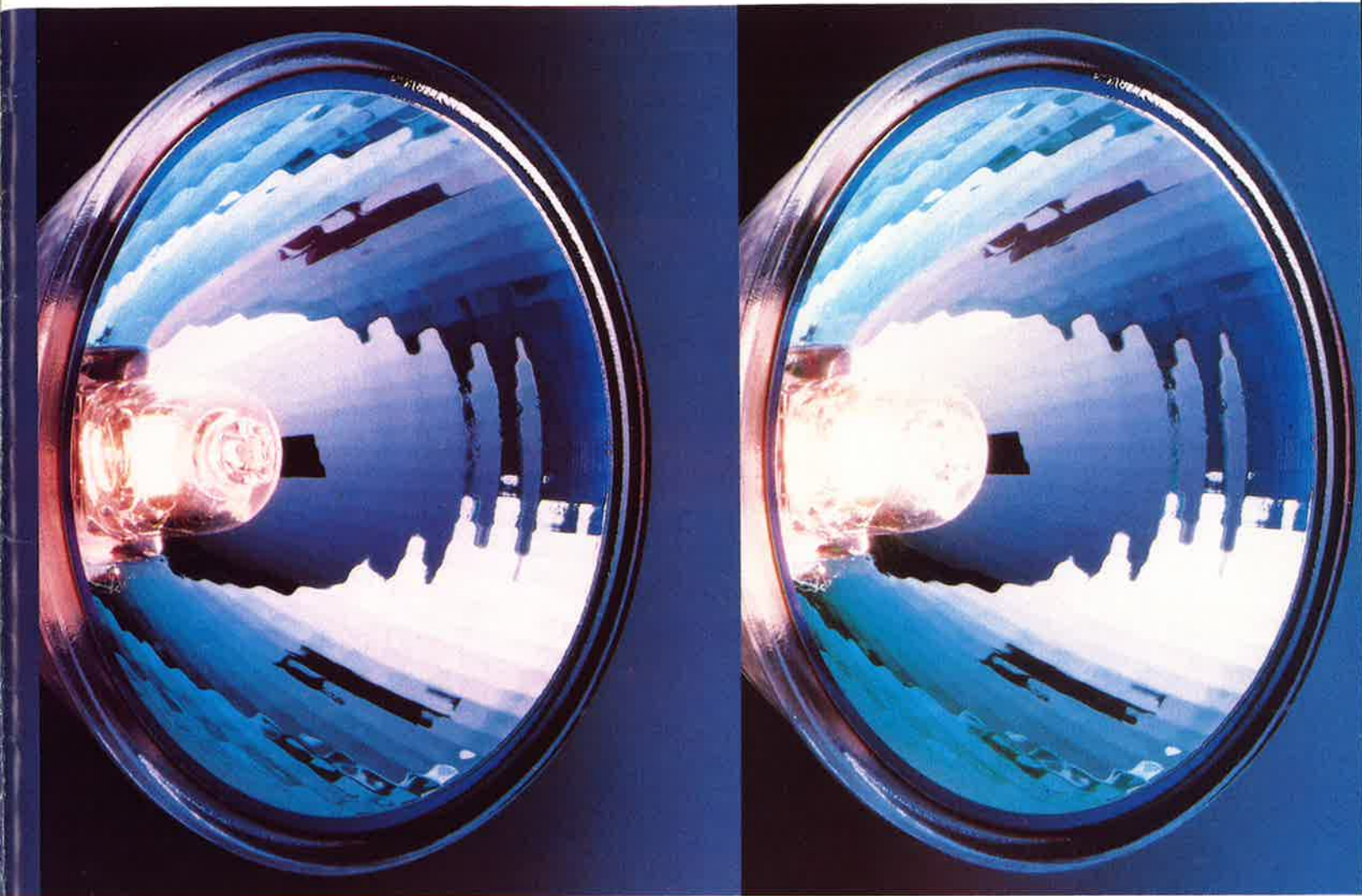


LIGHTS FOR LIVING

Thanks to advancements in artificial light, we now enjoy more productive work and leisure hours per day. For the past 80 years OSRAM has been creating and developing new and exciting concepts in innovative lighting. Today, nearly 40% of our sales come from products created in the past five years. Our newest energy-saving lamps, for instance, use only 20% of the energy needed by comparable incandescent lamps.

OSRAM is the largest lamp manufacturer in West Germany, second largest in Europe, and third largest in the world. We are a fully owned subsidiary of Siemens, one of the world's biggest and best known names in electrical and electronic engineering.

OSRAM's headquarters in Montgomery, N.Y. is one of 27 OSRAM subsidiaries worldwide, and our plant in Maybrook, N.Y. is one of 16 manufacturing sites. OSRAM also has sales coverage in 100 different countries through 110 companies and representatives.



MEETING MARKET DEMANDS WITH ADVANCED PRODUCTS

OSRAM lighting products are noted for advanced design, improved efficiencies and optimized performance. With over 3,500 different lamps, we serve three specific market categories:

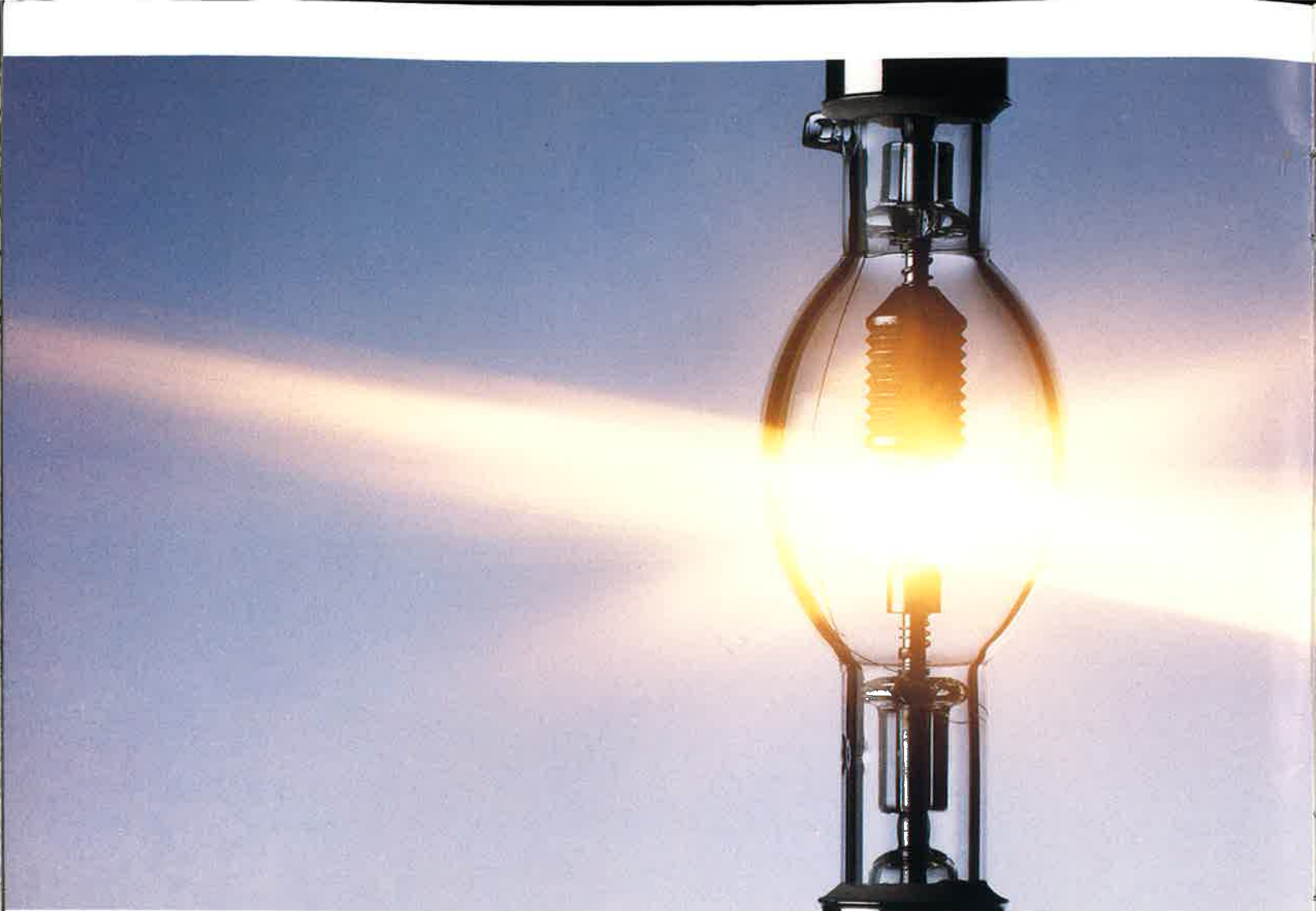
- General lighting lamps for commercial, industrial and residential applications
- Lights for photographic, scientific and entertainment applications
- Automotive lighting

Primary product segments within the general lighting offering include:

- Compact fluorescent lamps — DULUX®
- Tungsten Halogen lamps
- High C.R.I. Metal Halide lamps — HQI®

INNOVATION — AN OSRAM TRADITION

From its beginnings, in 1906, OSRAM has been known for innovation in lighting technology. OSRAM products are developed to anticipate and meet market needs. Research and development is done on a broad level and takes into account all variables and product development. In the last five years our lighting innovations and developments have doubled, and now account for 40% of our total product line.



QUALITY — AN OSRAM HALLMARK

From the design of our own computer-operated production equipment and processes, to the manufacture of our lighting components, everything is done "under one roof". OSRAM develops, designs, and manufactures its products, assuring superior quality every step of the way. Our MR16 lamps, for instance, go through stringent quality checks including a "half-angle" test before they are packed and shipped. OSRAM quality ensures highest luminous efficacy, and long lamp life.

UNIQUE APPLICATIONS — AN OSRAM SPECIALTY

In addition to our general lighting lamps, we develop and produce special light sources for unique lighting applications such as:

- mercury short-arc lamps with high UV output for use in microchip production and quality control
- xenon short-arc lamps for cinema projection
- infrared and UV lamps for special laboratory applications
- krypton long-arc lamps for laser excitation
- tungsten-halogen lamps for projection and video lighting
- special lamps for airport runways and taxiways
- entertainment lighting for stage and studio



TWO OSCARS — FOR OSRAM ACHIEVEMENT

In keeping with the tradition of innovation, the XBO Xenon Short-Arc Lamp was developed by OSRAM which revolutionized motion picture projection. In 1983, the Academy of Motion Picture Arts and Sciences awarded OSRAM its coveted Oscar for this outstanding new lamp. Again in 1988, an Oscar was awarded to OSRAM for the development of HMI® METALLOGEN® lamp, which, for the first time provided the motion picture industry with high efficiency, daylight-like studio lighting.

TECHNOLOGY BROUGHT TO LIGHT — OSRAM

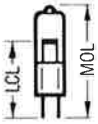
We create daylight in film and TV studios. Our lamps project dreams on the screen and conjure up illusions on stage. They enhance safety through better visibility in traffic. They provide warmth, assist in medicine and research, and promote growth. In the world of light, there is OSRAM.

HMI® and METALLOGEN® are registered trademarks of OSRAM Corporation.

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 fixtures with integral reflectors.

