



Specialty Lighting

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Actual photo of Ojai Waste Water Treatment Plant—Ojai, CA.
Photography courtesy of UVDI of Valencia, CA.

Photo/Projection Lamps

ANSI Code	Product Number	Std. Pkg. Qty.	Volts	Avg. Watts Amps.	Bulb	Base	Rated Avg. Life (Hrs.)*	Coil Type	LCL (In.)	LCL (mm)	MOL (In.)	MOL (mm)	Rated Approx. Lumens	Color Temp. (K)	Operating Position	Fig. No.
BRL	31627-3	24	12	50	T-3.5	G6.35	50	C-6	1.18	30	1.73	44	1500	3400	BDTH	13
BYE	23922-8	24	120	625	T-6	GY9.5	75	C-13D	1.75	44.5	3.5	89		3350	BDTH	11
DDL	31509-3	24	20	150	GX5.3	GX5.3	500	CC-6			1.75	44.5		3150	BDTH	25
DDM	23937-6	24	19	80	MR-16	GX5.3	50	CC-6			1.75	44.5		3350	BDTH	25
DDS	31510-1	24	21	80	MR-16	GX5.3	1000	CC-6			1.75	44.5		3125	BDTH	25
DNF	25241-1	24	21	150	MR-16	GX7.9	25	CC-6	6.15	15.88	1.78	45.24		3400	Horiz	28
DYS/DYV/BHC	31639-8	24	120	600	G-7	GZ9.5	75	CC-6	1.44	36.5	2.5	63.5	17,000	3200	Horiz	15
EFM	31484-9	50	8	50	MR-16	GZ6.35	50	C-6			1.65	42		3300	BDTH	25
EFN	31502-8	50	12	75	MR-16	GZ6.35	50	C-6			1.65	42		3350	BDTH	25
EFP	31488-0	50	12	100	50 DICH	GZ6.35	50	C-6			1.65	42		3350	BDTH	25
EFR	31490-6	50	15	150	MR-16	GZ6.35	50	C-6			1.65	42		3350	BDTH	25
EHA	31641-4	24	120	500	T-6	GZ9.5	50	C-13D	1.44	36.5	3	76.2	11,000	3250	BDTH	14
EHJ	31758-6	100	24	250	T-4	G6.35	50	C-6F	1.3	33	2.17	55	9400	3400	BD	13
EHJ-5H	14169-7	100	24	250	T-4	G6.35	500	C-6F	1.3	33	2.17	55			BD	13
EHJ-X	23175-3	200	24	250	T-4	G6.35	50	C-6F	1.3	33	2.17	55	10,000	3400	BD	13
EJA	44142-8	24	21	150	MR-16	GX5.3	40	CC-6			1.85	44.5		3350		25
EJL	31508-5	24	24	200	MR-16	GX5.3	50	CC-6			1.85	44.5		3400	BDTH	25
EJM	23942-6	24	21	150	MR-16	GX5.3	40	CC-6			1.75	44.5		3400	BDTH	25
EJV	33744-4	24	21	150	MR-16	GX5.3	40	CC-8			1.75	44.5		3400	BDTH	25
EKE	31592-9	24	21	150	MR-16	GX5.3	200	CC-6			1.75	44.5		3400	BDTH	25
EKZ	23945-9	24	10.8	30	MR-16	GX5.3	200	CC-6			1.75	44.5		3100	BDTH	25
ELC	23103-5	24	24	250	MR-16	GX5.3	50	CC-6			1.75	44.5		3200	BDTH	25
ELC-5	38166-5	24	24	250	MR-16	GX5.3	500	CC-6			1.75	44.5		3200	BDTH	25
ELD	31618-2	24	21	150	MR-16	GX5.3	40	CC-6			1.85	44.5		3350	BDTH	25
ELH	31619-0	24	120	300	MR-16	GY5.3	35	CC-8			1.85	44.5		3350	BDTH	25
ENG	23951-7	24	120	300	MR-16	GY5.3	15	CC-8			1.75	44.5		3450	BDTH	25
ENH	31621-6	24	120	250	50 DICH	GV5.3	175	CC-8			1.75	44.5		3250	BDTH	25
ENX	31927-7	24	82	360	MR-16	GY5.3	75	CC-8			1.75	44.5		3300	BDTH	25
ENX-5	20497-4	24	86	360	MR-16	GY5.3	75	CC-8			1.75	44.5		3300	BDTH	25
ESA/EHD	26126-3	100	6	10	T-2.5	G-4	100	C-6	0.77	19.6	1.18	30	200	3200	ANY	3
ESB	25678-4	100	6	20	T-3	G-4	100	C-6	0.77	19.5	1.22	31	420	3200	ANY	3
ETA	31882-4	24	12	100	T-3.5	PG22d	50	C-6	0.71	18	1.89	48	3200	3400	BDTH	8
EVA	25676-8	100	12	100	T-3.5	GY6.35	1000	C-6F	1.18	30	1.73	44	2500	3200	ANY	7
EVA	25676-8	100	12	100	T-3.5	GY6.35	1000	C-6F	1.18	30	1.73	44	2500	3200	ANY	7
EVC	31884-0	100	24	250	T-5	G6.35	300	C-GF	1.3	33	2.24	57	8400	3200	ANY	13
EVD-X	23177-9	24	36	400	T-6	G6.35	50	C-6F	1.42	36.1	2.36	59.9	16,625	3400	BDTH	13
EVW	25284-1	24	82	250	50 DICH	GX5.3	50	CC-8			1.75	44.45		3300	BD TO 22° UP	25
EXR	25286-6	24	82	300	MR-13	GX5.3	35	CC-8			1.75	44.45		3350	BDTH	27
EXR-5	23967-3	24	86	300	MR-13	GX5.3	15	CC-8			1.75	44.5		3400	BDTH	27
EXW	23971-5	24	82	300	42 DICH	GX5.3	15	CC-8			1.75	44.5		3400	BDTH	27
EXY	20493-3	24	82	250	MR-13	GX5.3	250	CC-8			1.75	44.5		3250	BDTH	27
EYB	14576-3	24	82	360	T-5	G5.3	75	CC-8	1.25	31	2.25	57	10,000	3250	BDTH	6
FCM	33269-2	12	120	1000	T-3	RX7s	300	C-8			4.72	119.9	27,000	3200	Horiz	20
FCR	26101-6	100	12	100	T-3.5	GY6.35	50	C-6F	1.18	30	1.73	44	3400	3400	BDTH	7
FCS	20607-8	200	24	150	T-4	G6.35	50	C-6F	1.18	30	2	50.8	6000	3400	BDTH	13
FDS/DZE	31655-4	24	24	150	T-4 1/2	GZ9.5	50	C-6F	1.32	33.4	2.25	57	5000	3400	BD	5
FHM	26130-5	100	120	1000	T-3	RX7s	300	C-8			4.72	119.9	26,000	3200	Horiz	20
FHS	25305-4	24	82	300	MR-13	GX5.3	70	CC-8			1.75	44.45		3300	BDTH	27
FJX	31499-7	50	13.8	30	50 DICH	GX5.3	500	C-8			1.77	44.9		3150		25
FKY	31924-4	24	6	9	MR-11	G3.9	250	C-6			1.65	42			BDTH	26
FLT	23980-6	24	13.8	25	MR-11	GZ4	400	CC-6			1.38	35		3100	Horiz	23
FLW	20492-5	24	24	300	T-6	GY6.3	50	C-6F	1.3	33	2.17	55	10,450	3400	BD±15°	13
FNT	20463-6	200	24	275	T-6	G6.35	75	C-6F	1.3	33	2.17	55	10,000	3400	BDTH	13
FXL	23030-0	24	82	410	50 DICH	GY5.3	50	CC-8			1.75	44.5		3300	BDTH	25
GDA	38684-7	100	120	500	T 3.5	RX7s	75	CC-8			5.25	133.3	11,000	3200	ANY	19

◆ — SPECIAL ORDER ITEM, Consult Customer Service for minimum order quantities and delivery.

D — Lamps to be discontinued after inventory is depleted. Please check with customer service for availability.

◆ — Not shown.

* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

Unless otherwise noted all dimensions are in inches. To convert inches to millimeters multiply by 25.4001.

For the most current product information, go to the e-catalog on www.philips.com

Photo/Projection Lamps, continued

ANSI Code	Product Number	Std. Pkg. Qty.	Volts	Avg. Watts Amps.	Bulb	Base	Rated Avg. Life (Hrs.)*	Coil Type	LCL (In.)	LCL (mm)	MOL (In.)	MOL (mm)	Rated Approx. Lumens	Color Temp. (K)	Operating Position	Fig. No.
JCR 15V, 150W	24923-5	24	15	150	MR-16	GZ6.35	500	C-8			1.65	42			BDTH	25
5761	25713-9	100	6	30	T-3.5	G4	100	C-6F	0.77	19.6	1.22	31	765	3200	ANY	16
5972	31333-8	100	6	10	T-3	G4	200		0.95	24	1.5	38	150	3000	ANY	4
6605	25684-2	100	6	10	T-3	G4	2000	C-6	0.77	19.5	1.22	30	150	2700	ANY	3
6981P	13420-5	10	115	750	T-6	G 9.5	300	Biplane	2 3/8	60.5	4.09	104	20500	3200	ANY	
6982P	13421-3	10	230	800	T-6	G 9.5	300	Biplane	2 3/8	60.5	4.09	104	20000	3200	ANY	
7010	25702-2	10	120	300	T-6	GX6.35	150	C-6	1.28				7500	3200	ANY	
13117	37614-5	50	17	150	MR-16	GX5.3	1000	CC-6			1.85	47		3200	ANY	25
13139	33545-5	50	12	75	MR-16	GX5.3	1000	C-8			1.65	42			BD±105°	25
13165	44295-4	50	14	35	35 DICH	GZ4	50				1.5	38			BD±130°	25
13288	22146-5	50	13.8	85	MR-16	GX5.3	1000	C-8			1.81	46			BDTH	25
13298	35436-5	230	10	52	35 DICH	GZ4	20	CC-8			1.77	44.9			Horiz.±40°	26
13347W	31453-4	100	6	15	T-6	BA15d	100	C-6F	1.75	44.5	2.13	54.1	210		Horiz	◆
13477R	31349-4	150	220	800	T-3.5	RX7s	150				4.72	120	21,600	3200	Horiz	22
13528	31504-4	360	6	15	35 DICH	GZ4	500	C-6			1.5	38			BD±105°	26
◆ 13529	31507-7	360	6	9	MR-11	GZ4	250	C-6			1.5	38			BD±105°	26
13865	26423-4	50	12	75	MR-11	G5.3	50				1.57	40			BD±105°	23
14553	26391-3	230	10	52	MR-11	GZ4	20				1.57	40			BD±105°	26
64514	14168-9	720	120	300	T-6	GX 6.35	75	SPECIAL					7700	3400	ANY	

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◆ — Not shown.

