



SPECIALTY



CONTENTS	124	How to Read a Table
	125	Safety Coated Lamps
	127	Photo/Projection/SSTV Lamps
	129	Miniature Lamps
	132	Sealed Beam Lamps
	133	Accessories
	134	Bulb, Base and Filament Identification
	135	Symbols, Footnotes and Abbreviations



how to read a table

FOOTNOTES & SYMBOLS Related footnotes can be found on page 135.

BULB Designations indicate shape and size. Illustrations can be found on page 134 and at the top of each page.

PRODUCT NUMBER Use this product number when placing an order.

PRODUCT CODE Abbreviated product description can also be used for ordering.

DESCRIPTION Color description or other important information.

PACKAGE QUANTITY Indicates minimum sell quantity and smallest shipping carton.

CRI An international scale from 0 to 100 that indicates the relative color rendering value of a light source. The Color rendering index expresses the degree to which colors will look "natural" under a given light source.

LUMENS Represents average light output.

MOL Indicates maximum overall length in inches.

Bulb	Base	Watts	Product Number	Footnotes	Product Code	Description	Pkg. Qty.	Color Temp.	CRI	Lumens	Avg. Life	MOL
------	------	-------	----------------	-----------	--------------	-------------	-----------	-------------	-----	--------	-----------	-----

CoverShield Compact Fluorescent

T3	Med.	13	90200	†,\$,1,2	CFL13/27/CS	Warm White	10/50	2700	82	850	10000	4.44"
		23	90250	†,\$,1,2	CFL23/27/CS	Warm White	10/50	2700	82	1600	12000	5.13"
PAR30	Med.	15	90201	†,\$,1,2,3	CFL15/27/PAR30/CS	Warm White Flood	6/24	2700	82	750	10000	4.63"

ANSI Code	Bulb	Base	Watts	Volts	Pkg. Qty.	Avg. Life	Filament	Lumens	Color Temp.	Operating Position
-----------	------	------	-------	-------	-----------	-----------	----------	--------	-------------	--------------------

Haleo Photo/Projection/SSTV

DED	MR16	GX5.3	85	13.8	1/10	1000	C-6	-	3150	BDTH
DVS	T3	R7s	500	130	1/10	2000	C-8	9500	3000	HOR
DWE	PAR36	Screw Terminals	650	120	1/12	100	C-6	24000	3200	U
DYS/DYV/BHC	G7	GZ9.5	600	120	1/10	75	CC-6	17000	3200	HOR
DYS/DYV/BHC/5	G7	GZ9.5	600	125	1/10	150	CC-6	17000	3200	HOR

ANSI CODE The specific electrical characteristics of a lamp.

BASE Indicates base type. Full base descriptions and illustrations can be found on page 134.

WATTS Indicates the power consumed by the lamp during operation.

VOLTS Indicates the product's design voltage of operation.

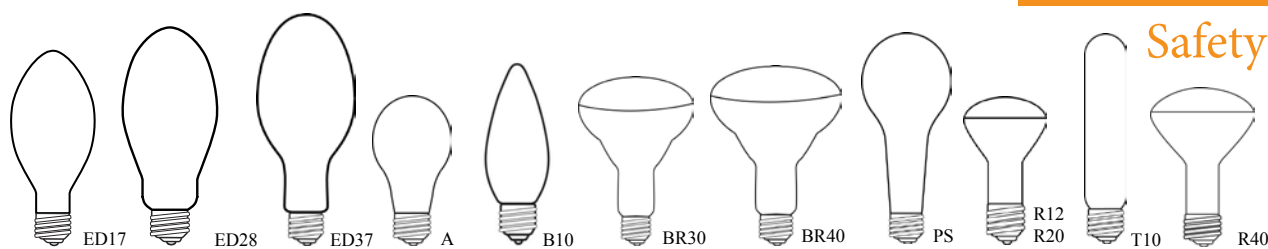
AVERAGE LIFE Average rated life expressed in hours.

FILAMENT Filament types are illustrated on page 134.