- platinum coated pins for better contact and fit
- long life heat resistant contact foils

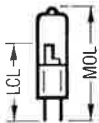


Transverse filament halogen lamps (Refer to page 35, Notes 1, 2, 3)

Volts	Watts	Base	Product Order Code	Reference	Pkg. Qty.	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)	LCL Inches (mm)
6	10	G4	AH020	64410	100	2,000	120	1 1/4 (31)	3/4 (19.5)
12	5	G4	AH010	64405	100	2,000	60	1 1/4 (31)	3/4 (19.5)
			AH005	64405 FR*	100	2,000	55	1 1/4 (31)	3/4 (19.5)
12	10	G4	AH025	64415	100	2,000	140	1 1/4 (31)	3/4 (19.5)
			AH027	64415 FR*	100	2,000	130	1 1/4 (31)	3/4 (19.5)
12	20	G4	AH030	64425	100	2,000	350	1 1/4 (31)	3/4 (19.5)
12	50	GY6.35	AH070	64440	100	2,000	950	1 3/4 (44)	1 3/16 (30)
12	100	GY6.35	AH118	64458	100	2,000	2,500	1 3/4 (44)	1 3/16 (30)
24	20	G4	AH060	64435	100	1,000	350	1 1/4 (31)	3/4 (19.5)
24	50	GY6.35	AH111	64445	100	2,000	850	1 3/4 (44)	1 3/16 (30)
24	75	GY6.35	AH125	64455	100	2,000	1,500	1 3/4 (44)	1 3/16 (30)
24	100	GY6.35	AH120	64460	100	2,000	2,200	1 3/4 (44)	1 3/16 (30)

*Frosted

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



In addition to the above bi-pin range, 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.

Volts	Watts	Base	Product Order Code	Reference	Pkg. Qty.	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL inches (mm)	LCL inches (mm)
6	35	GY6.35	AH050	64430AX	100	2,000	600	1 3/4 (44)	1 3/16 (30)
12	20	G4	AH045	64425AX	100	2,000	350	1 5/16 (33)	7/8 (22)
12	35	GY6.35	AH048	64432AX	100	2,000	650	1 3/4 (44)	1 3/16 (30)
12	50	GY6.35	AH085	64440AX	100	2,000	1,000	1 3/4 (44)	1 3/16 (30)
12	75	GY6.35	AH112	64450AX	100	2,000	1,350	1 3/4 (44)	1 3/16 (30)
12	100	GY6.35	AH115	64458AX	100	2,000	2,300	1 3/4 (44)	1 3/16 (30)
24	150	GY6.35	AH130	64465AX	100	2,000	3,200	1 3/4 (44)	1 3/16 (30)

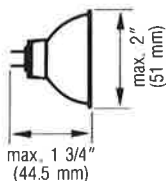
Tungsten Halogen and Incandescent Lamps

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.

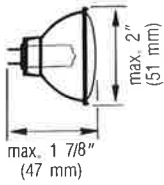
The dichroic reflector reduces approximately 2/3 of the heat in the beam by passing it backwards through the glass reflector. An additional aesthetic appeal of attractive color effects is produced by refracting the light in the dichroic reflector.

- improved reflector design and axial filament burner provide up to 66% higher beam candlepower
- decorative faceted reflector design for iridescent color effects.
- heat reduction on the illuminated object by approximately two-thirds.
- small, attractive light source for display and accent lighting
- available in a wide variety of beam spreads
- excellent color rendering
- fully dimmable with no lamp blackening
- 75W MR16 lamps feature chromized contact foils for high temperature operation and longer life
- made in U.S.A.



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

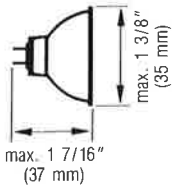
Watts	Volts	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Avg. Rated Hrs. Life	Candle Power	Beam Spread
20	12	GX5.3	ESX	AK610	41860NSP	10	2,000	4,100	12°
			BAB	AK600	41860FL	10	2,000	850	36°
35	12	GX5.3	FRB	AK630	41865NSP	10	2,000	13,000	8°
			FRA	AK620	41865SP	10	2,000	4,000	18°
			FMW	AK625	41865FL	10	2,000	1,550	38°
50	12	GX5.3	EXT	AK710	41870NSP	10	3,000	12,500	12°
			EXZ	AK700	41870NFL	10	3,000	4,400	24°
			EXK	AK711	41870MFL	10	3,000	3,500	30°
			EXN	AK705	41870FL	10	3,000	2,500	38°
75	12	GX5.3	EYF	AK810	41880NSP	10	3,500	15,000	14°
			EYJ	AK800	41880MFL	10	3,500	5,400	24°
			EYC	AK805	41880FL	10	3,500	2,950	38°



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

- glass front lens protects lamp, as well as dichroic coating from dust and fingerprints.
- available in beam spreads comparable to standard MR16 lamps.
- can be used in open fixtures.

Watts	Volts	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Avg. Rated Hours Life	Candle Power	Beam Spread
20	12	GX5.3	ESX/S	AK900	44860NSP	10	2,000	4,000	12°
			BAB/S	AK910	44860FL	10	2,000	800	38°
35	12	GX5.3	FRB/S	AK915	44865NSP	10	2,000	12,000	8°
			FRA/S	AK920	44865SP	10	2,000	4,000	18°
			FMW/S	AK925	44865FL	10	2,000	1,450	38°
50	12	GX5.3	EXT/S	AK930	44870NSP	10	3,000	11,000	12°
			EXZ/S	AK935	44870NFL	10	3,000	4,200	24°
			EXK/S	AK937	44870MFL	10	3,000	3,400	30°
75	12	GX5.3	EXN/S	AK940	44870FL	10	3,000	2,250	38°
			EYF/S	AK945	44880NSP	10	3,500	14,500	14°
			EYJ/S	AK950	44880MFL	10	3,500	5,400	24°
			EYC/S	AK955	44880FL	10	3,500	2,950	38°



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

Watts	Volts	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Avg. rated Hrs. Life	Candle Power	Beam Spread
20	12	GZ4	FTB	AK500	41890SP	10	2,000	5,500	10°
			FTC	AK505	41890MFL	10	2,000	1,750	20°
			FTD	AK510	41890FL	10	2,000	700	30°
35	12	GZ4	FTE	AK515	41892SP	10	2,000	8,500	10°
			FTF	AK520	41892MFL	10	2,000	3,000	20°
			FTH	AK525	41892FL	10	2,000	1,500	30°
50	12	GZ4	—	AK530	41894SP	10	3,000	11,000	10°
			—	AK535	41894MFL	10	3,000	4,400	20°
			—	AK540	41894FL	10	3,000	2,600	30°

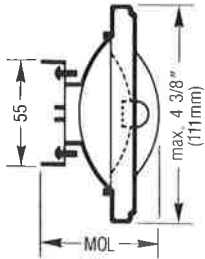
Tungsten Halogen and Incandescent Lamps

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

Halogen reflector lamps are 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. They are available with silver and gold colored reflectors.

- photometrically optimized combination of lamp and reflector
- light-weight 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



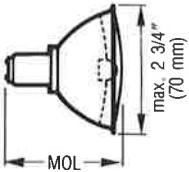
AR111 (PAR 36) with axial filament and aluminum faceted reflector

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

Watts	Volts	Base	Product Order Code	Reference	Pkg. Qty.	Reflector Color	Beam Spread	Candle Power	MOL Inches (mm)	Avg. Rated Hrs. Life
35	6	G53*	AI005	41830SSP	6	Silver	3°	45,000	1 3/4 (45)	2,000
50	12	G53*	AI020	41835NSP	6	Silver	5°	50,000	1 3/4 (45)	2,000
			AI010	41835SP	6	Silver	10°	20,000	1 3/4 (45)	2,000
			AI015	41835FL	6	Silver	30°	3,000	1 15/16 (50)	2,000
75	12	G53*	AI025	41840SP	6	Silver	10°	25,000	1 3/4 (45)	2,000
			AI030	41840FL	6	Silver	30°	4,500	1 15/16 (50)	2,000
			AI035	41840WFL	6	Silver	60°	1,300	1 15/16 (50)	2,000
100	12	G53*	AI040	41850SP**	6	Silver	10°	45,000	1 3/4 (45)	2,000
			AI045	41850FL**	6	Silver	30°	7,000	1 15/16 (50)	2,000
			AI050	41850WFL**	6	Silver	60°	2,000	1 15/16 (50)	2,000

* M4 screw

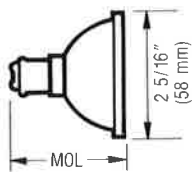
** Consult factory for availability



AR70 with axial filament and aluminum faceted reflector

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

Watts	Volts	Base	Product Order Code	Reference	Pkg. Qty.	Reflector Color	Beam Spread	Candle Power	MOL Inches (mm)	Avg. Rated Hrs. Life
20	12	BA15d	AJ080	41970SP	10	Silver	10°	7,000	2 (50)	2,000
			AJ090	41970FL	10	Silver	30°	1,000	2 (50)	2,000
50	12	BA15d	AJ100	41990SP	10	Silver	10°	15,000	2 (50)	2,000
			AJ110	41990FL	10	Silver	30°	2,000	2 (50)	2,000
			AJ120	41995SP	10	Gold	10°	13,500	2 (50)	2,000
			AJ130	41995FL	10	Gold	30°	1,800	2 (50)	2,000
75	12	BA15d	AJ095	41980SP	10	Silver	10°	19,000	2 (50)	2,000
			AJ096	41980FL	10	Silver	30°	4,000	2 (50)	2,000

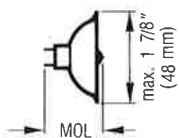


AR58 with front lens and aluminum faceted reflector

(Refer to page 35, Notes 1, 3)

Watts	Volts	Base	Product Order Code	Reference	Pkg. Qty.	Reflector Color	Beam Spread	Candle Power	MOL Inches (mm)	Avg. Rated Hrs. Life
50	12	BA15d	AJ900	AR58SP*	10	Silver	8°	11,000	2 1/16 (53)	2,000
			AJ905	AR58FL	10	Silver	16°	4,650	2 3/16 (56)	2,000
			AJ910	AR58WFL	10	Silver	32°	1,100	2 1/4 (57)	2,000

*Smooth reflector



AR48 with axial filament and aluminum faceted reflector

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

Watts	Volts	Base	Product Order Code	Reference	Pkg. Qty.	Reflector Color	Beam Spread	Candle Power	MOL Inches (mm)	Avg. Rated Hrs. Life
10	6	G4	AJ070	41960SP	10	Silver	10°	2,000	1 7/16 (36)	2,000
20	12	G4	AJ022	41900SP	10	Silver	10°	5,000	1 7/16 (36)	2,000
			AJ032	41900FL	10	Silver	15°	2,000	1 7/16 (36)	2,000
			AJ042	41905SP	10	Gold	10°	4,500	1 7/16 (36)	2,000
			AJ052	41905FL	10	Gold	15°	1,500	1 7/16 (36)	2,000
20	24	G4	AJ062	41930SP	10	Silver	10°	4,500	1 7/16 (36)	2,000

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°	5°	10°	10°	10°	30°	30°	30°	60°	60°
3 ft									130 fc	90 fc
6 ft					550 fc	165 fc	220 fc	120 fc	φ41.5"	φ41.5"
9 ft	550 fc	370 fc	550 fc	440 fc	φ12.6"	φ38.5"	φ29"	69 fc	φ62"	φ62"
12 ft	φ5.5"	φ9.4"	φ19"	170 fc	180 fc	φ58"	71 fc	φ38.5"		
15 ft	200 fc	130 fc	200 fc	φ25.2"			φ48"			
	φ9.4"	φ15.7"	φ31.5"							

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
	10°	10°	10°	10°	30°	30°	30°	30°
3 ft				550 fc	330 fc	120 fc	105 fc	65 fc
6 ft	415 fc	490 fc	445 fc	φ6.3"	φ19.3"	φ19.3"	φ19.3"	φ19.3"
9 ft	φ12.5"	φ9.5"	φ9.5"	85 fc	50 fc	30 fc	26 fc	29 fc
12 ft	105 fc	90 fc	110 fc	φ15.7"	φ48"	φ38.5"	φ38.5"	φ29"
	φ25.2"	φ22"	φ19"					