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Unless otherwise noted all dimensions are in inches. To convert inches to millimeters multiply by 25.4001.

Cross Reference List of IEC and ANSI Base Designations

IEC	ANSI	IEC	ANSI	IEC	ANSI	IEC	ANSI
E10/12	Miniature Screw	G13	Medium Bipin	G17t	3-Pin Prefocus	GY9.5	Prefocus Two-Pin (Higher Wattage)
E12/15	Candelabra Screw	G20	Mogul Bipin	G17q	4-Pin Prefocus		
E17/20	Intermediate Screw	R17d	Recessed D.C.	GX17q	4-Pin Prefocus (Low-Volt)	GZ9.5	Prefocus Two-Pin
E26s	Medium Screw S.C.	BA15s	Candelabra Bayonet S.C.	G5.3	Miniature Two-Pin	G22	Medium Bipost
E26d	Medium Screw D.C.	BA15d	Candelabra Bayonet D.C.	G6.35	Glass Two-Pin	G38	Mogul Bipost
E39	Mogul Screw	P28S	Medium Prefocus	GY6.35	Glass Two-Pin	R7s	Recessed S.C.
Fa8	Single-Pin	P40s	Mogul Prefocus	G9.5	Medium Two-Pin	GY5.3	Two-Pin Reflector (Low-Volt)
G5	Miniature Bipin					GY5.3	Two-Pin Reflector

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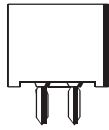
Base Types (Not Actual Sizes)



PG22-6.35
DIN: 49751
iec: 7004-48



RX7s
DIN: 49750
IEC: 7004-92
ANSI: Recessed single contact base
C81.61-1990
sheet 1-770-1



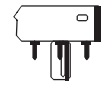
G5.3
IEC: 7004-73-2
ANSI: Miniature 2-pin
C81.61-1990
sheet 1-20-1



BA 15s
DIN: 49720
IEC: 7004-11A
ANSI: Single contact candelabra bayonet base
C81.61-1990
sheet 1-20-1



BA15d
DIN: 49720
IEC: 7004-11A
ANSI: Candelabra bayonet base double contact
C81.61-1990
sheet 1-20-1



GX17q
GX17q
G17q
DIN: 49665
IEC: 7004-45
ANSI: Four-pin prefocus base
C81.61-1990
sheet 1-440-1



B15d
DIN: 49721
IEC: 7004-11



B22d/22
IEC: 7004-10



G3.9
ANSI:
C81.61-1990
sheet 1-300-1



G4
IEC: 7004-72



GX5.3
(Round pin)
IEC: 7004-73
ANSI:
C61.61-1990
sheet 1-321-1



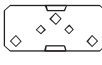
G6.35
GX6.35
GY6.35
IEC: 7004-59
ANSI: C81.61-1990
sheet 1-340-1



GZ6.35
DIN: 49754
IEC: 7004-59A



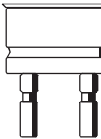
GZ4
IEC: 7004-67



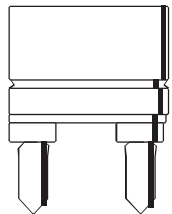
GX9.5
DIN: 49638
IEC: 7004-70A



GY9.5
IEC: 7004-70B
ANSI: C81.61-1990
sheet 1-369-1



G22
IEC: 7004-75
ANSI: Medium bipost
C81.61-1990
sheet 1-466-1



G38
IEC: 7004-76
ANSI: Mogul bipost
C81.61-1990
sheet 1-519-1

Bulb Shapes (Not Actual Sizes)

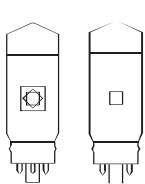


Fig. 1

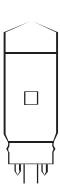


Fig. 2



Fig. 3



Fig. 4

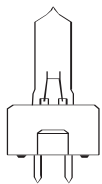


Fig. 5

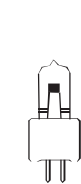


Fig. 6

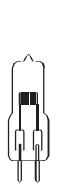


Fig. 7



Fig. 8

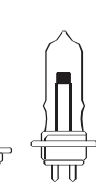


Fig. 9

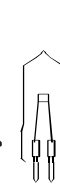


Fig. 10

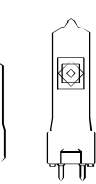


Fig. 11



Fig. 12

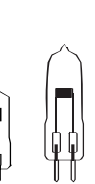


Fig. 13

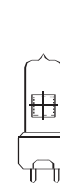


Fig. 14

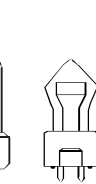


Fig. 15



Fig. 16

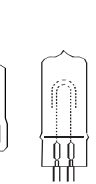


Fig. 17

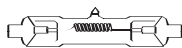


Fig. 18

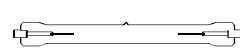


Fig. 19



Fig. 20

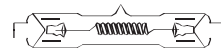


Fig. 21



Fig. 22

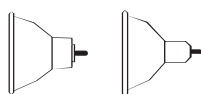


Fig. 23



Fig. 24



Fig. 25

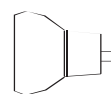


Fig. 26

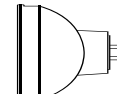


Fig. 27



Fig. 28

Specialty Lamps

Broadway

Stage/Studio/TV Lamps

ANSI Code	Product Number	Watts	Description	Volts	Base	MOL (In.)	LL (In.)	LCL (In.)	Mean Lumens	Rated Avg. Life (Hrs.)*	Filament	Color Temp. (K)	Envelope Finish
BTL	31891-5	500		120	Med. Pf.	4 ½		2.18	11,000	500	C-13D	3050	Clear
BTN	20481-8	750		120	Med. Pf.	4 ½		2 ¾	17,600	500	C-13D	3050	Clear
BTP	30514-4	750	750T7Q/4CL/2P	120	Med. Pf.	4 ½		2.38	21,000	200	C-13D	3200	Clear
BTR	30533-4	1000	1000T7Q/4CL/2P	120	Med. Pf.	4 ½		2 ¾	28,500	250	C-13D	3200	Clear
CYV	31892-3	1000		120	Mog. Bipost	7 ¾		5	28,500	200	C-13D	3200	Clear
CYX	31893-1	2000		120	Mog. Bipost	8 ½		5	59,000	300	C-13D	3200	Clear
DWT	38295-2	1000	1000T6Q/CL	120	RX7s	5 ¾	1		23,400	2000	CC-8	3000	Clear
DXW	31219-9	1000	1000T5Q/CL	120	RX7s	3 ¾			28,000	150	CC-8	3200	Clear
DYS/DYV/BHC	31639-8	600		120	2-Pin Pf.	2 ½		1 ¾	17,000	75	CC-6	3200	Clear
EGE	39069-0	500		120	Med. Pf.	5 ½		3 ½	10,450	2000	CC-8	3000	Clear
EGG	39067-4	750		120	Med. Pf.	6		3 ½	15,000	2000	CC-8	3000	Clear
EGJ	39068-2	1000		120	Med. Pf.	6		3 ½	27,500	400	CC-8	3200	Clear
EGR	22563-1	750		120	Med. Bipost	5 ½		2 ½	21,000	150	C-13D	3200	Clear
EGT	31896-4	1000		120	Med. Bipost	5 ½		2 ½	28,500	250	C-13D	3200	Clear
EHD	26971-2	500	500Q/CL	120	Med. 2-Pin	3 ¾		2 ¾	10,600	2000	CC-8	3000	Clear
EHG	26972-0	750	750Q/CL	120	Med. 2-Pin	4 ¼		2 ¾	15,000	2000	CC-8	3000	Clear
EHT	37857-0	250	250Q/CL	120	Mini-Can	3 ¾		1 ¾	5000	2000	CC-8	3000	Clear
ESN	30759-5	100	100Q/CL	120	Mini-Can	2 ¾		1 ¾	1900	1000	CC-2V	3000	Clear
ESS	31584-6	250	250Q/CL/DC	120	D.C. Bay	3		1 ¾	5000	2000	CC-8	3000	Clear
ETC	26676-7	150	150Q/CL/DC	120	D.C. Bay	2 ¾		1 ½	2800	200	CC-8	2900	Clear
ETF	29850-5	150	150Q/DC	120	D.C. Bay	2 ¾		1 ½	2700	2000	CC-8	2900	Frosted
ETG	34754-2	150	150Q/CL	120	Mini-Can	3		1 ½	2800	2000	CC-8	2900	Clear
ETG	34754-2	150	150Q/CL	120	Mini-Can	3		1 ½	2800	2000	CC-8	2900	Clear
ETH	29856-2	150	150Q	120	Mini-Can	3		1 ½	2700	2000	C-8	2900	Frosted
EVR	38079-0	500	500Q/CL	120	Mini-Cam	3 ¾		2	10,000	2000	CC-8	3000	Clear
FAL	23976-4	420	420T6QCL	120	RX7s	2.63			11,000	75	CC-8	3200	Clear
FCL	20010-5	500	500T3Q/CL	120	RX7s	4 ¼			10,500	2600	C-8	3000	Clear
FCM	33269-2	1000	1000T3Q/CL	120	RX7s	4 ¼		2 ½	28,000	300	C-8	3200	Clear
FEL	26979-5	1000	1000Q/CL	120	Med. 2-Pin	4		2 ¾	27,500	300	CC-8	3200	Clear
FER/EHS	31240-5	1000	1000T6Q/4CL	120	RX7s	5 ¾			27,500	500	CC-8	3200	Clear
FER/EHS	31240-5	1000	1000T6Q/4CL	120	RX7s	5 ¾			27,500	500	CC-8	3200	Clear
FEV	13925-3	200	200Q/CL/DC	120	D.C. Bay	2 ½		1 ¾	5500	50	CC-2V	3200	Clear
FEY	13926-1	2000	2000T8Q/CL	120	RX7s	5 ¾			57,000	400	CC-8	3200	Clear
FFM	44235-0	420	420T6Q/CL	120	RX7s	3 ¾			11,000	75	CC-8	3200	Clear
FFN	34350-9	1000	1000PAR64QVNSP	120	Ext. Mog. End	6			400,000	800		3200	Clear
FFP	34351-7	1000	1000PAR64QNSP	120	Ext. Mog. End	6			330,000	800		3200	Clear
FFR	34352-5	1000	1000PAR64QMFL	120	Ext. Mog. End	6			125,000	800		3200	Clear
FFS	34353-3	1000	1000PAR64QWFL	120	Ext. Mog. End	6			40,000	800		3200	Clear
FFT	39070-8	1000	1000T4Q	120	RX7s	6 ¾		2.56	27,000	300	C-8	3200	Clear
FHM	26130-5	1000	1000T3Q	120	RX7s	4 ¼			27,300	400	C-8	3200	Frosted
FLK	24861-7	575		115	G9.5	4		2 ¾	16,500	300	CC-8	3200	Clear
FRK	39168-0	650	6638P	120	GY 9.5	1 ¾			17,500	200	C-13D	3200	Clear
GAC	23667-9	1000	6995I/BP 120V 1000W	120	2-Pin Pf.	3 ¾		1.8	27,000	250	C-13D	3200	Clear
GCX	258590	500	6986P (JPD 120-500C-BP)	120	GY 9.5	1 ¾			13,200	120	CC-6	3200	Clear
GKV	36372-1	575	6986P	230	G9.5	4 ½		2 ¾	15,000	400	C-13D	3200	Clear
GLA	29432-2	575	6992P	115	G9.5	3.97		2 ¾	13,000	1500	C-13D	3100	Clear
GLB	36373-9	575	6999P	230	G9.5	4.33		2 ¾	13,000	1500	C-13D	3100	Clear
GLC	28739-1	575	6989P	115	G9.5	3.97		2 ¾	15,500	400	C-13D	3200	Clear
HPL575	39170-6	575	7007	115	Special	4		2 ¾	16,520	300	4-C8	3250	Clear
HPL575LL	39167-2	575	7007 LL	115	Special	4		2 ¾	12,360	2000	4-C8	3050	Clear
HPL750	391714	750	7008	115	Special	4		2 ¾	21,900	300	4-C8	3250	Clear
	22886-6	250	250Q/CL	130	Mini-Can	3 ¾		1 ¾	5000	2000	CC-8	3000	Clear
6980Z	38296-0	1200	6980Z	80	G 22			2 ½	37,500	300	C-13D	3300	Clear
6981P	13420-5	750	6981P	115	G 9.5	4		2 3/8	20,500	300	C-13D	3200	Clear

* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

For the most current product information, go to the e-catalog on www.philips.com

Stage/Studio/TV Lamps, continued

6982P	13421-3	800	6982P	120	G 9.5	4	2 3/8	20,000	300	C-13D	3200	Clear
7002Y	382978	1000	7002Y (V*L 1000)	115	G22	5 1/2	2 1/2	29,000	250	Biplane	3200	Clear
7010	25702-2	300	7010	120	GX6.35	2 1 1/32	1 9/32	7500	150	M	3200	Clear

High Volt SSTV Halogen Lamps

ANSI Code	Product Number	Watts	Description	Volts	Base	MOL (In.)	LL (In.)	LCL (In.)	Initial Lumens	Rated Avg. Life (Hrs.)*	Filament ²	Color Temp. (K)	Burning Position	Std. Pkg. Qty.	LIF	Monoplane Equivalent LIF
Single-Ended																
FSL	25813-7	300	6872P	230	GY9.5	3 1/2	1 1/2	1 1/2	7800	180	M Shape	3200	ANY	10	CP/81	
GCV/GVH	25796-4	500	6820P	230	GY9.5	3 1/2	1 1/2	1 1/2	11,000	360	Biplane	3000	BDTH	10	T/25	T/18
FRH	25806-1	500	6873P	230	GY9.5	3 1/2	1 1/2	1 1/2	13,500	180	M Shape	3200	ANY	10	CP/82	
—	14104-4	500	7389	230	GY 9.5	3	1 1/2	1 1/2	14,000	75	Biplane	3200	BDTH	10	A1/224	
HPL 575 (230)	14564-9	575	7007	230	SPECIAL	4	2 1/2	2 1/2	14,900	400	SPECIAL	3200	ANY	10		
HPL 575LL (230)	14565-6	575	7007	230	SPECIAL	4	2 1/2	2 1/2	11,780	1500	SPECIAL	3100	ANY	10		
GKV	36372-1	600	6986P	230	G 9.5	4	2 1/2	2 1/2	15,000	300	Biplane	3200	ANY	10		
GLB	36373-9	600	6991P	230	G 9.5	4	2 1/2	2 1/2	13,000	1500	Biplane	3100	ANY	10		
—	14103-6	650	6998P	230	GX 9.5	4 1/2	2 1/2	2 1/2	13,000	750	Biplane	3000	ANY	10	T 21	
GCK/GCT	25794-9	650	6823P	230	GY9.5	3 1/2	1 1/2	1 1/2	14,500	600	Biplane	3050	BDTH	10	T/27	T/26
FKH	25820-2	650	6993Z	230	G22	5 1/2	2 1/2	2 1/2	16,500	120	Biplane	3200	BDTH	10	CP/68	CP/39
HPL 750 (230)	14566-4	750	7008	230	SPECIAL	4	2 1/2	2 1/2	20,650	300	SPECIAL	3200	ANY	10		
—	13421-3	800	6982P	230	G 9.5	4 1/2	2 1/2	2 1/2	20,000	300	Biplane	3200	ANY	10		
FEP	14107-7	1000	6983P	230	G 9.5	4	2 1/2	2 1/2	26,000	250	Biplane	3200	ANY	10	CP/77	
FVA	14108-5	1000	6995P	230	GX9.5	4 1/2	2 1/2	2 1/2	25,000	240	Biplane	3200	BDTH	10	CP/70	CP/24
FKD	25803-8	1000	6996C	230	P28s	5	2 1/2	2 1/2	21,000	900	Biplane	3050	BDTH	10	T/20	T/14
VL 1000	13041-9	1000	7002Y	230	G 22	5 1/2	2 1/2	2 1/2	29,000	250	Biplane	3200	ANY	10		
FKJ	14247-1	1000	6995Z	230	G 22	5 1/2	2 1/2	2 1/2	25,000	240	Biplane	3200	ANY	10	T/20	
FWP	25804-6	1000	6996P	230	GX 9.5	4	2 1/2	2 1/2	21,000	750	Biplane	3050	ANY	10	T/19	
FWS	14105-1	1200	6897P	230	GX 9.5	4 1/2	2 1/2	2 1/2	27,600	400	Biplane	3000	ANY	10	T/29	
—	14106-9	2500	6894Y	230	G 22	6 1/2	3 1/2	3 1/2	67,500	350	Biplane	3200	ANY	10	CP/91	
—	29093-2	5000	6963Z	230	G38	11	6 1/2	6 1/2	132,500	400	Biplane	3200	ANY	1	CP/85	CP/29
Double-Ended																
—	36417-4	500	PF821 R	230	RX7s	5.31	3	3	11,000	75	CC-8	3200	Horiz ±15°	10		
—	25841-8	625	7775R/16	230	R7s	7 1/2	4 1/2	4 1/2	16,250	150	CC-8	3200	Horiz ±15°	10	P2/10	
EME¹	31349-4	800	13477 R	230	RX7s	4 1/2	2 1/2	2 1/2	24,000	150	C-8	3200	Horiz ±15°	10	P2/11	
—	27085-0	1000	13704R	230	R7s	3 1/2	1 1/2	1 1/2	26,500	120	C-8	3200	Any	10	P 2/35	
—	27072-8	1000	7786R	230	R7s	4 1/2	2 1/2	2 1/2	27,000	300	C-8	3200	Horiz ±15°	10		

* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

1) These lamp types must be operated with a separate rapid acting High Breaking-Capacity fuse, either 415V AC or 500V DC working in accordance with the supply in use as per end of table.

2) C.C. = coiled coil, S.C. = single coil

MSR Lamps Single-Ended Gas Discharge

Description	Product Number	Watts	Lamp Voltage	Lamp Current (Amps)	Initial Lumens	Rated Avg. Life (Hrs.)*	Arc Length (mm)	CRI	Color Temp. (K)	Base
Hot Restrike¹										
MSR 125 HR	35468-8	125	80	1.6	9400	200	4	92	6000	GZX9.5
MSR 200 HR	32466-5	200	70	3.3	15,000	200	5	92	6000	GZY9.5
MSR 400 HR	20477-6	400	70	6.9	32,000	750	6	95	6000	GZZ9.5
MSR 575 HR	31160-5	575	95	6.95	49,000	2000	7	95	6000	G 22
MSR 1200 HR	30270-3	1200	100	13.8	110,000	1000	10	95	6000	G 38
MSR 1200 HR/C	36041-2	1200	100	13.8	110,000	1000	10	95	6000	Special
MSR 2500 HR	30265-3	2500	115	25.6	240,000	500	14	95	6000	G 38
MSR 4000 HR	33579-4	4000	200	24	380,000	500	20	95	6000	G 38
MSR 6000 HR	36042-0	6000	125	55	570,000	500	24	95	6000	GY 38
MSR 12,000 HR	39071-6	12,000	160	86	1,200,000	300	30	95	6000	GY 38
Standard										
MSR 400	30268-7	400	70	6.9	32,000	1000	6	92	5900	GX 9.5
MSR 575/2	24528-2	575	95	6.95	49,000	1000	7	80	7200	GX 9.5
MSR700/2	28723-5	700	72	11	55,000	1000	8	80	7200	G 22/28x42
MSR 1200	30266-1	1200	100	13.8	110,000	800	10	95	5900	G 22/30x53
MSR 1200/2	28695-5	1200	90	13.8	110,000	800	10	85	7200	G 22/30x53
Short Arc										
MSR 400 SA	35365-6	400	54	8.4	30,000	750	3	92	5500	GY 9.5
MSR 700 SA	28718-5	700	72	11	45,000	750	4	80	5600	GY 9.5
MSR 1200 SA	29135-1	1200	100	13.8	96,000	750	7	80	5600	GY 22
MSR 2000 SA	38281-2	2000	200	20	155,000	750	7	80	6000	GY 22

* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

1) Lamps must be used in fixtures designed for hot restrike.