COLOR TEMP. A term used to describe the color of a light source and is expressed in degrees Kelvin (K).

OPERATING POSITION Indicates the approved operating position of a lamp.

Safety Coated



Bulb	Base	Watts	Product Number	Footnotes	Product Code	Description	Pkg. Qty.	ANSI	Color Temp.	Lumens	Avg. Life	MOL
------	------	-------	----------------	-----------	--------------	-------------	-----------	------	-------------	--------	-----------	-----

CoverShield Metal Halide

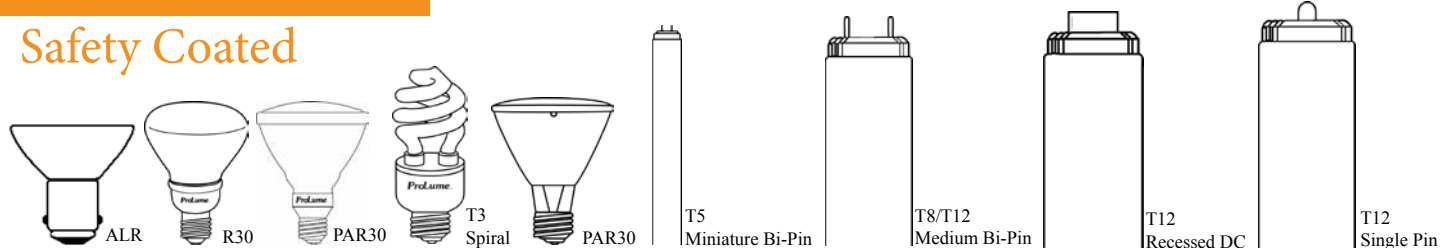
ED17	Med.	175	90402	†,10,12,13,15,18	MP175/U/MED/CSTF	Clear PFA	1/12	M57/O	4000	14000	10000	5.45"
ED28	EX39	175	90400	†,10,12,13,14,18	MP175/BU/CSTF	Clear Base Up PFA	1/12	M57/O	4000	14000	10000	8.25"
ED28	Mogul	175	108602	9,12,15,21,17,18	MH175/U/CSTF	Clear PFA	1/12	M57/E	4000	14000	10000	8.25"
		250	108604	9,12,15,16,17,18	MH250/U/CSTF	Clear PFA	1/12	M58/E	4000	21800	10000	8.25"
	EX39	250	90401	†,10,12,13,14,18	MP250/BU/CSTF	Clear Base Up PFA	1/12	M58/O	4000	21000	10000	8.25"
ED37	Mogul	400	108600	9,11,12,15,16,17,18	MH400/U/CSTF	Clear PFA	1/6	M59/E	4000	36000	20000	11.50"
	EX39	400	60502	10,11,12,14,15,18	MP400/BU/CSTF	Clear Base Up PFA	1/6	M59/O	4000	36000	20000	11.50"

Bulb	Base	Watts	Product Number	Footnotes	Product Code	Description	Pkg. Qty.	Lumens	Avg. Life	MOL
------	------	-------	----------------	-----------	--------------	-------------	-----------	--------	-----------	-----