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

AR48	41900SP 12V/20W silver	41930SP 24V/20W silver	41905SP 12V/20W gold	41960SP 6V/10W silver	41900FL 12V/20W silver	41905FL 12V/20W gold
	10°	10°	10°	10°	15°	15°
1.5 ft				665 fc	440 fc	375 fc
3 ft	420 fc	420 fc	345 fc	φ3.2"	φ4.7"	φ4.7"
4.5 ft	φ6.3"	φ6.3"	φ6.3"	74 fc	110 fc	90 fc
6 ft	105 fc	105 fc	85 fc	φ9.5"	φ9.5"	φ9.5"
	φ12.6"	φ12.6"	φ12.6"			

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	EXK 41870MFL 12V/50W	EXN 41870FL 12V/50W	EYF 41880NSP 12V/75W	EYJ 41880MFL 12V/75W	EYC 41880FL 12V/75W
1.5 ft	12°	36° 410 fc	8°	18°	38° 750 fc	12°	24°	32°	38° 1200 fc	14°	24°	38° 1420 fc
3 ft	500 fc	102 fc φ26.4"	1560 fc	480 fc	85 fc φ44.0"	1500 fc	525 fc	420 fc	140 fc φ44.0"	1800 fc	650 fc	160 fc φ44.0"
4.5 ft	125 fc φ14.6"		390 fc	120 fc φ23.4"		375 fc	130 fc φ33.0"	110 fc φ42.2"		450 fc	130 fc φ36.7"	
6 ft			175 fc φ13.4"			170 fc φ22.0"				200 fc φ27.5"		
7.5 ft												
9 ft												

MR16 Shielded Lens	ESX/S 44860NSP 12V/20V	BAB/S 44860FL 12V/20W	FRB/S 44865VNSP 12V/35W	FRA/S 44865SP 12V/35W	FMW/S 44865FL 12V/35W	EXT/S 44870NSP 12V/50W	EXZ/S 44870NFL 12V/50W	EXK/S 44870MFL 12V/50W	EXN/S 44870FL 12V/50W	EYF/S 44880NSP 12V/75W	EYJ/S 44880MFL 12V/75W	EYC/S 44880FL 12V/75W
1.5 ft	12°	36° 390 fc	8°	18°	38° 690 fc	12°	24°	32°	38° 1100 fc	14°	24°	38° 1420 fc
3 ft	480 fc	100 fc φ26.4"	1440 fc	480 fc	80 fc φ44.0"	1350 fc	500 fc	410 fc	120 fc φ44.0"	1740 fc	650 fc	160 fc φ44.0"
4.5 ft	120 fc φ14.6"		360 fc	120 fc φ23.4"		330 fc	125 fc φ33.0"	105 fc φ42.2"		435 fc	160 fc φ36.7"	
6 ft			160 fc φ13.4"			150 fc φ22.0"				195 fc φ27.5"		
7.5 ft												
9 ft												

MR11 Open Lens	FTB 41890SP 12V/20W	FTC 41890MFL 12V/20W	FTD 41890FL 12V/20W	FTE 41892SP 12V/35W	FTF 41892MFL 12V/35W	41892FL 12V/35W	41894SP 12V/50W	41894MFL 12V/50W	41894FL 12V/50W
1.5 ft	10°	20°	30° 310 fc	10°	20°	30° 670 fc	10°	20°	30° 890 fc
3 ft	610 fc	200 fc	80 fc φ22.3"	950 fc	330 fc	75 fc φ40.6"	1220 fc	445 fc	100 fc φ40.6"
4.5 ft	150 fc φ12.8"	85 fc φ26.2"		240 fc φ12.8"	150 fc φ26.2"		300 fc φ12.8"	200 fc φ26.2"	
6 ft									

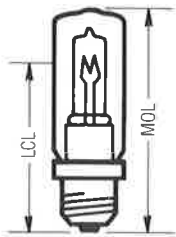
Note: fc = Footcandles shown are at beam center. Footcandles at edge of beam are 50% of center.
 □ = Practical range of application.

Tungsten Halogen and Incandescent Lamps

TUNGSTEN HALOGEN LINE VOLTAGE LAMPS SINGLE-ENDED

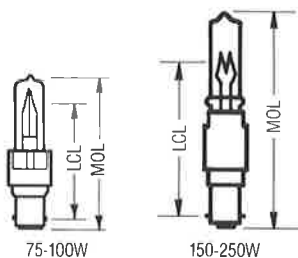
Single-ended halogen lamps are available in a wide variety of wattages. These lamps feature a sturdy ceramic base for reliable operation and an internal fuse.

- white, tungsten halogen light color of 3000K
- medium base for ease of handling and relamping
- bayonet base for accurate lamp positioning
- fully dimmable without lamp blackening
- universal burning position
- compact light source
- available in both clear and frosted versions



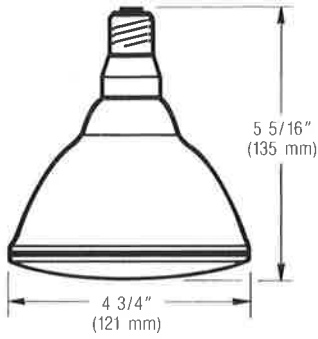
MEDIUM BASE (E26) with double-envelope (Refer to page 35, Notes 1, 2, 3, 4)

Watts	Base	Product Order Code	Volts	Reference	Pkg. Qty.	Description	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)	LCL Inches (mm)
75	Med.	AL140	120	64484CL	15	Clear	2,000	1,200	4 1/8 (105)	2 15/16 (75)
	Med.	AL145	120	64484FR	15	Frosted	2,000	1,164	4 1/8 (105)	2 15/16 (75)
100	Med.	AL150	120	64486CL	15	Clear	2,000	1,600	4 1/8 (105)	2 15/16 (75)
	Med.	AL155	120	64486FR	15	Frosted	2,000	1,552	4 1/8 (105)	2 15/16 (75)
150	Med.	AL065	120	64488CL	15	Clear	2,000	2,760	4 1/8 (105)	2 15/16 (75)
	Med.	AL075	120	64488FR	15	Frosted	2,000	2,677	4 1/8 (105)	2 15/16 (75)
250	Med.	AL125	120	64490CL	15	Clear	2,000	4,750	4 1/8 (105)	2 15/16 (75)
	Med.	AL135	120	64490FR	15	Frosted	2,000	4,607	4 1/8 (105)	2 15/16 (75)



D.C. BAYONET BASE (Refer to page 35, Notes 1, 2, 3, 4)

Watts	Base	Product Order Code	Volts	Reference	Pkg. Qty.	Description	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)	LCL Inches (mm)
75	D.C. Bay.	AL160	120	64483CL	10	Clear	2,000	1,200	3 3/8 (86)	2 3/16 (55)
	D.C. Bay.	AL165	120	64483FR	10	Frosted	2,000	1,164	3 3/8 (86)	2 3/16 (55)
100	D.C. Bay.	AL170	120	64485CL	10	Clear	2,000	1,600	3 3/8 (86)	2 3/16 (55)
	D.C. Bay.	AL175	120	64485FR	10	Frosted	2,000	1,552	3 3/8 (86)	2 3/16 (55)
150	D.C. Bay.	AL041	120	64487CL	10	Clear	2,000	2,760	3 7/8 (98)	2 5/8 (67)
	D.C. Bay.	AL042	120	64487FR	10	Frosted	2,000	2,677	3 7/8 (98)	2 5/8 (67)
250	D.C. Bay.	AL105	120	64489CL	10	Clear	2,000	4,750	3 7/8 (98)	2 5/8 (67)
	D.C. Bay.	AL106	120	64489FR	10	Frosted	2,000	4,607	3 7/8 (98)	2 5/8 (67)



HALOGEN-PAR 38 TUNGSTEN HALOGEN LINE VOLTAGE LAMPS

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

Halogen-PAR 38 (HPAR 38) lamps feature an efficient, halogen burner which produces a whiter, brighter light with 40% less power consumption than standard PAR 38 lamps.

- diode-free, no lamp flickering
- white, tungsten halogen light color, 3000K
- efficient halogen burner, no lamp blackening
- 45W HPAR 38 replaces standard 75W PAR 38
- 90W HPAR 38 replaces standard 150W PAR 38
- made in U.S.A.

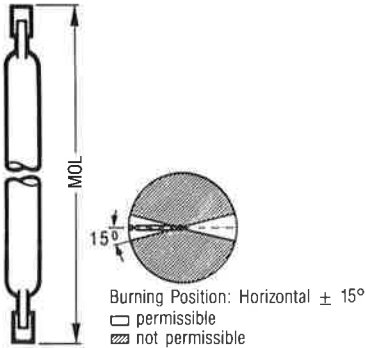
Watts	Base	Product Order Code	Volts	Reference	Pkg. Qty.	Avg. rated Hrs. Life	Lumens	Candle Power	Beam Spread
45	Med.	AL198	120	45 HPAR38/SP	12	2,000	540	6,000	13°
	Med.	AL196	130	45 HPAR38/SP	12	2,000	540	6,000	13°
	Med.	AL199	120	45 HPAR38/FL	12	2,000	540	1,600	32°
	Med.	AL197	130	45 HPAR38/FL	12	2,000	540	1,600	32°
90	Med.	AL210	120	90 HPAR38/SP	12	2,000	1,270	14,000	13°
	Med.	AL200	130	90 HPAR38/SP	12	2,000	1,270	14,000	13°
	Med.	AL215	120	90 HPAR38/FL	12	2,000	1,270	3,400	32°
	Med.	AL205	130	90 HPAR38/FL	12	2,000	1,270	3,400	32°

Tungsten Halogen and Incandescent Lamps

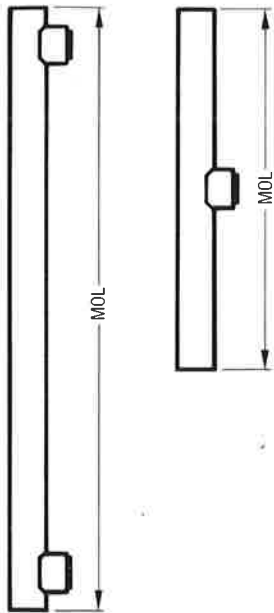
TUNGSTEN HALOGEN LINE VOLTAGE LAMPS DOUBLE-ENDED (Refer to page 35, Notes 1, 2, 3)

The family of OSRAM double-ended line voltage tungsten halogen lamps are the perfect choice for either direct replacement or small floodlight installations.

- design wattages from 100W to 1500W
- sturdy filament construction
- white, tungsten halogen light color of 3000K
- excellent color rendition
- dimmable



Watts	Base	Product Order Code	Volts	Reference	Pkg. Qty.	Description	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
100	RSC	AM130	120	Q100T3/CL	12	64689	2,000	1,600	3 3/8 (85)
150	RSC	AM135	120	Q150T3/CL	12	64694	2,000	2,800	3 3/8 (85)
200	RSC	AM150	120	Q200T3/CL	12	64697	2,000	3,600	4 11/16 (119)
300	RSC	AM070	120	Q300T3/CL	12	64703	2,000	6,000	4 11/16 (119)
		AM075	125/130	Q300T3/CL	12	64703	2,000	5,600	4 11/16 (119)
500	RSC	AM005	120	Q500T3/CL	12	64700	2,000	11,100	4 11/16 (119)
		AM020	125/130	Q500T3/CL	12	64700	2,000	10,500	4 11/16 (119)
1500	RSC	AM110	240/250	Q1500T3/CL	12	64760	2,000	33,000	10 1/16 (256)

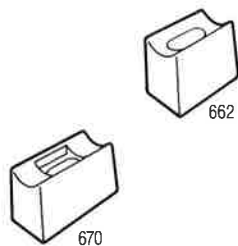


LINESTRA® — LINEAR INCANDESCENT LAMPS

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	Product Order Code	Volts	Reference	Pkg. Qty.	For Socket	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
35	2-base S14s	LI020	125/130	1603	25	662	2,000	240	11 13/16 (300)
	1-base S14d	LI090	125/130	1613	25	670	2,000	240	11 13/16 (300)
60	2-base S14s	LI040	125/130	1604	25	662	2,000	460	19 11/16 (500)
	1-base S14d	LI095	125/130	1614	25	670	2,000	460	19 11/16 (500)
150	2-base S14s	LI010	125/130	1106	16	662	2,000	930	39 3/8 (1000)



LAMP HOLDERS FOR LINESTRA

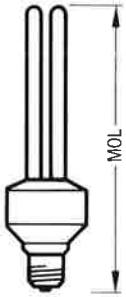
The lampholders 662 and 670 are intended for incorporation into suitably designed fixtures that will allow LINESTRA lamps to be installed safely and in compliance with the National Electrical Code. The installation of these lampholders as separate units is not recommended.