For the most current product information, go to the e-catalog on www.philips.com

Specialty Lamps

Broadway

MSR SA/DE Gold (Double-Ended) Lamps

Description	Product Number	Watts	Lamp Voltage	Lamp Current (Amps)	Initial Lumens	Rated Avg. Life (Hrs.)*	Arc Length (mm)	CRI	Color Temp. (K)	Base	MOL (mm)
MSR 400 SA/DE GOLD	13617-6	400		8.4	27,000	1000	3	70	7500	SFC 10-4	135
MSR 700 SA/DE GOLD	13701-8	700	70	10.2	59,000	1000	4	80	6500	SFC 10-4	135
MSR 1200 SA/DE GOLD	13986-5	1200	100	13.6	110,000	1000	7	85	6000	SFC 10-4	135

MSD Lamps

Description	Product Number	Watts	Lamp Voltage	Lamp Current (Amps)	Initial Lumens	Rated Avg. Life (Hrs.)*	Arc Length (mm)	CRI	Color Temp. (K)	Base
MSD 200	34592-6	200	70	3.4	13,500	2000 ¹	5	80	6000	GY 9.5
MSD 250	29152-6	250	90	3	17,000	3000	5	77	6700	GY 9.5
MSD 250/2	27721-0	250	90	3	17,000	3000	5	65	8500	GY 9.5
MSD 575	27479-5	575	95	6.95	45,000	3000	8	75	6000	GX 9.5
MSD 575 HR	39168-9	575	95	6.95	46,000	2000	8	75	6000	G 22
MSD 700	35364-9	700	72	11	55,000	3000	10	75	6000	G 22
MSD 1200	29134-4	1200	115	13.8	92,000	3000	14	95	6000	G 22

MHD Lamps

MHD 200	20985-8	200	63	4.5	12,500	2000	4.5	75	6600	Special Prefocus
MHD 1800	31360-1	1800	120	17.3	155,000	4000		92	5600	SFC20-6

Sealed Beam

ANSI Code	Product Number	Watts	Description	Volts	Base	Diameter		MOL		Lumens	Rated Avg. Life (Hrs.)*	Color Temp. (K)	Burning Position	Beam Shape
						(in.)	(mm)	(in.)	(mm)					
—	35619-6	500	500PAR56Q/NSP	120	Mog. End	7	179	5	127	88,000	4000	2950	Universal	Narrow Spot
—	35621-2	500	500PAR56Q/MFL	120	Mog. End	7	179	5	127	43,000	4000	2950	Universal	Med. Flood
—	35620-4	500	500PAR56Q/WFL	120	Mog. End	7	179	5	127	22,500	4000	2950	Universal	Wide Flood
—	27555-2	1000	1000PAR64Q/NSP	120	Ext. Mog. End	8	204	6	150	200,000	4000	3000	Universal	Narrow Spot
—	27556-0	1000	1000PAR64Q/MFL	120	Ext. Mog. End	8	204	6	150	80,000	4000	3000	Universal	Med. Flood
—	27558-6	1000	1000PAR64Q/WFL	120	Ext. Mog. End	8	204	6	150	31,000	4000	3000	Universal	Wide Flood
FFN	34350-9	1000	1000PAR64QVNSP	120	Ext. Mog. End	8	204	6	150	400,000	800	3200	Universal	Very Nar. Spot
FFP	34351-7	1000	1000PAR64QNSP	120	Ext. Mog. End	8	204	6	150	330,000	800	3200	Universal	Narrow Spot
FFR	34352-5	1000	1000PAR64QMFL	120	Ext. Mog. End	8	204	6	150	125,000	800	3200	Universal	Medium Flood
FFS	34353-3	1000	1000PAR64QWFL	120	Ext. Mog. End	8	204	6	150	40,000	800	3200	Universal	Wide Flood

MasterColor® CDM/SA (Short Arc)

ANSI Code	Product Number	Watts	Description	Volts	Base	MOL (in.)	LL (in.)	LCL (in.)	Mean Lumens	Rated Avg. Life (Hrs.)*	CRI	Color Temp. (K)	Arc Gap (mm)
—	38278-8	150	CDM-SA/RI 150/942	207	Special	5 3/4	—	—	—	6000	96	4200	6
—	14248-9	150	CDM-R 150/832	207	Special	5 3/4	—	—	—	6000	85	3200	6

Micro Power Light (MPXL)

Product Number	Description	Type	Wattage	Life	Lumens	Color Temperature (K)	CRI	Burning Position	MOL (in.)
14442-8	MPXL DL35 24PK	DL35	35	5000	3600	6500	90	Horizontal ±10°	3
14417-0	MPXL DL50	DL50	50	3000	5300	3900	75	Horizontal ±10°	3
14443-6	MPXL RP50	RP50	35	5000	3900	3900	75	Horizontal ±10°	2.6
13474-2	MPXL DUV	DUV	35	500	—	—	—	Horizontal ±10°	3

MSI Lamps

Product Number	Description	Watts	Lamp Current (Amps)	Initial Lumens	Rated Avg. Life (Hrs.)*	Arc Length (mm)	Color Temperature (K)	MOL (mm)	Base	Burning Position
39072-4	MSI 575W	575	6.95	49,000	1000	7	5600	136	SFC10-4	Any
13091-4 Replaced by	MSI 1200W/S MSR 1200SA/DE GOLD	1200	13.2	110,000	750	7	6000	136	SFC10-4	Any
39073-2	MSI 1200W	1200	13.8	110,000	1000	10	5600	220	SFC15.5-6	Any
16244-6	MSI 1800W	1800	17.5	155,000	2000	25	5600	240	SFC18.5-6	Horiz. ± 15°
39074-0	MSI 2500W	2500	25.6	240,000	600	20	5600	355	SFA21-12	Horiz. ± 30°
39075-7	MSI 4000W	4000	24	410,000	600	34	6000	405	SFA21-12	Horiz. ± 15°
39076-5	MSI 6000W	6000	55	570,000	400	22	6000	450	S25.5X60	Horiz. ± 15°
39165-6	MSI 12000W	12000	82	1,100,000	300	32	6000	470	S25.5X60	Horiz. ± 15°

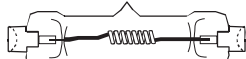
* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

1) Vertical burning position life is 750 hours.

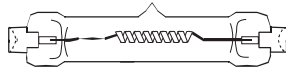
For the most current product information, go to the e-catalog on www.philips.com

Bulb Shapes and Base Types (Not Actual Sizes)

Double-Ended Tungsten Halogen Lamps
 3 1/8, 3 3/4, 4 3/8, 4 1 1/16, 5 5/8 and 6 5/8 MOL
RX7s Base



DWY, DWZ, DXN, DXW, FBY

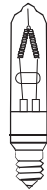


DWT, FER/EHS, FEY

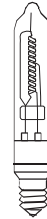


EHM, EHZ, EJG, FCL, FCM, FFT, FHM

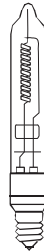
Mini-Can Base Single-Ended
Tungsten Halogen Lamps



ESN
 ETH

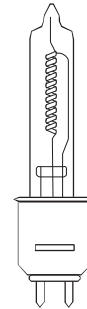


EHT
 250Q/CL



EVR

Medium Two-Pin
Tungsten Halogen Lamps (G9.5)

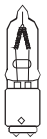


EHD
 500Q/CL

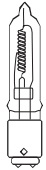


EHG
 FEL

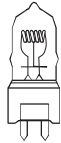
Double Contact Bayonet Bases (BA 15d)
 Tungsten Halogen-Miniature Two-Pin Base (G5.3)
Tungsten Halogen-Two-Pin Prefocus Base (GZ 9.5)



FEV
 150/DC

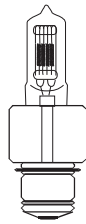


ESS
 500Q/CL/DC

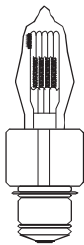


DYS/DYV/BHC
 (GZ9.5)

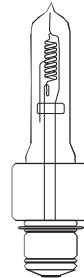
Medium Prefocus Lamps With 23/16" L.C.L. (P28s)
Medium Prefocus Lamps With 3 1/2" L.C.L. (P28s)



BTL

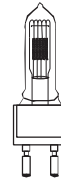


BTP
 BTR



EGE, EGF,
 EGG, EGJ

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



EGR
 EGT

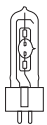


CYV

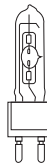


CYX
 FKK (5" LCL)

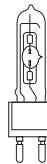
MSR Lamps
(Medium Source Rare Earth Lamps)



MSR 400

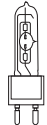


MSR 700

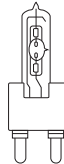


MSR 1200

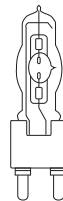
MSR/HR Lamps (Medium Source Rare Earth
 Lamps Hot Restrike Version)



MSR
 575/HR

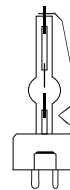


MSR
 1200/HR



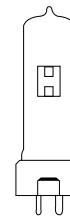
MSR
 2500/HR

MSR Short
 Arc Lamps



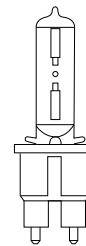
MSR
 400W SA

MSD Lamps



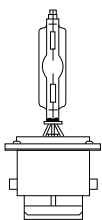
MSD
 200W/2

MHD Lamps

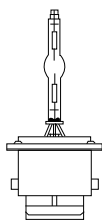


MHD
 200

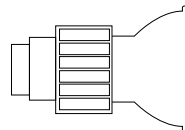
Micro Power Light (MPXL)



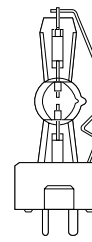
MPXL DL-35W
 MPXL DL-50W



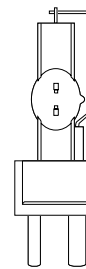
DUV-35W



MPXL RP50



MSR 400 SA/MSR 700 SA



MSR 1200 SA/MSR 2000 SA

Short Arc Lamps

Product Number	Description	Nominal Watts	Volts	Lumens	Base	LCL (In.)	MOL (In.)	Fig. No.
31644-8	★SAH250B D.C. Operation Only ¹	250	42	10,000	Med. Pf.	2.8	6	—

1) Should be operated on a control circuit which supplies direct current to the lamp.