CoverShield Incandescent

A15	Med.	40	90300		A15CL40/CSTF	Clear PFA	20/120	300	3000	3.50"
		40	6146		A15RS40/CS	Clear	20/120	300	1500	3.50"
		60	6147		A15RS60/CS	Clear	20/120	500	1500	3.50"
A19	Med.	25	101124		A19RS25/CS	Clear	20/120	160	2000	4.25"
		40	101125		A19RS40/CS	Clear	20/120	300	2000	4.25"
		60	6141		A19RS60/CS	Clear	20/120	500	2000	4.25"
		75	6142		A19RS75/CS	Clear	20/120	680	2000	4.25"
		100	6143		A19RS100/CS	Clear	20/120	960	2000	4.25"
		100	6041		A21RS100/P5/CS	Clear	12/60	800	5000	5.00"
A21	Med.	150	6043		A21RS150/P5/CS	Clear	1/60	1300	5000	5.00"
		40	102148	21	ETC40/CS	Clear	25/500	280	3000	3.87"
B10	Med.	60	102146	21	ETC60/CS	Clear	25/500	500	3000	3.87"
		65	404051	23	BR30FL65/CS	Flood	1/24	500	5000	5.37"
BR40	Med.	120	404065	23	BR40FL120/5/CS	Flood	1/24	1200	5000	6.56"
		250	404066	△,23,25,27	BR40CL250/1/CSTF	Clear Heat PFA	1/12	-	5000	6.56"
PS25	Med.	150	401345	22	PS25CL150/P5/CS	Clear	1/60	1300	5000	6.93"
		200	401347	22	PS25CL200/P5/CS	Clear	1/60	2000	5000	6.93"
R12	BA15s	20	1383/CS		1383/CS	S.C. Bayonet 13V	10/1000	-	300	2.60"
R20	Med.	30	10102	†	R20FL30/CS	Flood	10/100	140	3000	3.93"
		50	104016	3	R20FL50/CS	Flood	10/100	210	2000	4.80"
R40	Med.	250	404071	△,23,25,16	R40RED250/10/CSTF	Red Heat PFA	1/12	-	5000	6.56"
		375	104050	△,23,24,25,26,27	R40CL375/CSTF	Clear Heat PFA	1/12	-	5000	6.56"
T10	Med.	40	106228		T10CL40/CS	Clear	25/200	280	2500	5.00"

Safety Coated



Bulb	Base	Watts	Product Number	Footnotes	Product Code	Description	Pkg. Qty.	Lumens	Avg. Life	MOL
------	------	-------	----------------	-----------	--------------	-------------	-----------	--------	-----------	-----

CoverShield Halogen

ALR	BA15d	20	90351	†	GBF/CS	DC Bayonet 12V	1/50	750cp	2000	1.38"
PAR30	Med.	50	90350	†,N,\$,19,20	HP30FL50/CS	Flood	15	660	3000	3.62"

Bulb	Base	Watts	Product Number	Footnotes	Product Code	Description	Pkg. Qty.	Color Temp.	CRI	Lumens	Avg. Life	MOL
------	------	-------	----------------	-----------	--------------	-------------	-----------	-------------	-----	--------	-----------	-----

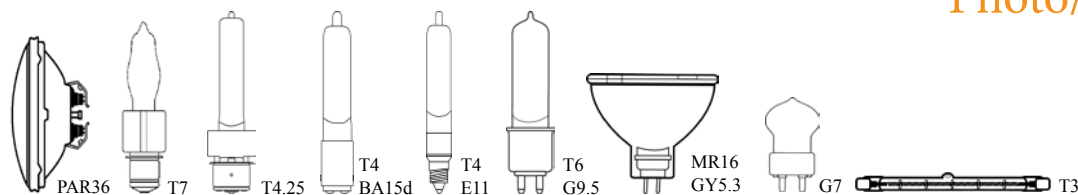
CoverShield Compact Fluorescent

T3	Med.	13	90200	†,\$,1,2	CFL13/27/CS	Warm White	10/50	2700	82	850	10000	4.44"
		23	90250	†,\$,1,2	CFL23/27/CS	Warm White	10/50	2700	82	1600	12000	5.13"
PAR30	Med.	15	90201	†,\$,1,2,3	CFL15/27/PAR30/CS	Warm White Flood	6/24	2700	82	750	10000	4.63"
R30	Med.	16	46106	,\$,1,2,4	CFL16/50/R30/CS	Natural White Flood	6/24	5000	82	750	8000	5.56"