Reference	Product Order Code	For Lamp Base	Color	MOL Inches (mm)	HEIGHT Inches (mm)	DEPTH Inches (mm)
662	SK010	2-base S14s	White	2 5/16 (59)	1 13/16 (46)	1 11/32 (34)
670	SK020	1-base S14d	White	3 7/32 (82)	1 13/16 (46)	1 11/32 (34)

Compact Fluorescent Lamps



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



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

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.

- up to 75% less energy cost compared to incandescent lamps
- long life of 10,000 hours — lasts up to 13 times longer than incandescent lamps
- medium base for easy replacement
- flicker free instant start
- warm, pleasant incandescent-like light
- Trichrome phosphor for excellent color rendition (C.R.I. 82)
- made in U.S.A.

Watts	Base	Product Order Code	Volts	Reference	Pkg. Qty.	Trichrome Phosphor	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
7	Med.	DB010	120	DULUX EL 7W	6	2700K	10,000	400	5 11/16 (145)
11	Med.	DB020	120	DULUX EL 11W	6	2700K	10,000	600	5 11/16 (145)
15	Med.	DB030	120	DULUX EL 15W	6	2700K	10,000	900	6 7/8 (175)
20	Med.	DB040	120	DULUX EL 20W	6	2700K	10,000	1,200	8 3/16 (207)

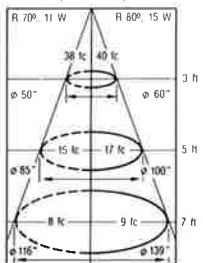
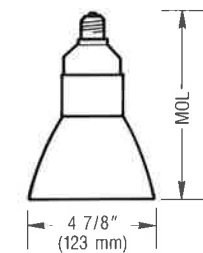
Note:

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

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 for R30 and R40 incandescent lamps.

- long life of 10,000 hrs. — 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 (C.R.I. 82)
- less stress on track installations with the light-weight DULUX® EL REFLECTOR
- made in U.S.A.



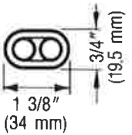
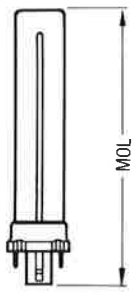
11W		=	50W	
15W		=	75W	






Watts	Base	Product Order Code	Volts	Reference	Pkg. Qty.	Trichrome Phosphor	Avg. Rated Hrs. Life	Approx. Initial Lumens	Candle Power	MOL Inches (mm)
11	Med.	DB060	120	DULUX EL-R 11W	6	2700K	10,000	600	315	5 7/8 (148)
15	Med.	DB065	120	DULUX EL-R 15W	6	2700K	10,000	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.

Compact Fluorescent Lamps



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" (12 mm) 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 10,000 hrs. — lasts up to 13 times longer than incandescents
- four colors available (2700K, 3500K, 4100K, 5000K)
- Trichrome phosphor for excellent color rendition (up to C.R.I. 86)
- single-ended plug-in base with integral starter and interference suppressor
- made in U.S.A.

Watts	Bulb	Base	Product Order Code	Reference	Pkg. Qty.	Trichrome Phosphor	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
5	T4	G23	DS005	F5TT/27K	50	2700K	10,000	250	4 1/8 (105)
			DS032	F5TT/41K	50	4100K	10,000	250	4 1/8 (105)
7	T4	G23	DS010	F7TT/27K	50	2700K	10,000	400	5 5/16 (135)
			DS094	F7TT/35K	50	3500K	10,000	400	5 5/16 (135)
			DS033	F7TT/41K	50	4100K	10,000	400	5 5/16 (135)
			DS091	F7TT/50K	50/10	5000K	10,000	400	5 5/16 (135)
			DS020	F9TT/27K	50	2700K	10,000	600	6 1/2 (165)
9	T4	G23	DS095	F9TT/35K	50	3500K	10,000	600	6 1/2 (165)
			DS034	F9TT/41K	50	4100K	10,000	600	6 1/2 (165)
			DS092	F9TT/50K	50/10	5000K	10,000	600	6 1/2 (165)
			DS030	F13TT/27K	50	2700K	10,000	900	7 1/2 (190)
13	T4	GX23	DS096	F13TT/35K	50	3500K	10,000	900	7 1/2 (190)
			DS035	F13TT/41K	50	4100K	10,000	900	7 1/2 (190)
			DS093	F13TT/50K	50/10	5000K	10,000	900	7 1/2 (190)

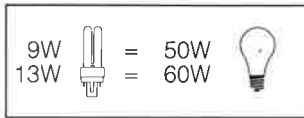
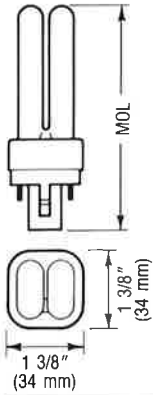
DULUX® S — COLORED TWIN TUBE COMPACT FLUORESCENT LAMP

For decorative illumination and special effects, DULUX® S lamps are 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	Product Order Code	Reference	Pkg Qty.	Avg. Rated Life Hrs	Approx. Initial Lumens	MOL Inches (mm)
7	T4	G23	DS050	DULUX S 7W/Red	10	10,000	310	5 5/16 (135)
			DS042	DULUX S 7W/Blue	10	10,000	110	5 5/16 (135)
			DS045	DULUX S 7W/Green	10	10,000	590	5 5/16 (135)
9	T4	G23	DS016	DULUX S 9W/Red	10	10,000	400	6 1/2 (165)
			DS014	DULUX S 9W/Blue	10	10,000	150	6 1/2 (165)
			DS015	DULUX S 9W/Green	10	10,000	740	6 1/2 (165)

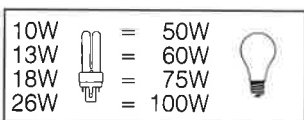
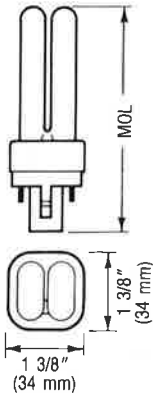


DOUBLE DULUX® — QUAD TUBE COMPACT FLUORESCENT LAMP

DOUBLE DULUX® lamps add to the existing DULUX® range 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 either in energy efficient fixtures or energy saving retrofit units.

- up to 70% less energy costs compared to incandescents
- long life of 10,000 hrs. for increased replacement intervals
- Trichrome phosphor for excellent color rendition (up to C.R.I. 85)
- symmetrical luminous intensity with 2700K and 3500K light color
- single-ended plug-in base with integral starter and interference suppressor
- made in U.S.A.

Watts	Bulb	Base	Product Order Code	Reference	Pkg. Qty.	Trichrome Phosphor	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
9	T4	G23-2	DD085	F9DTT/27K	50	2700K	10,000	575	4 3/8 (111)
			DD086	F9DTT/35K	50	3500K	10,000	575	4 3/8 (111)
13	T4	GX23-2	DD090	F13DTT/27K	50	2700K	10,000	860	4 7/8 (123)
			DD091	F13DTT/35K	50	3500K	10,000	860	4 7/8 (123)



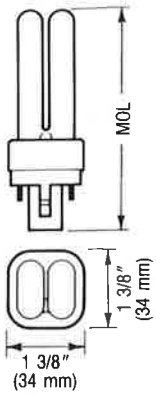
DULUX® D — HIGH PERFORMANCE QUAD TUBE COMPACT FLUORESCENT LAMP

DULUX® D are single-ended quad-tube lamps which offer, with up to 1800 lumens, the widest range of high lumen output compact fluorescent lamps. With their symmetrical luminous intensity, DULUX® D is designed to replace up to 100W incandescent lamps.

- up to 75% less power consumption compared to incandescent lamps
- long life of 10,000 hrs. — 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 light color
- color rendering up to C.R.I. 85
- single-ended plug-in base with integral starter and interference suppressor
- made in U.S.A.

Watts	Bulb	Base	Product Order Code	Reference	Pkg. Qty.	Trichrome Phosphor	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
10	T4	G24d-1	DD010	DULUX D 10W/27K	50	2700K	10,000	600	4 5/8 (118)
			DD041	DULUX D 10W/41K	50	4100K	10,000	600	4 5/8 (118)
13	T4	G24d-1	DD020	DULUX D 13W/27K	50	2700K	10,000	900	5 1/2 (140)
			DD021	DULUX D 13W/35K	50	3500K	10,000	900	5 1/2 (140)
			DD042	DULUX D 13W/41K	50	4100K	10,000	900	5 1/2 (140)
18	T4	G24d-2	DD030	DULUX D 18W/27K	50	2700K	10,000	1,250	6 11/16 (170)
			DD095	DULUX D 18W/35K	50	3500K	10,000	1,250	6 11/16 (170)
			DD043	DULUX D 18W/41K	50	4100K	10,000	1,250	6 11/16 (170)
26	T4	G24d-3	DD040	DULUX D 26W/27K	50	2700K	10,000	1,800	7 1/2 (190)
			DD096	DULUX D 26W/35K	50	3500K	10,000	1,800	7 1/2 (190)
			DD044	DULUX D 26W/41K	50	4100K	10,000	1,800	7 1/2 (190)

Compact Fluorescent Lamps



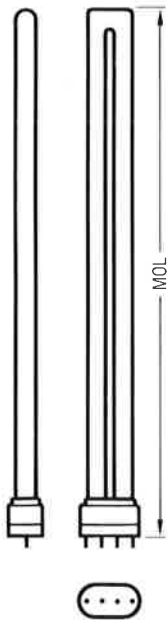
DULUX® D/E — QUAD TUBE COMPACT FLUORESCENT LAMP FOR DIMMING AND ELECTRONIC BALLASTS

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

- dimmable quad tube fluorescent lamp
- replaces up to 100W incandescent lamps
- lamp life of 10,000 hrs.
- flicker-free instant start on electronic ballast
- enables AC/DC operation on electronic ballast
- Trichrome phosphor with 2700K and 4100K light color
- made in U.S.A.

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

Watts	Bulb	Base	Product Order Code	Reference	Pkg. Qty.	Trichrome Phosphor	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
10	T4	G24q-1	DD050	DULUX D/E 10W/27K	50/10	2700K	10,000	600	4 5/8 (118)
			DD081	DULUX D/E 10W/41K	50/10	4100K	10,000	600	4 5/8 (118)
13	T4	G24q-1	DD060	DULUX D/E 13W/27K	50/10	2700K	10,000	900	5 1/2 (140)
			DD082	DULUX D/E 13W/41K	50/10	4100K	10,000	900	5 1/2 (140)
18	T4	G24q-2	DD070	DULUX D/E 18W/27K	50/10	2700K	10,000	1,250	6 11/16 (170)
			DD083	DULUX D/E 18W/41K	50/10	4100K	10,000	1,250	6 11/16 (170)
26	T4	G24q-3	DD080	DULUX D/E 26W/27K	50/10	2700K	10,000	1,800	7 1/2 (190)
			DD084	DULUX D/E 26W/41K	50/10	4100K	10,000	1,800	7 1/2 (190)



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

DULUX® L are single-ended, high lumen twin-tube fluorescent lamps. With design wattages of 18W to 40W they provide nearly the same lumens as 2', 3' and 4' fluorescent lamps, but are less than half the length. DULUX® L offers high efficacy of up to 81 lumens per watt, and are available in Trichrome phosphor 2700K, 3500K and 4100K light colors.