★ Heat resisting glass bulb.

Medium Pressure Metal Halide Lamps

Product Number	Description	Nominal Wattage	Lamp Voltage	Nominal Length (mm)	Diameter (mm)	Fig. No.
44431-5	HPM 10/B	400	125	112	17	1-S
30832-0	HPM 12	460	120	98	21	2-S
44440-6	HPM 13	1000	125	147	27	1-S
30831-2	HPM 15	1950	240	203	32	2-S
30829-6	HPM 17	2000	243	175	27	2-S
30828-8	HPM 19	2000	200	179	27	2-S
30827-0	HPM 20	2900	350	236	27	1-S
44439-8	HPM 20C	2900	350	210	27	2-S
44448-9	HPA 400S	400	125	118	18	3-S

Low Pressure Pulsed Xenon Discharge Lamps

Product Number	Description	Nominal Wattage	Lamp Voltage	Maximum Length (mm)	Width or Diameter (mm)	Fig. No.
30750-4	XOP 7 O/F	750	52	241	16.2	8-S
30749-6	XOP 15 O/F	1500	105	395	16.2	8-S

Fluorescent Lamps with Super Actinic Radiation—Medium BiPin Base

Product Number	Description	Nominal Wattage	Nominal Current (Amps)	Bulb	Nominal Length (mm)	(In.)	Fig. No.
29747-3	TLD 15W/03	15	0.34	T8	452	18	10-S
30800-7	TL20W/03	20	0.37	T12	604	24	9-S
30805-6	TLDK30W/03	30	0.81	T8	452	18	10-S
30807-2	TLK40W/03	40	0.86	T12	604	24	9-S
30801-5	TL40W/03	40	0.86	T12	1214	48	9-S
30808-0	TL140W/03	140	1.46	T12	1514	60	9-S

Fluorescent Lamps with Actinic Radiation

Product Number	Description	Nominal Wattage	Nominal Current (Amps)	Bulb	Nominal Length (mm)	(In.)	Fig. No.
30812-2	TLK40W/05 ²	40	0.86	T12	604	24	9-S

2) No longer available after June 2006.

Black Light Blue Lamps

These lamps are not intended and should not be used for therapeutic or diagnostic purposes.

Product Number	Ordering Code	Nominal Lamp Watts	Description	Nominal Length (In.)	Bulb	Base	Rated Average Life (Hrs.)*	UVA Watts	Fig. No.
36017-2	F4T5/BLB	4	Black Light-Integral Filter	6	T5	Min. Bipin	6000	0.5	11-S
35841-6	F6T5/BLB	6	Black Light-Integral Filter	9	T5	Min. Bipin	7500	0.9	11-S
11065-0	F8T5/BLB	8	Black Light-Integral Filter	12	T5	Min. Bipin	7500	1.2	11-S
20678-9	PL9W/08	9	Black Light-Integral Filter	6 ½	PL-S	G23	10,000	1.7	16-S
39223-3	F15T8/BLB, 6 pack	15	Black Light-Integral Filter	18	T8	Med. Bipin	7500	3.1	10-S
29271-4	F15T8/BLB	15	Black Light-Integral Filter	18	T8	Med. Bipin	7500	3.1	10-S
39224-1	F20T12/BLB, 6 pack	20	Black Light-Integral Filter	24	T12	Med. Bipin	9000	3.7	9-S
39151-6	F20T12/BLB	20	Black Light-Integral Filter	24	T12	Med. Bipin	9000	3.7	9-S
26271-7	F30T8/BLB	30	Black Light-Integral Filter	36	T8	Med. Bipin	7500	6	10-S
39225-8	F40BLB, 6 pack	40	Black Light-Integral Filter	48	T12	Med. Bipin	20,000	9	9-S
39053-4	F40BLB	40	Black Light-Integral Filter	48	T12	Med. Bipin	20,000	9	9-S

* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

For the most current product information, go to the e-catalog on www.philips.com

Special Blue (Therapeutic) Lamps T12 Bipin

Product Number	Ordering Code	Nominal Lamp Watts	Description	Nominal Length (In.)	Rated Average Life (Hrs.)*	Approx. Initial Avg. Lumens	Design Lumens
31745-3	F20T12/BB	20	Special Blue	24	9000	192	154
20189-7	F40/BB	40	Special Blue	48	20,000	468	360

* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

NOTE: Black Light and Special Blue Lamps are not designed for general illumination.

WARNING: Ultraviolet Radiation

Wear protective eyewear in occupational situations and in close proximity to these lamps. Failure to may result in severe burns and long-term injury to the eyes.

Certain medications and chemicals may increase your sensitivity to ultraviolet radiation. Consult your physician. These lamps can be harmful to skin and eyes in situations where people are exposed for extended periods of time. Unshielded lamps should be installed at least 40 inches from people.

UVA 365nm Peak Lamps For graphic arts, lacquer curing and insect trap applications

Product Number	Ordering Code	Nominal Lamp Watts	Description	Nominal Length (In.)	Bulb	Base	Rated Average Life (Hrs.)*	UVA Watts	Fig. No.
31006-0	PL-S 9W/10	9	UVA Lamp	6 1/2	PL-S	G23	2000	1.9	16-S
13036-9	F15TB/BL	15	Black Light	18	TB	Min. Bipin	5000	3.1	10-S
13034-4	PL-L 18W/10	18	UVA Lamp	9	PL-L	2G11	5000	3.4	15-S
39152-4	F20BL	20	Black Light	24	T12	Med. Bipin	5000	3.7	9-S
24675-1	TLK 40W/10R	40	UVA Reflector Lamp	24	T12	Med. Bipin	3000	7.4	9-S
39153-2	F40BL	40	Black Light	48	T12	Med. Bipin	9000	9.0	9-S
26169-3	TL 60W/10R	60	UVA Reflector Lamp	48	T12	Med. Bipin	1000	15.8	9-S
26885-4	TL 80W/10R	80	UVA Reflector Lamp	60	T12	Med. Bipin	1000	20.5	9-S
24694-2	TL 100W/10R	100	UVA Reflector Lamp	70	T12	Med. Bipin	1000	26.6	9-S
24607-6	TL 140W/10R	140	UVA Reflector Lamp	60	T12	Med. Bipin	1000	37.0	9-S
24697-5	TL 176D38/10	140	UVA Lamp	70	T12	Med. Bipin	1000	38.2	9-S
24698-3	TL 176D38/10R	140	UVA Reflector Lamp	70	T12	Med. Bipin	1000	31.7	9-S

* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

Germicidal Sterilamp® 254nm Lamps

Product Number	Description	Lamp Wattage ¹	UV-C Watts ²	Bulb	Base	Rated Average Life (Hrs) ³	Nominal Length (In.)	Fig. No.
Hot Cathode								
36371-3	TUV4T5	4	0.9	T5	Min. Bipin	6000	6	12-S
24485-5	TUV6T5	6	1.5	T5	G5	8000	9	12-S
29930-5	TUV8T5	8	2.1	T5	Min. Bipin	8000	12*	12-S
30864-3	TUV15T8	15	4.7	T8	Med. Bipin	8000	18*	12-S
29268-0	TUV25T8	25	7	T8	Med. Bipin	8000	18*	12-S
36016-4	TUV30T8	30	11.2	T8	Med. Bipin	8000	36*	12-S
26269-1	TUV36W	36	15.3	T8	Med. Bipin	8000	48*	12-S
29090-8	TUV75WHO	75	26	T12	Med. Bipin	8000	48*	12-S
23596-0	TUV115W	115	38.8	T12	Med. Bipin	5000	48*	12-S
Twin Tube PL-S/ PL-L Hot Cathode								
38186-3	TUV PL-S 5W	5	1	PL-S	G23	8000	4	16-S
32512-6	PL-S9W/TUV	9	2.4	PL-S	G23	9000	6 1/2	16-S
21064-1	PL-L18W/TUV	18	5.5	PL-L	2G11	9000	8 1/8	15-S
13726-5	PL-L35W/TUV	35	11	PL-L	2G11	9000	8 1/8	15-S
26585-0	PL-L36W/TUV	36	12	PL-L	2G11	9000	16 1/8	15-S
29464-5	PL-L55W/TUV	55	17	PL-L	2G11	9000	22 1/2	15-S
13035-1	PL-L60W/TUV	60	18	PL-L	2G11	9000	16 7/8	15-S
13725-7	PL-L95W/TUV	95	32	PL-L	2G11	9000	22 1/2	15-S
Slimline T5								
38542-7	TUV 11W	11	2.2	T5	4-Pin	8000	10	14-S
38541-9	TUV 16W	16	3.9	T5	4-Pin	8000	13	14-S
13341-3	TUV 25W	16	7.2	T5	4-Pin	8000	20	14-S
29267-2	TUV36T5/SP	39 ⁵	15	T5	Single Pin	9000	34	13-S
36209-5	TUV36T5 4P SE	39 ⁵	15	T5	4-Pin	9000	34	14-S
29269-8	TUV64T5/SP	75	31	T5	Single Pin	9000	62	13-S
38303-4	TUV64T5 4P SE	75	31	T5	4-Pin	9000	62	14-S
36217-8	TUV64T5 4P SE	75	31	T5	4-Pin	9000	62	14-S
13389-2	TUV36T5 HO 4P SE	75	25	T5	4-Pin	9000	34	14-S
39200-1	TUV64T5 HO 4P SE	145	48	T5	4-Pin	9000	62	14-S

1) Wattages shown are for operation from a transformer or ballast, currently standard, under specified test conditions.