CoverShield Linear Fluorescent

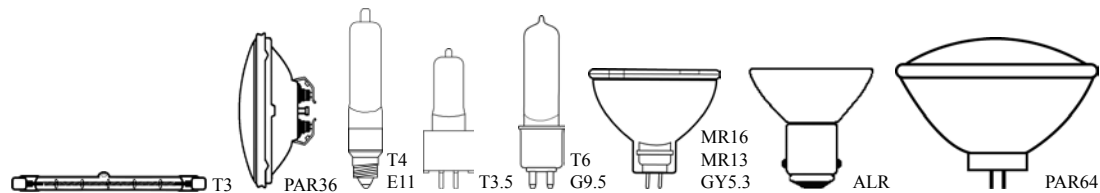
T5	Min. Bi-Pin	28	90015	♥ ⊕ †,\$,5,8	F28T5/835/ECO/IC/CS	835 Phosphor	25	3500	86	2900	24000	46.00"
		28	90016	♥ ⊕ †,\$,5,8	F28T5/841/ECO/IC/CS	841 Phosphor	25	4100	86	2900	24000	46.00"
		54	90051	♥ ⊕ †,\$,5,8	F54T5/835/HO/ECO/IC/CS	835 Phosphor High Output	25	3500	86	5000	24000	46.00"
		54	90052	♥ ⊕ †,\$,5,8	F54T5/841/HO/ECO/IC/CS	841 Phosphor High Output	25	4100	86	5000	24000	46.00"
		54	90053	♥ ⊕ †,\$,5,8	F54T5/850/HO/ECO/IC/CS	850 Phosphor High Output	25	5000	86	5000	2400	46.00"
T8	Med. Bi-Pin	17	90061	♥ ⊕ †,\$,5	F17T8/735/ECO/IC/CS	735 Phosphor	25	3500	78	1350	24000	24.00"
		17	90062	♥ ⊕ †,\$,5	F17T8/741/ECO/IC/CS	741 Phosphor	25	4100	78	1350	24000	24.00"
		25	90071	♥ ⊕ †,\$,5	F25T8/735/ECO/IC/CS	735 Phosphor	25	3500	78	2150	24000	36.00"
		25	90072	♥ ⊕ †,\$,5	F25T8/741/ECO/IC/CS	741 Phosphor	25	4100	78	2150	24000	36.00"
		28	90081	♥ ⊕ †,\$,5	F28T8/835/ECO/IC/CS	835 Phosphor	25	3500	86	2800	24000	48.00"
		28	90082	♥ ⊕ †,\$,5	F28T8/841/ECO/IC/CS	841 Phosphor	25	4100	86	2800	24000	48.00"
		28	90083	♥ ⊕ †,\$,5	F28T8/850/ECO/IC/CS	850 Phosphor	25	5000	86	2800	24000	48.00"
		32	90086	♥ ⊕ †,\$,5	F32T8/735/ECO/IC/CS	735 Phosphor	25	3500	78	2850	24000	48.00"
		32	90087	♥ ⊕ †,\$,5	F32T8/741/ECO/IC/CS	741 Phosphor	25	4100	78	2850	24000	48.00"
		32	90088	♥ ⊕ †,\$,5	F32T8/750/ECO/IC/CS	750 Phosphor	25	5000	78	2850	24000	48.00"
		32	90091	♥ ⊕ †,\$,5	F32T8/835/ECO/IC/CS	835 Phosphor	25	3500	86	3050	24000	48.00"
		32	90092	♥ ⊕ †,\$,5	F32T8/841/ECO/IC/CS	841 Phosphor	25	4100	86	3050	24000	48.00"
		32	90093	♥ ⊕ †,\$,5	F32T8/850/ECO/IC/CS	850 Phosphor	25	5000	86	3050	24000	48.00"
T12	Med. Bi-Pin	20	90120	†,5	F20T12CW/CS	Cool White	30	4100	62	1150	8000	24.00"
		34	90130	♥ ⊕ †,\$,5	F34CWES/ECO/CS	Cool White	30	4100	53	2650	20000	48.00"
		40	90135	†,5	F40DX/CS	Daylight Deluxe	30	6500	85	2650	20000	48.00"
	R17D	60	90055	†,5,6,7	F48CWHO/M/CS	Cool White	15	4100	62	4050	12000	48.00"
	Single Pin	75	90152	♥ ⊕ †,5	F96DX/ECO/CS	Daylight Deluxe	15	6500	84	4500	26000	96.00"
R17D	95	90054	♥ ⊕ †,\$,5,6,7	F96CWHOES/ECO/CS	Cool White	15	4250	62	8000	12000	96.00"	