- provide nearly the same lumens as 2', 3' and 4' fluorescent lamps
- for operation on rapid start, pre-heat and electronic ballasts
- lamp life similar to linear fluorescent lamps (up to 20,000 hrs.)
- excellent color rendition of up to C.R.I. 82
- single-ended 4-pin base
- made in U.S.A.

DULUX® L for Rapid Start Operation

Watts	Bulb	Base	Product Order Code	Reference	Pkg. Qty.	Trichrome Phosphor	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
18*	T5	2G11	DL010	DULUX L 18W/30K/RS	10	3000K	20,000	1,250	10 1/2 (267)
			DL005	DULUX L 18W/35K/RS	10	3500K	20,000	1,250	10 1/2 (267)
			DL000	DULUX L 18W/41K/RS	10	4100K	20,000	1,250	10 1/2 (267)
27	T5	2G11	DL012	DULUX L 27W/30K	10	3000K	12,000	1,800	12 3/4 (326)
			DL014	DULUX L 27W/35K	10	3500K	12,000	1,800	12 3/4 (326)
			DL011	DULUX L 27W/41K	10	4100K	12,000	1,800	12 3/4 (326)
39	T5	2G11	DL015	DULUX L 39W/30K	10	3000K	12,000	2,900	16 1/2 (419)
			DL017	DULUX L 39W/35K	10	3500K	12,000	2,900	16 1/2 (419)
			DL020	DULUX L 39W/41K	10	4100K	12,000	2,900	16 1/2 (419)
40	T5	2G11	DL025	DULUX L 40W/30K/RS	10	3000K	20,000	3,150	22 1/2 (573)
			DL027	DULUX L 40W/35K/RS	10	3500K	20,000	3,150	22 1/2 (573)
			DL030	DULUX L 40W/41K/RS	10	4100K	20,000	3,150	22 1/2 (573)

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

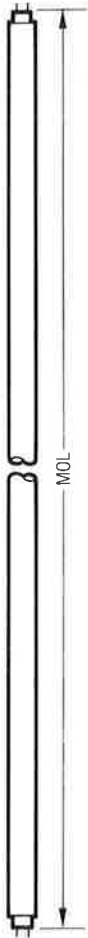
DULUX® L for Pre-Heat Start and Electronic Ballasts

Watts	Bulb	Base	Product Order Code	Reference	Pkg. Qty.	Trichrome Phosphor	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
18**	T5	2G11	DL060	DULUX L 18W/30K	10	3000K	12,000	1,250	9 (229)
			DL065	DULUX L 18W/35K	10	3500K	12,000	1,250	9 (229)
			DL070	DULUX L 18W/41K	10	4100K	12,000	1,250	9 (229)
24/27	T5	2G11	DL012	DULUX L 27W/30K	10	3000K	12,000	1,800	12 3/4 (326)
			DL014	DULUX L 27W/35K	10	3500K	12,000	1,800	12 3/4 (326)
			DL011	DULUX L 27W/41K	10	4100K	12,000	1,800	12 3/4 (326)
36/39	T5	2G11	DL015	DULUX L 39W/30K	10	3000K	12,000	2,900	16 1/2 (419)
			DL017	DULUX L 39W/35K	10	3500K	12,000	2,900	16 1/2 (419)
			DL020	DULUX L 39W/41K	10	4100K	12,000	2,900	16 1/2 (419)

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

Fluorescent Lamps





T8/FO TRICHROME FLUORESCENT LAMPS

The OSRAM range of T8/FO fluorescent lamps are designed to be operated on T8 rapid start and electronic ballasts. With their high C.R.I. of 85, OSRAM T8/FO 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 colors available, 3000K, 3500K and 4100K
- full range of sizes 2', 3', 4', 5'
- long life of 20,000 hours on T8 rapid start ballasts
- 15,000 hours life on high frequency, instant start electronic ballasts

Watts	Bulb	Base	Product Order Code	Reference	Pkg. Qty.	Trichrome Phosphor	Color Rendering C.R.I.	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
17	T8	Med. Bipin	AO125	FO17W/30K	25	3000K	85	20,000	1,350	24 (610)
			AO115	FO17W/35K	25	3500K	85	20,000	1,350	24 (610)
			AO105	FO17W/41K	25	4100K	85	20,000	1,350	24 (610)
25	T8	Med. Bipin	AU125	FO25W/30K	25	3000K	85	20,000	2,150	36 (915)
			AU115	FO25W/35K	25	3500K	85	20,000	2,150	36 (915)
			AU105	FO25W/41K	25	4100K	85	20,000	2,150	36 (915)
32	T8	Med. Bipin	AQ125	FO32W/30K	25	3000K	85	20,000	2,900	48 (1220)
			AQ115	FO32W/35K	25	3500K	85	20,000	2,900	48 (1220)
			AQ105	FO32W/41K	25	4100K	85	20,000	2,900	48 (1220)
40	T8	Med. Bipin	AS125	FO40W/30K	25	3000K	85	20,000	3,650	60 (1524)
			AS115	FO40W/35K	25	3500K	85	20,000	3,650	60 (1524)
			AS105	FO40W/41K	25	4100K	85	20,000	3,650	60 (1524)

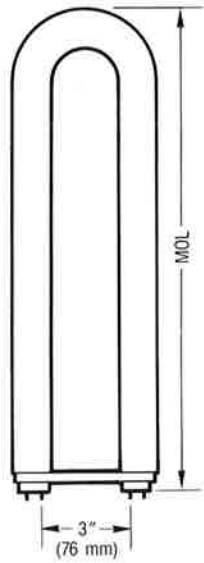
Fluorescent Lamps

T5 MINIATURE FLUORESCENT LAMPS

T5 miniature fluorescent lamps are available in three standard light colors: cool white, 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	Product Order Code	Reference	Pkg. Qty.	Description	Color Rendering C.R.I.	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
4	T5	Min. Bipin	AZ005	F4T5/CW	25	Cool White	62	7,500	140	6 (152)
			AZ008	F4T5/UW	25	White	75	7,500	120	6 (152)
6	T5	Min. Bipin	AZ010	F6T5/CW	25	Cool White	62	7,500	290	9 (229)
			AZ015	F6T5/UW	25	White	75	7,500	290	9 (229)
			AZ020	F6T5/WW	25	Warm White	52	7,500	290	9 (229)
8	T5	Min. Bipin	AZ030	F8T5/CW	25	Cool White	62	7,500	400	11 5/16 (288)
			AZ035	F8T5/UW	25	White	75	7,500	330	11 5/16 (288)
			AZ040	F8T5/WW	25	Warm White	52	7,500	400	11 5/16 (288)
13	T5	Min. Bipin	AZ060	F13T5/CW	25	Cool White	62	7,500	860	20 5/16 (517)
			AZ065	F13T5/UW	25	White	75	7,500	650	20 5/16 (517)
			AZ067	F13T5/WW	25	Warm White	52	7,500	880	20 5/16 (517)



U-SHAPED FLUORESCENT LAMPS

OSRAM U-bend lamps with 3" 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	Product Order Code	Reference	Pkg. Qty.	Description	Color Rendering C.R.I.	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)
40	T12	Med. Bipin	BB035	FB40CW/U3	12	Cool White	62	12,000	2,825	22 1/2 (570)
			BB040	FB40UW/U3	12	White	75	12,000	2,300	22 1/2 (570)
			AT120	FB40WW/U3	12	Warm White	52	12,000	2,800	22 1/2 (570)

Metal Halide Lamps



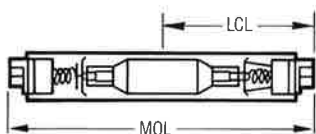
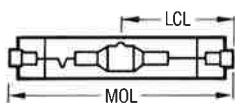
OSRAM HQI® METAL HALIDE LAMPS WITH HIGH C.R.I.

OSRAM HQI lamps have set a new standard in metal halide lamps with C.R.I. 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 light color.

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.

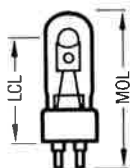
- outstanding color rendition of up to C.R.I. 93
- designed with a small tubular envelope and a compact arc stream for operation in highly efficient reflector systems.
- long service life
- high lumen output
- HQI-DE 70W can also be used with POWERTRONIC (refer to page 31)



Double-Ended HQI Compact Metal Halide Lamps (Refer to page 35, Notes 1, 6, 7)

Watts	Bulb	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Color Temperature	Color Rendering C.R.I.	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	10,000	5,000	4 1/2 (114)	2 1/4 (57)
			M85	HQ040	HQI-DE70/NDX*	12	4200K	85	10,000	5,500	4 1/2 (114)	2 1/4 (57)
150	T7 1/2	RSC	M81	HQ055	HQI-DE150/WDX*	12	3000K	81	10,000	11,000	5 3/16 (132)	2 5/8 (65)
			M81	HQ060	HQI-DE150/NDX*	12	4200K	85	10,000	11,250	5 3/16 (132)	2 5/8 (65)
250	T9 1/2	Fc2	M80	HR080	HQI-DE250/NDX*	12	4200K	85	10,000	20,000	6 7/16 (163)	3 3/16 (81)
			M80	HR070	HQI-DE250/DX*	12	5400K	93	10,000	19,000	6 7/16 (163)	3 3/16 (81)
400	T10	Fc2	M86	HR090	HQI-DE400/DX*	12	5400K	93	10,000	25,000	8 1/8 (206)	4 1/16 (103)
1000	T11	Fc2	M83	HS100	HQI-DE1000/DX*	6	5400K	93	10,000	90,000	10 1/4 (260)	5 1/8 (130)

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

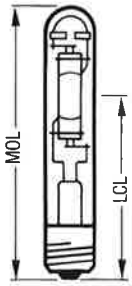


Single-Ended HQI Compact Metal Halide Lamps (Refer to page 35, Notes 1, 6, 7)

Watts	Bulb	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Color Temperature	Color Rendering C.R.I.	Service Life Hrs.	Approx. Initial Lumens	MOL Inches (mm)	LCL Inches (mm)
70	T8	G12	M85	HQ035	HQI-SE70/WDX*	12	3000K	81	6,000	5,200	3 5/16 (84)	2 3/16 (56)
150	T8	G12	M81	HQ061	HQI-SE150/WDX*	12	3000K	81	6,000	12,000	3 5/16 (84)	2 3/16 (56)

* Universal burning position

Metal Halide Lamps



Mogul Base HQI Metal Halide Lamps (Refer to page 35, Notes 1, 7)

Watts	Bulb	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Color Temperature	Color Rendering C.R.I.	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	9,000	19,000	8 5/8 (220)	5 7/8 (150)
400	T14 1/2	MOG	M86	HR020	HQI-SE400/DXH**	12	5400K	90	9,000	25,000	11 1/4 (285)	6 7/8 (175)
			M86	HR025	HQI-SE400/DXV***	12	5400K	90	9,000	28,000	11 1/4 (285)	6 7/8 (175)

* Universal burning position.

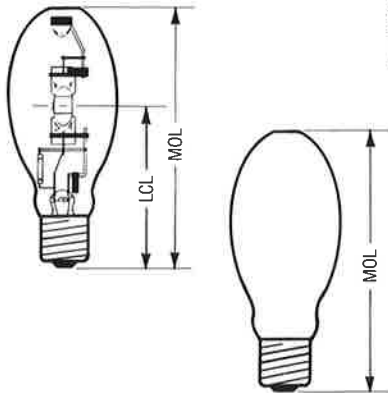
** Burning position horizontal $\pm 45^\circ$

*** Burning position base up $\pm 45^\circ$.

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

With a color rendition of C.R.I. 65, standard metal halide lamps fulfill the requirements for industrial, warehouse and street lighting where a lower C.R.I. is acceptable.