2) 100 Hour 3) Rated average life when burned at 8 hours per start and under IES/ANSI test conditions. 4) Approximate overall length including two standard lamp holders.

5) Wattage shown is for lamp operating current of 420 ma. Wattage will vary at other operating currents as follows: 120 ma. — 17 watts; 200 ma. — 25 watts; 300 ma. — 32 watts.

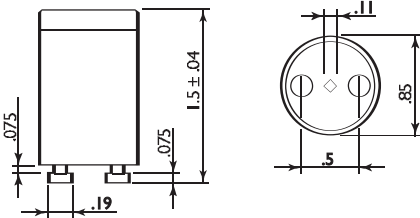
For the most current product information, go to the e-catalog on www.philips.com

Specialty Lamps

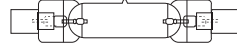
Starters

Product Number	Description	Circuit	Standard Package Quantity	Fluorescent Lamps
33118-1	S10 STARTER 25PK	Single 220-240V	25	4-85W
13367-2	Cleo Power Starter	Single 220-240V	500	100/180W

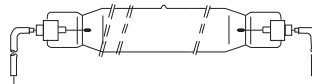
For the most current product information, go to the e-catalog on www.philips.com



Specialty Bulb Shapes (Not Actual Sizes)



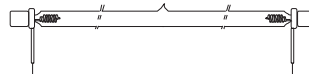
HPM 10/B, 13, 19, 20
Fig. 1-S



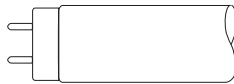
HPM 12, 14, 15, 17, 19, 20C,
Fig. 2-S



HPA 400S
Fig. 3-S



XOP 7, 15, 25, O/F
Fig. 8-S



T12 Medium Bipin
Figure 9-S



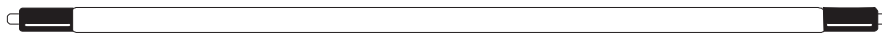
T8 Medium Bipin
Figure 10-S



T5 Miniature Bipin
Figure 11-S



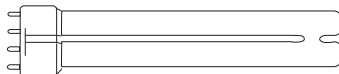
Hot Cathode Sterilamp
Figure 12-S



Cold Cathode and Slimline Sterilamp
Figure 13-S



Slimline Sterilamp
Figure 14-S



PL-L
Figure 15-S



PL-S
Figure 16-S

Quartz Infrared Heat Lamps

Watts	Product Number	Description	Volts	Bulb	Base	Pkg. Qty.	Finish	Filament	LL		MOL		Rated Avg. Life (Hrs.)*	Diam. (mm)	W/cm	Color Temp. (K)	Burning Position	Fig. No.
									(In.)	(mm)	(In.)	(mm)						
200	36043-8	13912R	230	T-3	RX7s	10	Clear	C-8	4.7	120	7.4	189	5000	11	16.7	2300	Universal	2
375	20997-3	375T3/7	120	T-3	RX7s	10	Trans.	C-8	5	127	8.6	217.6	5000	11	29.5	2450	Universal	2
500	21651-5	500T3	120	T-3	U	10	Trans.	C-8	5	127	8.8	223.8	5000	11	39.4	2450	Horiz.±15°	6
	20994-0	500T3/7	120	T-3	RX7s	10	Trans.	C-8	5	127	8.6	217.6	5000	11	39.4	2450	Horiz.±15°	2
	31203-3	13169X	120	T-3	X	10	Clear	C-8	5.6	142	9.5	241	5000	11	35.2	2450	Horiz.±15°	3
	31207-4	13169Y	120	T-3	Y	10	Clear	C-8	5.6	142	8.6	218	5000	11	30.3	2450	Horiz.±15°	7
31205-8	13169X/98¹	120	T-3	X	10	Reflector	C-8	5.6	142	9.5	241	5000	11	35.2	2450	Horiz.±15°	3	
800	21680-4	800T3	120	T-3	U	10	Trans.	C-8	8	203	12	303	5000	11	39.4	2450	Horiz.±15°	6
1000	20995-7	1000T3	240	T-3	U	10	Trans.	C-8	10	254	13.8	350.8	5000	11	39.4	2450	Horiz.±15°	6
	21000-5	1000T3/CL	240	T-3	U	10	Clear	C-8	10	254	13.8	350.8	5000	11	39.4	2450	Horiz.±15°	6
	31213-2	13195X	235	T-3	X	10	Clear	C-8	10.7	272	14.6	370	5000	11	36.8	2450	Horiz.±15°	3
	31225-6	13195Y	235	T-3	Y	10	Clear	C-8	10.7	272	13.7	348	5000	11	36.8	2450	Horiz.±15°	7
	31267-8	13713Z/98¹	235	T-3	Z	10	Reflector	C-8	10.7	272	14	357.5	5000	11	36.8	2450	Horiz.±15°	4
	31260-3	13713X	235	T-3	X	10	Clear	C-8	10.7	272	14.6	370	5000	11	36.8	2450	Horiz.±15°	3
	31216-5	13195X/98¹	235	T-3	X	10	Reflector	C-8	10.7	272	14.1	360	5000	11	36.8	2450	Horiz.±15°	3
	29105-4	6990P	120	T6	G9.5	10	Clear	CC-8	1.375	60.3	4	101	300	20		2450	Universal	9
	29107-0	6990P Long Life	120	T6	G9.5	10	Clear	CC-8	1.375	60.3	4	101	450	20		3100	Universal	9
1200	28853-0	13561Y/00	144	T-3	Y	10	Clear	C-8	6.1	155	9	228	5000	11	77.4	2450	Horiz.±15°	1
	27063-7	13561Y/98¹	144	T-3	Y	10	Reflector	C-8	6.1	155	9	228	5000	11	77.4	2400	Horiz.±15°	1
1600	21676-2	1600T3	208	T-3	U	10	Trans.	C-8	16	406	19.8	503	5000	11	39.4	2450	Horiz.±15°	6
	20996-5	1600T3	240	T-3	U	10	Trans.	C-8	16	406	19.8	503	5000	11	39.4	2450	Horiz.±15°	6
	21590-5	1600T3	277	T-3	U	10	Trans.	C-8	16	406	19.8	503	5000	11	39.4	2450	Horiz.±15°	6
	21003-9	1600T3/7	240	T-3	RX7s	10	Trans.	C-8	16	406	19.6	498.5	5000	11	39.4	2450	Horiz.±15°	2
	21678-8	1600T3/CL	240	T-3	U	10	Clear	C-8	16	406	19.8	503	5000	11	39.4	2450	Horiz.±15°	6
	28875-3	13568Y/00	144	T-3	Y	10	Clear	C-8	6.1	155	9	228	5000	11	103.2	2450	Horiz.±15°	1
	27062-9	13568Y/98^{1,2}	144	T-3	Y	10	Reflector	C-8	6.1	155	9	228	5000	11	103.2	2500	Horiz.±15°	1
	28378-8	1600T3/CL	277	T-3	U	10	Clear	C-8	16	406	19.8	503	5000	11	39.4	2500	Horiz.±15°	6
2000	31198-5	13168X	235	T-3	X	10	Clear	C-8	11.1	282	14.6	370	5000	11	71.4	2450	Horiz.±15°	3
	31200-9	13168Z/98¹	235	T-3	Z	10	Reflector	C-8	11	280	14	357.5	5000	11	71.4	2450	Horiz.±15°	4
	21169-8	13213Y/00	235	T-3	Y	10	Clear	C-8	11	280	14	357.5	5000	11	71.4	2450	Horiz.±15°	1
	31252-0	13245X/98¹	400	T-3	X	10	Reflector	C-8	16.2	410	20	508	5000	11	48.8	2450	Horiz.±15°	3
	31269-4	13765X	400	T-3	X	10	Clear	C-8	16.2	410	20	508	5000	11	48.8	2450	Horiz.±15°	3
	26665-0	14103Z/98¹	235	T-3	SK15	10	Reflector	C-8	11	280	14.1	360	5000	11	71.4	2450	Horiz.±15°	5
	21592-1	2000T3/ICL/HT	240	T-3	U	10	Clear	C-8	10	254	12	303	5000	11	78.8	2500	Horiz.±15°	6
	21648-1	2000T3/ICL	240	T-3	U	10	Clear	C-8	10	254	12	303	5000	11	78.8	2450	Universal	6
	36855-5	13765X/98	400	T-3	X	10	Reflector	C-8	16.1	410	20	508	5000	11	48.8	2450	Universal	3
	35703-8	13168V	240	T-3	V	10	Clear	C-8	11	280	13.8	350	5000	11	71.4	2450	Horiz.±15°	8
	37811-7	13213Z/98	235	T-3	Z	10	Reflector	C-8	11	280	14.1	358	5000	11	71.1	2450	Horiz.±15°	4
2500	20998-1	2500T3	480	T-3	U		Trans.	C-8	25	635	28.8	731	5000	11	39.4	2450	Horiz.±15°	6
	21689-5	2500T3/7	480	T-3	RX7s	10	Trans.	C-8	25	635	28.7	730	5000	11	39.4	2450	Horiz.±15°	2
	23874-1	2500T3/CL	480	T-3	U	10	Clear	C-8	25	635	28.8	731	5000	11	39.4	2450	Horiz.±15°	6
	28217-8	14120R	480	T-3	RX7s	10	Clear	C-8	25	635	28.7	728	5000	11	39.4	2450	Horiz.±15°	2
3000	31244-7	13230X	400	T-3	X	10	Clear	C-8	27.6	700	31.4	798	5000	11	42.9	2450	Universal	3
	23648-9	13230X/98¹	400	T-3	X	10	Reflector	C-8	27.6	700	31.4	798	5000	11	42.9	2450	Horiz.±15°	3
3200	25435-9	3200T3/CL	240	T-3	U	10	Clear	C-8	32.1	815	41.8	1062	5000	11	39.3	2450	Horiz.±15°	6
3800	22128-3	3800T3	575	T-3	U	6	Trans.	C-8	38	965	41.8	1062	5000	11	39.4	2450	Horiz.±15°	6
	22127-5	3800T3/CL	570	T-3	U	6	Clear	C-8	38	965	41.8	1062	5000	11	39.4	2450	Horiz.±15°	6
	22129-1	3800T3/ICL/UB	575	T-3	U	6	Clear	C-8	38	965	41.8	1062	5000	11	39.4	2450	Vertical	6
5000	36845-6	5000T3/ICL/HT	600	T-3	U	6	Clear	C-8	25.1	638	28.8	731	5000	11	78.4	2450	Horiz.±15°	6
6000	29114-6	13170V	480	T-3	V	10	Clear	C-8	11.2	284	13.8	350	5000	11	211.3	2450	Horiz.±15°	8
	29123-7	13138V	480	T-3	V	10	Clear	C-8	9.3	236	12	303	5000	11	194.7	3000	Horiz.±15°	8
6850	29170-8	14118V	480	T-3	V	10	Clear	C-8	9.52	242	11.9	303	1000	11	28.3	3000	Horiz.±15°	8

* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

1) Lamps have white reflective coating on bulb

2) Lamps have fork terminals

For the most current product information, go to the e-catalog on www.philips.com

HeLeN Quartz Infrared Heat Lamps

Infrared HeLeN glare reduction lamps have a gold coating which reduces visible glare and raises the infrared output when compared to existing zone ruby sleeve heating lamps. These lamps feature a substantially lower visible glare level than either ruby and neutral density zone heating lamps. They have a narrower diameter and better color rendering than ruby sleeve lamps

Watts	Product Number	Description	Volts	Bulb	Base	Pkg. Qty.	Finish	Filament	LL		MOL		Rated Avg. Life* (hrs)	Diam. (mm)	W/cm	Color Temp. (K)	Burning Position	Fig. No.
									(In.)	(mm)	(In.)	(mm)						
500	28836-5	I5018U	120	T-3	U	10	HeLeN	C-8	5	127	8.8	223.8	5000	11	39.4	N/A	Horiz.±15°	6
1000	36516-3	I5024Z	120	T-3	SK15	10	HeLeN	C-8	11	280	14.1	360	5000	11	35.7	N/A	Horiz.±15°	5
	28050-3	I5007Z	235	T-3	SK15	10	HeLeN	C-8	11	280	14.1	360	7000	11	35.7	N/A	Horiz.±15°	5
	38175-6	I5019U	235	T-3	U	10	HeLeN	C-8	10.7	272	13.7	347	7000	11	36.8	N/A	Horiz.±15°	6
	28925-6	I5019Z	235	T-3	SK15	10	HeLeN	C-8	11	280	14.1	360	7000	11	35.7	N/A	Horiz.±15°	5
3000	249615	I5012U	235	T-3	U	10	HeLeN	C-8	16.3	413	19.9	504	5000	11	72.6	N/A	Universal	6

* Rated Average Life is the length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not. For the most current product information, go to the e-catalog on www.philips.com

Tubular Quartz Infrared Bulb Shapes (Not Actual Sizes)

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

1. Tubular quartz heat lamps should not be used in equipment where the seal temperatures exceed 350°F.
2. Operating position is HORIZONTAL.
3. RX7s Base = Recessed Single Contact

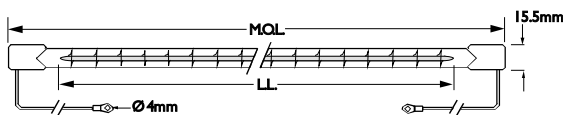


Fig. 1 (Y Base)
Leads Are Approximately 6"



Fig. 2 (RX7s Base)

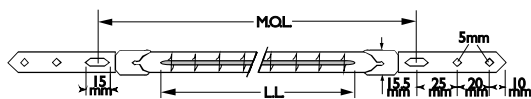


Fig. 3 (X Base)

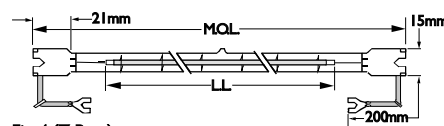


Fig. 4 (Z Base)

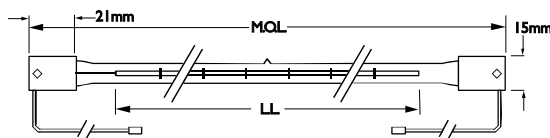


Fig. 5 (SK15 Base)
I3844Z/98—Lead is 15.7", I4103Z/98—Lead is 9"

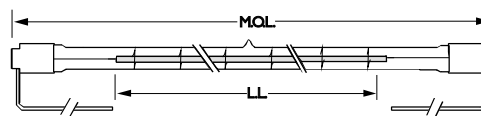


Fig. 6 (U Base)
Leads Are Approximately 6"

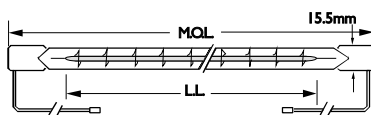


Fig. 7 (Y Base)
I3169Y—Lead is 6.3". I3195Y—Lead is 7.8"

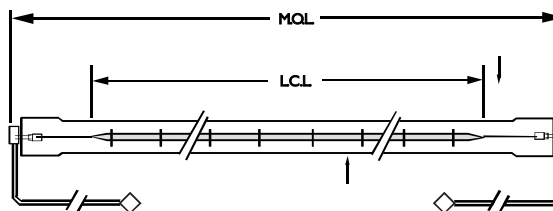


Figure 8 (V Base)
I3136V, I3170V, I3138V, I4118V lead is 1.5"
I3168V leads are 4.7" and 5.5"

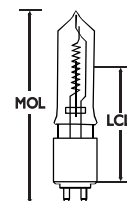


Fig. 9 (G9.5 Base)

Accent Lighting

Concentrated light on a subject which highlights it and causes it to stand out from its surrounding. Depending on degree of drama desired, accent light should minimally be 10x the general light or ambient light.

Accommodation

The involuntary muscular process by which the eye changes focus from one distance to another.

Adaptation

The involuntary process by which the visual system changes its sensitivity, depending on the luminances prevailing in the visual field. The process involves both the iris and the light sensitive cells of the retina.

ALTO® Lamp Technology

Philips ALTO® Lamp Technology is widely recognized as a leading low-mercury solution for fluorescent lighting. This technology uses capsule dosing to precisely control the amount of mercury in each ALTO lamp. Long-life ALTO lamps further reduce the need to replace lamps and, as a result, decrease the amount of mercury used over life of any lighting installation.

Ballast

The ballast is an electrical device that performs two basic functions: 1) provides the starting voltage and 2) limits the current to sustain lamp operation.

Ballast types for fluorescent lamps:

Instant Start: Instant start electronic ballasts are the most popular type of electronic ballast today because they provide maximum energy savings and they start lamps without delay or flashing. Since they do not provide lamp electrode heating, instant start ballasts consume less energy than comparable rapid start, program rapid start or programmed start ballasts. As a result, they provide the most energy efficient solution to fluorescent lamp ballasting. The instant start ballast uses 1.5 to 2 watts less energy per lamp than the rapid start alternative.

Instant-start electronic ballasts provide a high initial voltage (typically 600V for F32T8 lamps) to start the lamp. This high voltage is required to initiate discharge between the unheated electrodes of the lamp. However, the cold electrodes of lamps operated by an instant start ballast may deteriorate more quickly than the warmed electrodes of lamps operated by a rapid start, program rapid start or programmed start ballast. Lamps operated by instant start ballasts will typically withstand 10–15K switch cycles. Instant start ballasts are typically wired in *parallel*. This means that if one lamp fails, the other lamps in the circuit will remain lit.

Rapid Start: Rapid start ballasts have a separate set of windings which provide a low voltage (approx. 3.5 volts) to the electrodes for one second prior to lamp ignition. A starting voltage somewhat lower than that of instant ballast (typically 450–550V for F32T8 lamps) is applied, striking an electrical arc inside the lamp. Most rapid start electronic ballasts continue to heat the electrode even after the lamp has started, which results in a power loss of 1.5 to 2 watts per lamp. Lamps operated by a rapid start electronic ballast will typically withstand 15–20K switch cycles. Rapid start ballasts are typically wired in *series*. This means

that if one lamp fails, all other lamps in the circuit will extinguish.

Programmed Start: Programmed start (PS) electronic ballasts provide maximum lamp life in frequent starting conditions (up to 50,000 starts). PS ballasts use a custom integrated circuit (IC) which monitors lamp and ballast conditions to ensure optimal system lighting performance. Life Program rapid start ballasts, PS ballasts also precisely heat the lamp cathodes. However, PS ballasts heat the lamp cathodes to 700° C prior to lamp ignition. This puts the least amount of stress on the lamp electrodes, resulting in maximum lamp life regardless of the number of lamp starts. Programmed start ballasts are typically wired in *series*.

Ballast types for HID lamps:

Reactor: Single coil, very efficient, but poor voltage regulation to the lamp.

Constant Wattage Autotransformer (CWA): Employing two coils, the ballast is less efficient than reactor types, but have better voltage regulation. Most popular type in use.

Magnetically Regulated (Mag Reg) or Regulated

Lag (Reg Lag): Three coils make for very effective voltage regulation but also not very efficient.

Electronic: Allows for both high efficiency and the best voltage regulation.

Beam Angle

The beam angle defines the light pattern around the beam's central axis for which the luminous intensity is half that of the maximum luminous intensity.

Candela (cd) (Luminous Intensity)

The intensity base unit for light. Intensity is the luminous flux emitted from a point per unit solid angle into a particular direction, regardless of distance.

Candpower (cp)

Luminous intensity expressed in candelas.

Color Rendering Index (CRI)

A method for describing the effect of a light source on the color appearance of objects, compared to a reference source of the same color temperature (CCT). The highest CRI attainable is 100. Originally based on an eight standardized color comparisons, it was later extended to fourteen colors.