Photo/Projection/SSTV

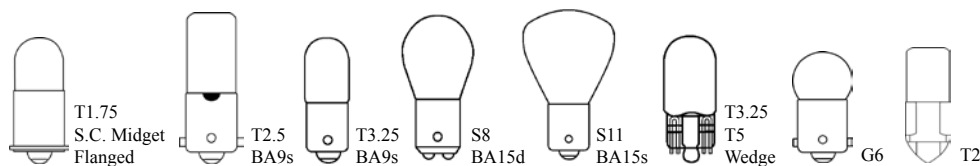


ANSI Code	Bulb	Base	Watts	Volts	Pkg. Qty.	Avg. Life	Filament	Lumens	Color Temp.	Operating Position
Halco Photo/Projection/SSTV										
DED	MR16	GX5.3	85	13.8	1/10	1000	C-6	-	3150	BDTH
DVS	T3	R7s	500	130	1/10	2000	C-8	9500	3000	HOR
DWE	PAR36	Screw Terminals	650	120	1/12	100	C-6	24000	3200	U
DYS/DYV/BHC	G7	GZ9.5	600	120	1/10	75	CC-6	17000	3200	HOR
DYS/DYV/BHC/5	G7	GZ9.5	600	125	1/10	150	CC-6	17000	3200	HOR
EGE	T4.25	P28s	500	120	1/10	2000	CC-8	10450	2950	U
EGG	T6	P28s	750	120	1/10	2000	CC-8	15750	3000	U
EHC/EHB	T6	G9.5	500	120	1/10	500	CC-8	12700	3150	U
EHF	T6	G9.5	750	120	1/10	300	CC-8	20000	3200	U
EHM	T3	R7s	300	120	1/10	2000	C-8	5000	2950	HOR
EHT	T4	E11	250	120	1/10	2000	CC-8	4500	2950	U
EHV	T4	E11	325	120	1/10	500	CC-8	7800	3000	U
EJA	MR16	GX5.3	150	21	1/10	40	CC-6	-	3400	BDTH
EJL	MR16	GX5.3	200	24	1/10	50	CC-6	-	3400	BDTH
EJM	MR16	GX5.3	150	21	1/10	40	CC-6	-	3350	BDTH
EJV	MR16	GX5.3	150	21	1/10	40	CC-8	-	3350	BDTH
EKE	MR16	GX5.3	150	21	1/10	200	CC-6	-	3250	BDTH
ELC	MR16	GX5.3	250	24	1/10	50	CC-6	-	3400	BDTH
ELH	MR16	GY5.3	300	120	1/10	35	CC-8	-	3350	BDTH
ENH	MR16	GY5.3	250	120	1/10	175	CC-8	-	3250	BDTH
ENX	MR16	GY5.3	360	82	1/10	75	CC-8	-	3300	BDTH
ENX/5	MR16	GY5.3	360	86	1/10	100	CC-8	-	3300	BDTH
ESD	MR16	GY5.3	150	120	1/10	12	CC-8	-	3350	BDTH
ESL	T4	E11	150	120	1/10	1000	CC-2V	2800	2900	U
ESM	Frosted/T4	E11	250	120	1/10	2000	CC-8	4850	2950	U
ESN	T4	E11	100	120	1/10	750	CC-2V	1900	2850	U
ESP	T4	BA15d	150	120	1/10	1000	CC-2V	2400	2950	U
ESR	T4	BA15d	100	120	1/10	1000	CC-2V	1900	3000	U
ESS	T4	BA15d	250	120	1/10	2000	CC-8	5000	3000	U
ETB	Frosted/T4	BA15d	250	120	1/10	2000	CC-8	4700	2950	U
ETC	T4	BA15d	150	20	1/10	2000	CC-8	2800	2900	U
ETD	Frosted/T4	BA15d	100	120	1/10	750	CC-2V	1750	2900	U
ETE	Frosted/T4	E11	100	120	1/10	750	CC-2V	1750	2900	U
ETF	Frosted/T4	BA15d	150	120	1/10	2000	CC-8	2700	2900	U
ETG	T4	E11	150	120	1/10	2000	CC-8	2400	2950	U