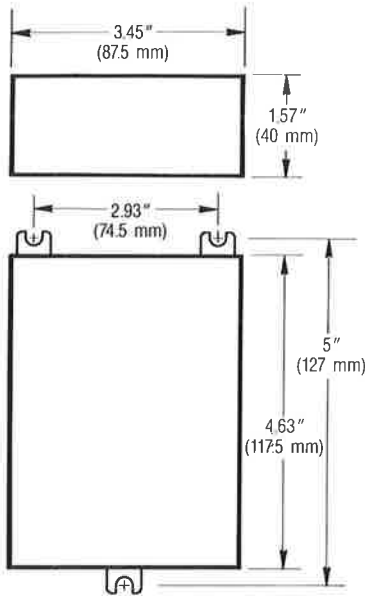
Standard metal halide lamps are available in a full range of wattages from 175W to 1000W, both clear and coated. They are made in U.S.A. and designed for universal burning position.



Watts	Bulb	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Description	Color Rendering C.R.I.	Avg. Rated Hrs. Life	Approx. Initial Lumens	Burning Position	MOL Inches	LCL Inches
175	ED28	MOG	M57	HQ300	MH175/U	12	Clear, 4300K	65	10,000	14,000	Universal	8 1/4	5
			M57	HQ305	MH175/C/U	12	Coated, 4100K	70	10,000	14,000	Universal	8 1/4	5
250	ED28	MOG	M58	HR300	MH250/U	12	Clear, 4300K	65	10,000	20,500	Universal	8 1/4	5
			M58	HR305	MH250/C/U	12	Coated, 3900K	70	10,000	20,500	Universal	8 1/4	5
400	ED37	MOG	M59	HR310	MH400/U	6	Clear, 4000K	65	20,000	36,000	Universal	11 5/16	7
			M59	HR315	MH400/C/U	6	Coated, 3700K	70	20,000	36,000	Universal	11 5/16	7
1000	BT56	MOG	M47	HS300	MH1000/U	6	Clear, 3900K	65	12,000	110,000	Universal	15 3/8	9 1/2
			M47	HS305	MH1000/C/U	6	Coated, 3400K	70	12,000	105,000	Universal	15 3/8	9 1/2

Note:

All lamps listed on this page 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.



POWERTRONIC — ELECTRONIC REGULATING HID BALLAST

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 light weight makes POWERTRONIC ideal for applications in retail and display lighting.

FEATURES:

- compact, lightweight fully integrated ballast
- power load reduced by 13%
- high power factor > .9
- constant wattage regulation 95V-135V line voltage
- increased lamp life
- stabilized lamp color
- safety starter with automatic shut-off
- U.L. listed product

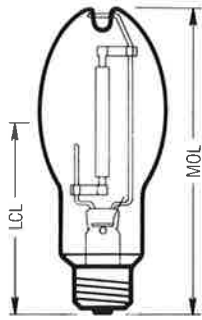
Model	Product Order Code	Volts	For Lamp Type	Length Inches (mm)	Width Inches (mm)	Height Inches (mm)
PT-DE 70/120	PT 100	120	HQI-DE 70/WDX	4.63 (117.5)	3.45 (87.5)	1.57 (40)
	PT 100	120	HQI-DE 70/NDX	4.63 (117.5)	3.45 (87.5)	1.57 (40)
	PT 100	120	LU-DE 70	4.63 (117.5)	3.45 (87.5)	1.57 (40)

TECHNICAL DATA

Model:	PT-DE 70/120
Number of Lamps:	1
Lamp Type:	OSRAM HQI-DE 70/WDX, OSRAM HQI-DE 70/NDX, OSRAM LU-DE 70
Line Voltage:	120VAC (50-60 Hz)
Operating Voltage Range:	Continuous: 95 VAC to 135 VAC; Short Term: 90 VAC to 150 VAC
Power Factor:	> .9
Input Current:	.69A
Input Wattage:	80W
Line Current Harmonics:	8% Total Harmonic Distortion
Transient Protection:	Meets ANSI C62.41
Electromagnetic Interference:	Meets FCC Part 18C
UL Approved:	U.L. Listed Product
Internal Safety Starter:	Internal Starter with automatic turn-off
Thermal Shut Down:	POWERTRONIC will automatically shut down if case temperature exceeds 85°C/185°F
Lamp Ballast Separation:	Ballast may be removed from the lamp up to 10 feet (3 meters)

High Pressure/Low Pressure Sodium Lamps



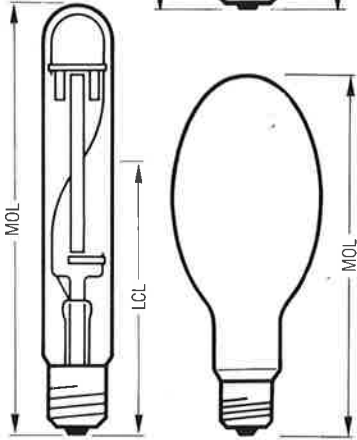


VIALOX® HIGH PRESSURE SODIUM LAMPS

High luminous efficacy (up to 140 lumens/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.

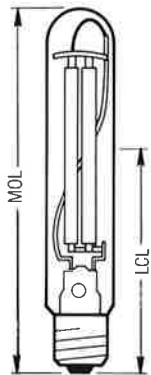
- nickel-plated brass base for better contact and fit
- date coded base for ease of maintenance
- universal burning position



Single-Ended High Pressure Sodium Lamps

(Refer to page 35, Note 1, 7)

Watts	Bulb	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Description	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)	LCL Inches (mm)
35	E17	MED	S76	NL005	LU35/MED	12	Clear, 2100K	16,000	2,250	5 7/16 (138)	3 7/16 (87)
50	E23 1/2	MOG	S68	NL015	LU50	12	Clear 2100K	24,000	4,000	7 7/16 (189)	4 15/16 (125)
	E17	MED	S68	NL025	LU50/MED	12	Clear, 2100K	24,000	4,000	5 7/16 (138)	3 7/16 (87)
70	E23 1/2	MOG	S62	NL035	LU70	12	Clear, 2100K	24,000	6,300	7 7/16 (189)	4 15/16 (125)
	E17	MED	S62	NL045	LU70/MED	12	Clear, 2100K	24,000	6,300	5 7/16 (138)	3 7/16 (87)
100	E23 1/2	MOG	S54	NL055	LU100	12	Clear, 2100K	24,000	9,500	7 7/16 (189)	4 15/16 (125)
	E17	MED	S54	NL065	LU100/MED	12	Clear, 2100K	24,000	9,500	5 7/16 (138)	3 1/2 (89)
150	E23 1/2	MOG	S55	NL075	LU150	12	Clear, 2100K	24,000	16,000	7 7/16 (189)	4 15/16 (125)
	E17	MED	S55	NL085	LU150/MED	12	Clear, 2100K	24,000	16,000	5 7/16 (138)	3 1/2 (89)
250	T14 1/2	MOG	S50	NC095	LU250	12	Clear, 2100K	24,000	29,000	9 3/4 (248)	5 3/4 (146)
	E28	MOG	S50	NC200	LU250/D	12	Diffuse, 2100K	24,000	26,000	9 (226)	N/A
400	T14 1/2	MOG	S51	NC100	LU400	12	Clear, 2100K	24,000	50,000	9 3/4 (248)	5 3/4 (146)
	E37	MOG	S51	NC210	LU400/D	12	Diffuse, 2100K	24,000	47,500	11 7/16 (290)	N/A
1000	T21	MOG	S52	NC090	LU1000	6	Clear, 2100K	24,000	140,000	15 3/4 (400)	9 1/2 (240)



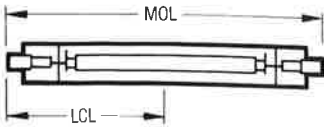
Single-Ended Double Arc Tube High Pressure Sodium Lamps

(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	Product Order Code	Reference	Pkg. Qty.	Description	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)	LCL Inches (mm)
250	T14 1/2	MOG	S50	NC110	LU250W/SBY	12	Clear, 2100K	24,000+	28,500	9 3/4 (248)	5 3/4 (146)
400	T14 1/2	MOG	S51	NC111	LU400W/SBY	12	Clear, 2100K	24,000+	50,000	9 3/4 (248)	5 3/4 (146)

High Pressure/Low Pressure Sodium Lamps



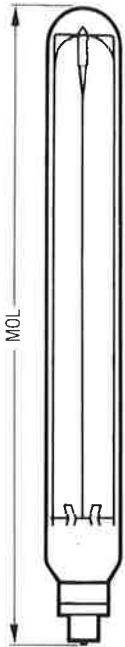
Burning Position: Horizontal $\pm 45^\circ$

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. The VIALOX product line is physically and electrically interchangeable with the HQI-DE 70W or HQI-DE 150W metal halide lamp. Hot restrike with a special ignitor is optional.

Watts	Bulb	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Description	Avg. Rated Hrs. Life	Approx. Initial Lumens	MOL Inches (mm)	LCL Inches (mm)
70	T7	RSC	S88	NC060	LU-DE70W	12	Clear, 2000K	10,000	7,000	4 1/2 (114)	2 1/4 (57)
150	T7	RSC	N/A	NC065	LU-DE150W*	12	Clear, 2000K	10,000	15,000	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 and tunnel lighting, industrial lighting and flood lighting.

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

Watts	Bulb	Base	ANSI Code	Product Order Code	Reference	Pkg. Qty.	Avg. Rated Hrs. Life	Approx. Initial Lumens	Burning Position	MOL Inches (mm)
18	T17	BY22d	L69RA-18	NA005	SOX18W	25	18,000	1,800	$V \pm 150^\circ$	8 1/2 (216)
35	T17	BY22d	L70RB-35	NA010	SOX35W	25	18,000	4,800	$V \pm 110^\circ$	12 3/16 (310)
55	T17	BY22d	L71RC-55	NA020	SOX55W	25	18,000	8,000	$V \pm 110^\circ$	16 3/4 (425)
90	T21	BY22d	L72RD-90	NA023	SOX90W	12	18,000	13,500	$H \pm 20^\circ$	20 3/4 (527)
135	T21	BY22d	L73RE-135	NA025	SOX135W	12	18,000	22,500	$H \pm 20^\circ$	30 1/2 (775)
180	T21	BY22d	L74RF-180	NA028	SOX180W	9	18,000	33,000	$H \pm 20^\circ$	44 1/8 (1120)

Notes

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.