Color Temperature or Correlated

Color Temperature (CCT)

The color temperature of a light emitter refers to the temperature to which one would have to heat a "blackbody" source (Planckian radiator) to produce light of similar overall appearance or chromaticity. A low color temperature implies warmer color (more yellow/red) light while high color temperature implies a cooler light (more blue). The standard unit for color temperature measurement is expressed in Kelvin (K).

Field Angle

The field angle defines the light pattern around the beam's central axis for which the luminous intensity is 10% that of the maximum luminous intensity.

Footcandle

The unit of measure for the density of light on a surface unique to the USA. One footcandle is equal to one lumen per foot (lm/ft²). One footcandle = 10.674 lux.

General Lighting (Ambient Lighting)

Lighting designed to deliver a predominately uniform level of light throughout an area.

Glare

Glare is an interference with visual perception caused by an uncomfortably bright light source or reflection within one's field of view; a form of visual noise. In its simplest form, glare (unwanted light) is a consequence of the human eye to adapt to different light levels. In the case of glare, the eye adapts to the high level of the glare source, which makes it difficult to perceive details in the now too dark work area.

Direct Glare: Glare resulting from high luminances in the visual environment that are directly visible from a viewers position; such as an insufficiently shielded luminaire.

Reflected Glare or Veiling Reflection: A reflection of incident light that partially or totally obscures the details to be seen on a surface by reducing the contrast.

Discomfort Glare: Glare which is distracting or uncomfortable (subjective), which interferes with the perception of visual information, but which does not significantly reduce visual performance.

Disability Glare: The effect of light which significantly reduces visual performance and perception; such as car high beams in your face on a dark country road.

Illuminance

The total density of visible light—from all directions—illuminating, falling on or incident to, a surface.

Standard unit of measure for illuminance is LUX (lx) which is lumens per square meter (lm/m²). See [Footcandle](#).

Initial vs. Mean Lumens

The measured luminous output of a new light source versus the output at 40% of lamp life.

Inverse Square Law

This law says that the measured flux density from a light source decreases along any line from the source. It falls off in proportion to the square of the relative distance traversed. Thus the illuminance measurement 2 feet from the light source will be 1/4 of the measurement 1 foot from the source—not 1/2.

Kelvin

The Kelvin unit is the basis of all temperature measurement. In lighting, Kelvin is the unit of measure for Color Temperature used to indicate the overall color of the light produced from a source. See [Color Temperature](#).

Kilowatt Hour (kWh)

The measure of electrical energy from which electricity billing is determined. For example, at the rate of \$0.10 per kWh, a 100 watt lamp operating for 2000 hours will cost \$20.00 (100x2000/1000 = 200 kWh x .10 = \$20.00)

Light

Radiant energy that stimulates the sense of sight. The "visible" part of the electromagnetic spectrum from 380–770 nm. Light is the energy which allows us to see.

Lumen (lm)

SI unit of luminous flux. Photometrically, it is the luminous flux emitted within a unit solid angle (lsr) by a point source having a uniform luminous intensity of 1 cd.—or—The SI unit for measuring the flux of light being produced by a light source or received by a surface.

Luminaire (light fixture)

A complete lighting unit which consists of lamp(s), ballast(s)—if applicable—as well as mechanism for light distribution, lamp protection and alignment and connection to power.

Luminaire Efficacy

The ratio of luminous flux emitted by the fixture to that emitted by the lamp(s) within the fixture. Expressed as a percentage.

Luminance (The physical measure of brightness)

Luminance is the amount of visible light leaving a point on a surface in a given direction. The light leaving the surface can be due to reflection, transmission and/or emission. Standard unit of luminance is candela per square meter (cd/m²).

Luminous Efficacy

The expression of efficiency in converting power (watts) into light (lumens). Expressed as lumens per watt or l/w.

Luminous Exitance

Refers to the total amount of visible light leaving a surface in all directions. Unit for luminous exitance is lumens per square meter (lm/m²).

Photometry

Photometry is the science of measuring visible light in units that are weighted according to the sensitivity of the human eye known as the Visual Wavelength (Vλ) factor. Photometric theory does not address how we perceive colors.

Radiometry

Radiometry is the science of quantifying the phenomena of electromagnetic radiation. In our context, we are interested in light, the limited range of electromagnetic radiation that is visible to the human eye, sometimes extended to the areas of infrared and ultraviolet.

Rated Average Life

The length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

Task Lighting

Lighting designed for a specific visible operation which requires higher light levels; most often characterized by proximity to that task.

Voltage

A measure of electromotive force or simply said, the pressure of electricity. This is analogous to pressure in a water line. In this catalog, voltage refers to supply voltage required by the lamp (incandescent) or operating voltage required by the arc tube (discharge lamps).

Watt

Unit used to measure electric power consumed by a lamp or any electrical device.

TECHNICAL DESCRIPTIONS

Lamp Listing Sequence

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

Ordering Code

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

Ordering Code	BC-7T7W 12/2
Pkg. Qty.*	12cds
Explanation	Carded pack—2 lamps per card. The number shown under "Pkg. Qty." is the number of cards per min. shipping case.
Ordering Code	60T/SW 12/4
Pkg. Qty.	48
Explanation	12-4 lamp wrappers = 48 lamps per min. shipping case.
Ordering Code	50/150T/WL/TP 96/1
Pkg. Qty.	96
Explanation	96-1 lamp wrappers = 96 lamps per min. shipping case.

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

Voltage

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

Range Voltage	Design Voltage
115–125.....	120
120–125.....	120
120–130.....	125
125–130.....	130
230–250.....	240

Class of Lamp

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

Lamp Dimensions

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

Maximum Overall Length (MOL)

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

Nominal Length

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

Light Center Length (LCL)

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

All Screw Bases: Bottom base contact

Medium and Mogul Prefocus: Top of base pin

Medium Bipost: Bottom of bulb

Bayonet Candelabra and Medium Bayonet: Top of base pins

SC or DC Prefocus: Plane of locating bosses of prefocusing collar

Mini-Can: Intersection of 45° taper with max. diameter of base

Inches to Metric Conversion

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

Operating Position

Lamps may be operated in any position unless otherwise indicated.

Base Pin Position for Bayonet Candelabra-Based Lamps

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

SC or DC Prefocus Based Lamps

The plane containing the base axis and the major locking eyelet which is the eyelet equidistant from the two other eyelets, will be at right angles to the plane of the filament or lead wires unless otherwise indicated. The letter (A) shown in the Base column after SC or DC Pref. based lamps indicates that the distance from the bottom of base contact or contacts to the bottom of the collar is .406". In the case of DC Pref. based lamps, the letter (A) also indicates that the plane containing the base axis and contacts is at right angles to the plane containing the base axis and the major locking eyelet.



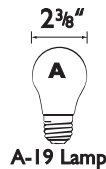
MEASURING LAMPS

Measuring Incandescent, Halogen, CFL and HID Lamps

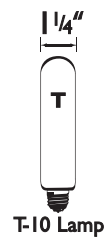
Letters designate the shape of the glass bulb and numbers indicate the diameter of the bulb in eighths of an inch.

For example:

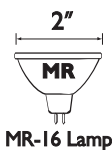
“A-19” indicates a standard bulb having a diameter of $\frac{1}{8}$ or $2\frac{3}{8}$ inches.



“T-10” indicates a tubular shaped having a diameter of $\frac{1}{8}$ or $1\frac{1}{4}$ inches.



“MR-16” indicates mini reflector having a diameter of $\frac{1}{8}$ or 2 inches.

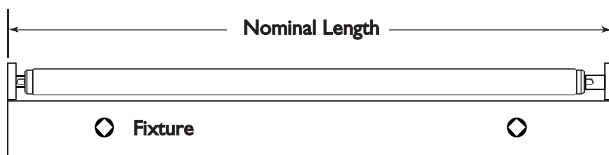


“ED-37” indicates a large HID bulb having a diameter of $\frac{3}{8}$ or $4\frac{5}{8}$ inches.

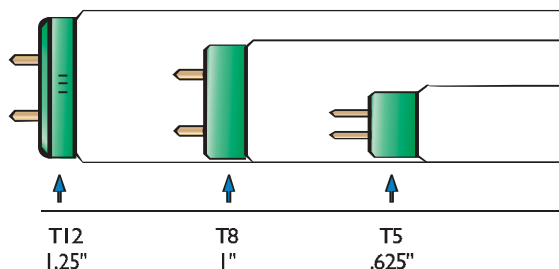


Measuring Fluorescent Lamps

To determine the length of a fluorescent lamp, you do not measure the bulb. The Nominal Length of the bulb is the measurement from back of socket to back of socket on the fixture.



To determine the type of lamp you need, measure the endcap and use the illustration below as a guide.



UNDERSTANDING ORDERING CODES

Typical ordering codes can be understood with the examples below:

Incandescent ordering code: BC15BA9C/CL/LL

- BC = Blister Carded Package
- 15 = Wattage
- BA9 = Lamp Type
- C = Candelabra Base (Blank = Medium)
- CL = Clear (W = White, etc.)
- LL = Long Life (Blank = Standard)

Halogen ordering code: 45PAR38/HAL/SP10

- 45 = Lamp Wattage
- PAR38 = Lamp Type
- Hal = Halogen
- SP = Spot Lamp
- 10 = Beam Spread in Degrees

CFL ordering code: PL-C 13W/827/4P/ALTO

- PL-C = Lamp Type
- 13W = Lamp Wattage
- 827 = Lamp Color
- 4P = Base has 4-Pins
- ALTO = Low Mercury Content

Fluorescent ordering code: F32T8/ADV841/ALTO

- F = Fluorescent
- 32 = Nominal Lamp Wattage
- T8 = 1" Diameter Tube
- ADV = Advantage
- 841 = CRI of 80+ and Color Temp. of 4100K
- ALTO = Low Mercury Content

HID ordering code: MS320/C/U/PS

- MS = High Output Art Tune
- 320 = Lamp Wattage
- C = Coated
- U = Universal Burning Position
- PS = Pulse Start