Photo/Projection/SSTV

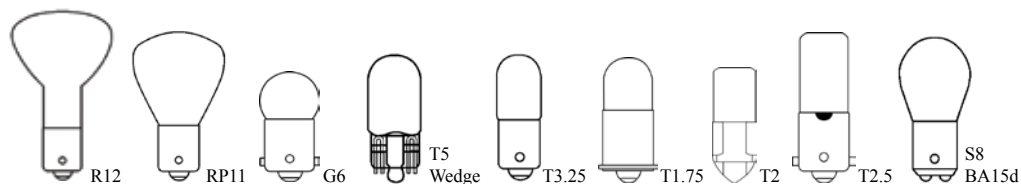


ANSI Code	Bulb	Base	Watts	Volts	Pkg. Qty.	Avg. Life	Filament	Lumens	Color Temp.	Operating Position
ETH	Frosted/T4	E11	150	120	1/10	2000	CC-8	2700	2900	U
EVR	T4	E11	500	120	1/10	2000	CC-8	10450	2950	U
EVW	MR16	GY5.3	250	82	1/10	50	CC-8	-	3300	BDTH
EXR	MR13	GX5.3	300	82	1/10	35	CC-8	-	3350	BDTH
EXR/5	MR13	GX5.3	300	86	1/10	70	CC-8	-	3350	BDTH
EXY	MR13	GX5.3	250	82	1/10	200	CC-8	-	3200	BDTH
EYA	MR16	GY5.3	200	82	1/10	50	CC-8	-	3300	BDTH
EYB	T3.5	G5.3	360	82	1/10	75	CC-8	10000	3300	BDTH
EYB/5	T3.5	G5.3	360	86	1/10	150	CC-8	10000	3300	BDTH
EYV	Frosted/T4	E11	500	130	1/10	2000	CC-8	8075	3000	U
EYW	T4	E11	500	130	1/10	2000	CC-8	8500	3000	U
EYX	Frosted/T4	E11	500	120	1/10	1700	CC-8	8800	2950	U
FAL	T4	R7s	420	120	1/10	90	CC-8	11000	3200	U
FBO	PAR36	Screw Terminals	650	120	1/12	100	C-6	38000	3400	U
FCL	T3	R7s	500	120	1/10	2000	C-8	9500	3000	HOR
FCM	T3	R7s	1000	120	1/10	300	C-8	27000	3200	HOR
FCR	T3.5	GY6.35	100	12	1/10	50	C-6F	2900	3250	BDTH
FCS	T4	G6.35	150	24	1/10	50	C-6F	4500	3400	ANY
FEL	T6	G9.5	1000	120	1/10	300	CC-8	27000	3200	BDTH
FFN	PAR64	GX16d	1000	120	1/6	800	C-7A	400000	3200	U
FHM	Frosted/T3	R7s	1000	120	1/10	300	C-8	26000	3200	HOR
FHS	MR13	GX5.3	300	82	1/10	70	CC-8	-	3300	BDTH
FHS/5	MR13	GX5.3	300	86	1/10	140	CC-8	-	3300	BDTH
FLK	T6	G9.5	575	115	1/10	300	CC-8	16000	3200	U
GBE	ALR12	BA15d	20	12	1/10	2000	CC-8	1500cp	3000	U
GBF	ALR12	BA15d	20	12	1/10	2000	CC-8	750cp	3000	U
GBF/CS	ALR12	BA15d	20	12	1/10	2000	CC-8	750cp	3000	U