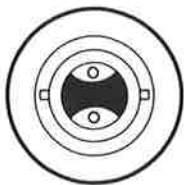
Base Table



E 26 Medium



E 39 Mogul



BY 22 d



BA 15 d



B 15 d



G 4



GX 5.3



GY 6.35



GZ 4



G 12



G 53
M 4 Screw



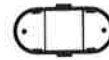
Fc 2



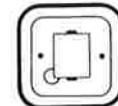
RSC



G 23



GX 23



G 23-2



GX 23-2



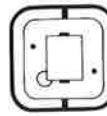
G 24 d-1



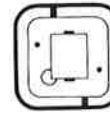
G 24 d-2



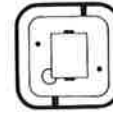
G 24 d-3



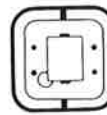
G 24 q-1



G 24 q-2



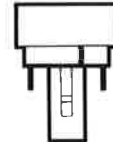
G 24 q-3



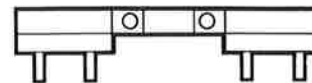
2 G 11



Medium
BiPin

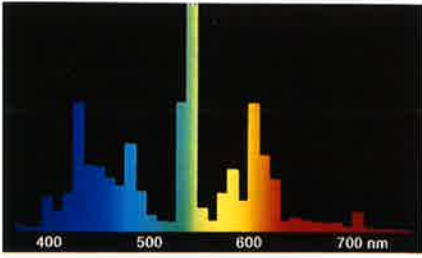


Miniature
BiPin

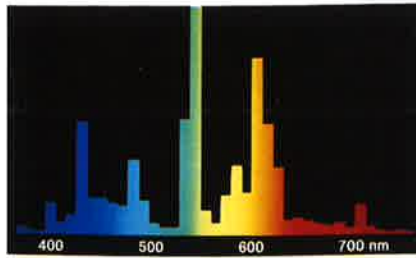


2 G 13
3" Leg

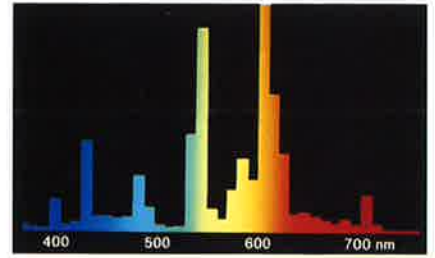
Spectral Power Distribution



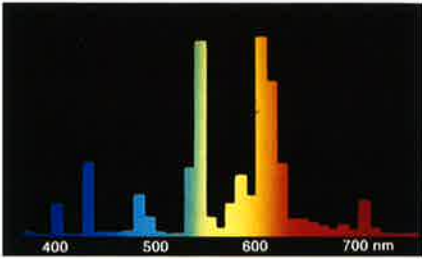
Trichrome 5000K; C.R.I. 86



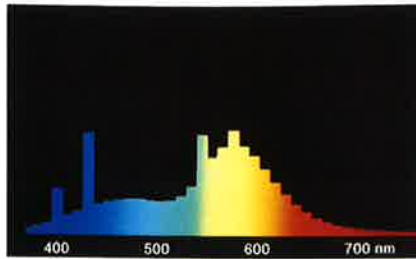
Trichrome 4100K; C.R.I. 85



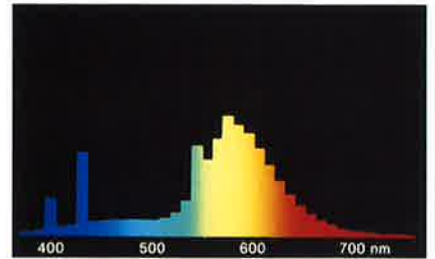
Trichrome 3500K; C.R.I. 85



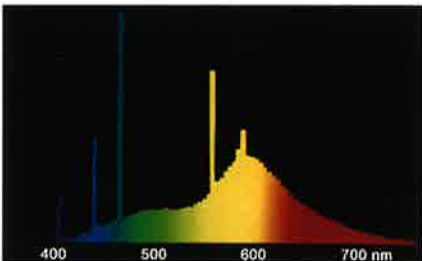
Trichrome 2700K; C.R.I. 82



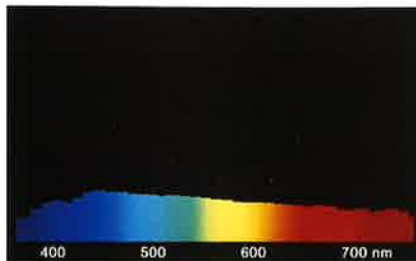
Cool White; C.R.I. 65



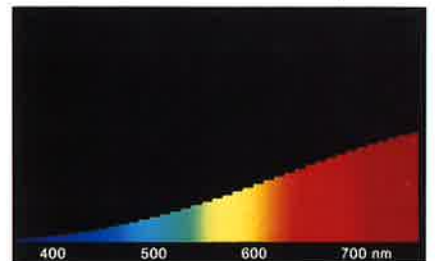
Warm White; C.R.I. 55



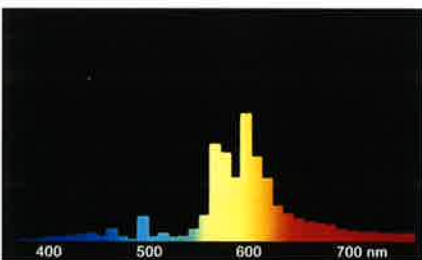
White, 4100K; C.R.I. 75



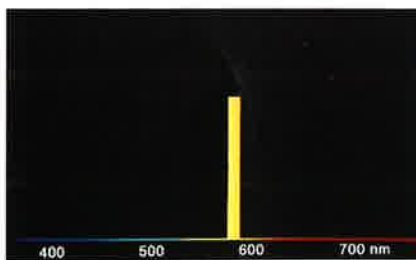
Daylight (D65); C.R.I. 100



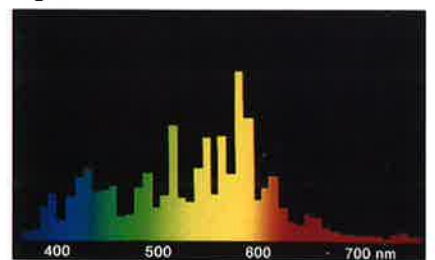
Tungsten Halogen and Incandescent Light



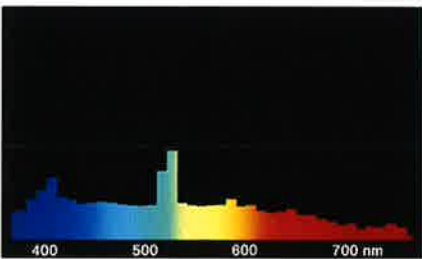
High Pressure Sodium — VIALOX®



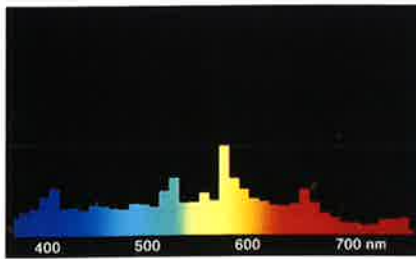
Low Pressure Sodium — SOX



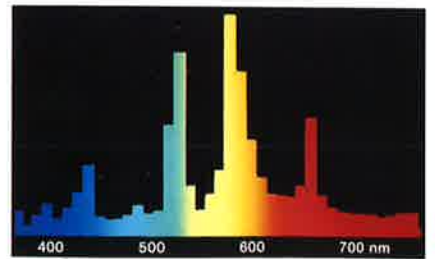
Standard Metal Halide; C.R.I. 65



HQI® Metal Halide 5400K; C.R.I. 93



HQI® Metal Halide 4200K; C.R.I. 85



HQI® Metal Halide 3000K; C.R.I. 81

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	—	F13DTT/D835	—
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	—	—	—
DULUX D 18W/27K	F18DBXT4/SPX27	F18DTT/27K	10MM/18W/27
DULUX D 18W/35K	F18DBXT4/SPX35	F18DTT/D835	—
DULUX D 18W/41K	—	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	—	F26DTT/D841	—

DULUX® L

OSRAM DULUX L	GE BIAx	PHILIPS PL
DULUX L 18W/30K	F18BX/SPX30	PL18/30
DULUX L 18W/35K	F18BX/SPX35	—
DULUX L 18W/41K	F18BX/SPX41	PL18/41
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	PL24/30
DULUX L 27W/35K	F27BX/SPX35	—
DULUX L 27W/41K	F27BX/SPX41	PL24/41
DULUX L 39W/30K	F39BX/SPX30	PL36/30
DULUX L 39W/35K	F39BX/SPX35	PL36/35
DULUX L 39W/41K	F39BX/SPX41	PL36/41
DULUX L 40W/30K/RS	F40BX/SPX30/RS	—
DULUX L 40W/35K/RS	F40BX/SPX35/RS	—
DULUX L 40W/41K/RS	F40BX/SPX41/RS	—

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
LU400	LU400	LU400	C400S51
LU400/D	LU400/D	LU400/D	C400S51/D
LU400/SBY	—	LU400/SBY	C400S51/2
LU1000	LU1000	LU1000	C1000S52

General Lighting Cross Reference

T8/FO FLUORESCENT LAMP

OSRAM TRICHROME	GE TRIMLINE	SYLVANIA OCTRON	PHILIPS OCTOLUME
FO17W/30K	F17T8/SP30/RS	—	—
FO17W/35K	F17T8/SP35/RS	FO17/35K	—
FO17W/41K	F17T8/SP41/RS	FO17/41K	—
FO25W/30K	F25T8/SP30/RS	—	FO25/30K
FO25W/35K	F25T8/SP35/RS	FO25/35K	—
FO25W/41K	F25T8/SP41/RS	FO25/41K	FO25/41K
FO32W/30K	F32T8/SP30/RS	—	FO32/30K
FO32W/35K	F32T8/SP35/RS	FO32/35K	FO32/35K
FO32W/41K	F32T8/SP41/RS	FO32/41K	FO32/41K
FO40W/30K	F40T8/SP30/RS	—	FO40/30K
FO40W/35K	F40T8/SP35/RS	FO40/35K	—
FO40W/41K	F40T8/SP41/RS	FO40/41K	FO40/41K

METAL HALIDE

OSRAM HQI METAL HALIDE	GE MQI MULTIVAPOR	SYLVANIA METALARC	PHILIPS METAL HALIDE
HQI-DE70/WDX	MQI/70/T6/30	—	—
HQI-DE70/NDX	—	—	—
HQI-SE70/WDX	—	—	—
HQI-DE150/WDX	—	—	—
HQI-DE150/NDX	MQI/150/T7/43	—	—
HQI-SE150/WDX	—	—	—
MH175/U	MVR175/U	—	MH175/U
MH175/C/U	MVR175/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 H-PAR	GE HALOGEN PERFORMANCE PLUS	SYLVANIA CAPSYLITE	PHILIPS HALOGEN ECON-O-PAR
45HPAR38/SP120V	45PAR/SP/H120V	45PAR38/CAP/SP120V	45PAR38/CAP/SP120
45HPAR38/SP130V	45PAR/SP/H130V	45PAR38/CAP/SP130V	45PAR38/CAP/SP130
45HPAR38/FL120V	45PAR/FL/H120V	45PAR38/CAP/FL120V	45PAR38/CAP/FL120
45HPAR38/FL130V	45PAR/FL/H130V	45PAR38/CAP/FL130V	45PAR38/CAP/FL130
90HPAR38/SP120V	90PAR/SP/H120V	90PAR38/CAP/SP120V	90PAR38/CAP/SP120
90HPAR38/SP130V	90PAR/SP/H130V	90PAR38/CAP/SP130V	90PAR38/CAP/SP130
90HPAR38/FL120V	90PAR/FL/H120V	90PAR38/CAP/FL120V	90PAR38/CAP/FL120
90HPAR38/FL130V	90PAR/FL/H130V	90PAR38/CAP/FL130V	90PAR38/CAP/FL130

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* AR 58 FL	AJ 905	11
* AR 58 WFL	AJ 910	11
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DULUX D 10W/41K	DD 041	21
DULUX D 13W/27K	DD 020	21
DULUX D 13W/35K	DD 021	21
DULUX D 13W/41K	DD 042	21
DULUX D 18W/27K	DD 030	21
DULUX D 18W/35K	DD 095	21
DULUX D 18W/41K	DD 043	21
DULUX D 26W/27K	DD 040	21
DULUX D 26W/35K	DD 096	21
DULUX D 26W/41K	DD 044	21
DULUX D/E 10W/27K	DD 050	22
DULUX D/E 10W/41K	DD 081	22
DULUX D/E 13W/27K	DD 060	22
DULUX D/E 13W/41K	DD 082	22
DULUX D/E 18W/27K	DD 070	22
DULUX D/E 18W/41K	DD 083	22
DULUX D/E 26W/27K	DD 080	22
DULUX D/E 26W/41K	DD 084	22
DULUX EL 7W	DB 010	19
DULUX EL 11W	DB 020	19
DULUX EL 15W	DB 030	19
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DULUX EL 11W/REFLECTOR	DB 060	19
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DULUX L 18W/30K	DL 060	23
DULUX L 18W/35K	DL 065	23
DULUX L 18W/41K	DL 070	23
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DULUX L 18W/35K/RS	DL 005	23
DULUX L 18W/41K/RS	DL 000	23
DULUX L 27W/30K	DL 012	23
DULUX L 27W/35K	DL 014	23
DULUX L 27W/41K	DL 011	23
DULUX L 39W/30K	DL 015	23
DULUX L 39W/35K	DL 017	23
DULUX L 39W/41K	DL 020	23
DULUX L 40W/30K/RS	DL 025	23
DULUX L 40W/35K/RS	DL 027	23
DULUX L 40W/41K/RS	DL 030	23
DULUX S 5W/27K	DS 005	20
DULUX S 5W/41K	DS 032	20
DULUX S 7W/27K	DS 010	20
DULUX S 7W/35K	DS 094	20
DULUX S 7W/41K	DS 033	20
DULUX S 7W/50K	DS 091	20
DULUX S 7W/RED	DS 050	20
DULUX S 7W/GREEN	DS 045	20
DULUX S 7W/BLUE	DS 042	20
DULUX S 9W/27K	DS 020	20
DULUX S 9W/35K	DS 095	20
DULUX S 9W/41K	DS 034	20
DULUX S 9W/50K	DS 092	20
DULUX S 9W/RED	DS 016	20

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DULUX S 9W/BLUE	DS 014	20
DULUX S 13W/27K	DS 030	20
DULUX S 13W/35K	DS 096	20
DULUX S 13W/41K	DS 035	20
DULUX S 13W/50K	DS 093	20
DOUBLE DULUX 9W/27K	DD 085	21
DOUBLE DULUX 9W/35K	DD 086	21
DOUBLE DULUX 13W/27K	DD 090	21
DOUBLE DULUX 13W/35K	DD 091	21
F4T5/CW	AZ 005	26
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FB40UW/U3	BB 040	27
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FO17W/30K	AO 125	25
FO17W/35K	AO 115	25
FO17W/41K	AO 105	25
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FO25W/35K	AU 115	25
FO25W/41K	AU 105	25
FO32W/30K	AQ 125	25
FO32W/35K	AQ 115	25
FO32W/41K	AQ 105	25
FO40W/30K	AS 125	25
FO40W/35K	AS 115	25
FO40W/41K	AS 105	25
* HPAR 45W SP 120V	AL 198	15
* HPAR 45W SP 130V	AL 196	15
* HPAR 45W FL 120V	AL 199	15
* HPAR 45W FL 130V	AL 197	15
* HPAR 90W SP 120V	AL 210	15
* HPAR 90W SP 130V	AL 200	15
* HPAR 90W FL 120V	AL 215	15
* HPAR 90W FL 130V	AL 205	15
HQI-SE70/WDX	HQ 035	29
HQI-SE150/WDX	HQ 061	29
HQI-SE250/DX	HR 010	30
HQI-SE400/DXH	HR 020	30
HQI-SE400/DXV	HR 025	30
HQI-DE70/NDX	HQ 040	29
HQI-DE70/WDX	HQ 050	29
HQI-DE150/NDX	HQ 060	29
HQI-DE150/WDX	HQ 055	29
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* Addition since last printing

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* MR-11 "FTC"	AK 505	9
* MR-11 "FTD"	AK 510	9
* MR-11 "FTE"	AK 515	9
* MR-11 "FTF"	AK 520	9
* MR-11 "FTH"	AK 525	9
* MR-11 50W SP	AK 530	9
* MR-11 50W MFL	AK 535	9
* MR-11 50W FL	AK 540	9
MR-16 "ESX"	AK 610	8
MR-16 "BAB"	AK 600	8
* MR-16 "FRB"	AK 630	8
* MR-16 "FRA"	AK 620	8
* MR-16 "FMW"	AK 625	8
MR-16 "EXT"	AK 710	8
MR-16 "EXZ"	AK 700	8
MR-16 "EXK"	AK 711	8
MR-16 "EXN"	AK 705	8
MR-16 "EYF"	AK 810	8
MR-16 "EYJ"	AK 800	8
MR-16 "EYC"	AK 805	8
* MR-16/LENS "ESX/S"	AK 900	9
* MR-16/LENS "BAB/S"	AK 910	9
* MR-16/LENS "FRB/S"	AK 915	9
* MR-16/LENS "FRA/S"	AK 920	9
* MR-16/LENS "FMW/S"	AK 925	9
* MR-16/LENS "EXT/S"	AK 930	9
* MR-16/LENS "EXZ/S"	AK 935	9
* MR-16/LENS "EXK/S"	AK 937	9
* MR-16/LENS "EXN/S"	AK 940	9
* MR-16/LENS "EYF/S"	AK 945	9

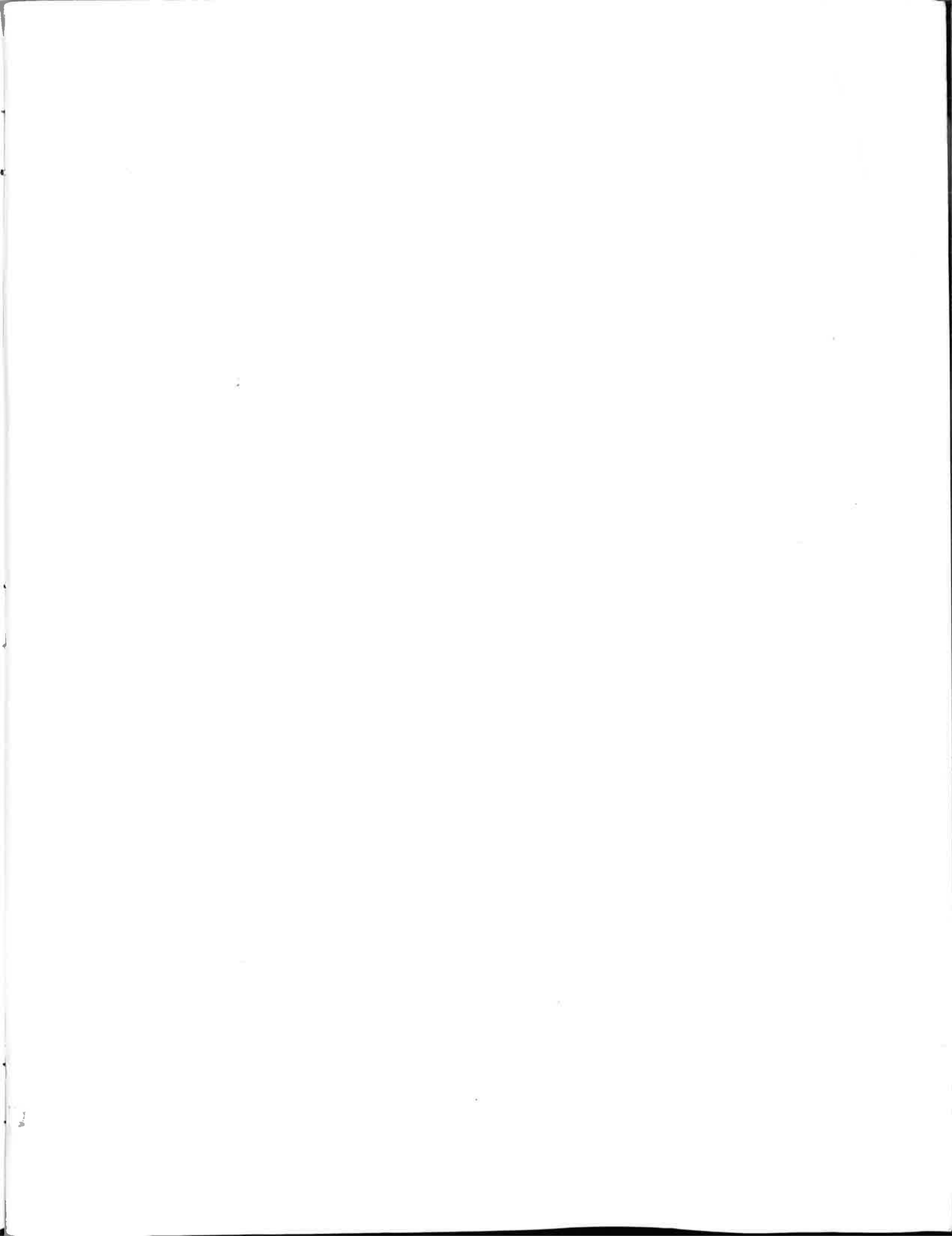
OSRAM TYPE	OSRAM ORDER #	CATALOG PAGE
* MR-16/LENS "EYJ/S"	AK 950	9
* MR-16/LENS "EYC/S"	AK 955	9
* POWERTRONIC 70W	PT 100	31
SOX 18W	NA 005	34
SOX 35W	NA 010	34
SOX 55W	NA 020	34
SOX 90W	NA 023	34
SOX 135W	NA 025	34
SOX 180W	NA 028	34
662	SK 010	17
670	SK 020	17
1106	LI 010	17
1603	LI 020	17
1604	LI 040	17
1613	LI 090	17
1614	LI 095	17
41830 SSP	AI 005	10
41835 NSP	AI 020	10
41835 SP	AI 010	10
41835 FL	AI 015	10
41840 SP	AI 025	10
41840 FL	AI 030	10
41840 WFL	AI 035	10
41850 SP	AI 040	10
41850 FL	AI 045	10
41850 WFL	AI 050	10
41900 SP	AJ 022	11
41900 FL	AJ 032	11
41905 SP	AJ 042	11
41905 FL	AJ 052	11
41910 SP	AJ 025	11
41930 SP	AJ 062	11
41960 SP	AJ 070	11
41970 SP	AJ 080	10
41970 FL	AJ 090	10
41980 SP	AJ 095	10
41980 FL	AJ 096	10
41990 SP	AJ 100	10
41990 FL	AJ 110	10
41995 SP	AJ 120	10
41995 FL	AJ 130	10
64405 CL	AH 010	7
64405 FR	AH 005	7
64410	AH 020	7
64415 CL	AH 025	7
64415 FR	AH 027	7
64425	AH 030	7
64425 AX	AH 045	7
64430 AX	AH 050	7
64432 AX	AH 048	7
64435	AH 060	7
64440	AH 070	7
64440 AX	AH 085	7
64445	AH 111	7
64450 AX	AH 112	7
64455	AH 125	7
64458	AH 118	7

* Addition since last printing

OSRAM TYPE	OSRAM ORDER #	CATALOG PAGE
64458 AX	AH 115	7
64460	AH 120	7
64465 AX	AH 130	7
64483 CL	AL 160	14
64483 FR	AL 165	14
64484 CL	AL 140	14
64484 FR	AL 145	14
64485 CL	AL 170	14
64485 FR	AL 175	14
64486 CL	AL 150	14
64486 FR	AL 155	14
64487 CL	AL 041	14
64487 FR	AL 042	14
64488 CL	AL 065	14

OSRAM TYPE	OSRAM ORDER #	CATALOG PAGE
64488 FR	AL 075	14
64489 CL	AL 105	14
64489 FR	AL 106	14
64490 CL	AL 125	14
64490 FR	AL 135	14
* 64689	AM 130	16
* 64694	AM 135	16
64697	AM 150	16
64700 120V	AM 005	16
64700 125/130V	AM 020	16
64703 120V	AM 070	16
64703 125/130V	AM 075	16
64760	AM 110	16

* Addition since last printing



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