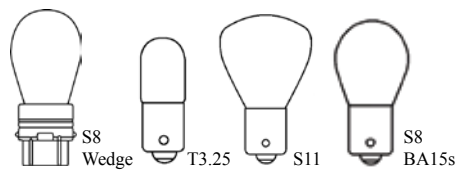
Product Code	Bulb	Base	Primary Application	Volts	Watts or Amps	Pkg. Qty.	MSCP	Avg. Life	Design Filament	MOL
Miniatures										
18S11/ISC	S11	BA15s	Railway Signal	10	25W	10/500	360lm	2000	CC-6	2.37"
25S11/4SC	S11	BA15s	Railway Signal	10	18W	10/500	200lm	1000	CC-6	2.37"
55	G4.5	BA9s	Indicator	7	0.41	10/2000	2	500	C-2R	1.07"
57	G4.5	BA9s	Auto, Instrument	14	0.24	10/2000	2	500	C-2V	1.07"
73	T1.75	Wedge	Indicator	14	0.08	10/2000	0.3	15000	C-2V	0.80"
74	T1.75	Wedge	Auto	14	0.10	10/2000	0.7	1000	C-2V	0.80"
85	T1.75	Wedge	Indicator	28	0.04	10/2000	0.3	7000	C-2F	0.80"
86	T1.75	Wedge	Indicator	6.3	0.20	10/2000	0.4	20000	C-2V	0.80"
89	G6	BA15s	Auto	13	0.58	10/2000	6	750	C-2R	1.40"
93	S8	BA15s	Auto	12.8	1.04	10/2000	15	700	C-6	2.00"
94	S8	BA15d	Auto, Marine	12.8	1.04	10/2000	15	700	C-6	2.00"
120MB	T2.5	BA9s	Tel. Indicator	120	0.025	10/100	0.36	10000	CC-3A	1.20"
120PSB	T2	Tel Slide #5	Tel. Indicator	120	0.025	10/50	-	10000	CC-7A	1.10"
130MB	T2.5	BA9s	Indicator	130	0.025	10/2000	0.36	10000	CC-3A	1.19"
159	T3.25	Wedge	Indicator	6.3	0.15	10/2000	0.34	5000	C-2R	1.06"
161	T3.25	Wedge	Auto, Instrument	14	0.19	10/2000	1	4000	C-2F	1.06"
194	T3.25	Wedge	Auto	14	0.27	10/2000	2	2500	C-2F	1.10"
259	T3.25	Wedge	Radio	6.3	0.25	10/2000	0.65	5000	C-2R	1.06"
313	T3.25	BA9s	Aircraft	28	0.17	10/2000	3.5	500	C-2F	1.19"
316	T3.25	BA9s	Aircraft	6	0.70	10/2000	3.4	500	C-2R	1.19"
387	T1.75	S.C. Midget Flanged	Indicator	28	0.04	10/50	0.03	7000	C-2F	0.60"
400	T3.25	Wedge	Aircraft	28	0.10	10/2000	1.6	1000	C-2F	1.06"
456	G4.5	BA9s	Instrument	28	0.17	10/2000	2	5000	C-2F	1.07"
464	T3.25	Wedge	Aircraft	28	0.17	10/2000	3	1500	C-2F	1.06"
555	T3.25	Wedge	Pinball	6.3	0.25	10/2000	0.9	3000	C-2R	1.06"
590	T3.25	Wedge	Strip Lighting	13.5	0.37	10/2000	4	300	C-2V	1.06"
656	T3.25	Wedge	Indicator	28	0.06	10/2000	0.62	2500	C-2F	1.06"
657	T3.25	Wedge	Indicator	28	0.08	10/2000	0.62	15000	C-2F	1.06"
658	T3.25	Wedge	Indicator	14	0.08	10/2000	0.31	15000	C-2F	1.06"
755	T3.25	BA9s	Indicator	6.3	0.15	10/2000	0.33	20000	C-2R	1.20"
756	T3.25	BA9s	Indicator	14	0.08	10/2000	0.31	15000	C-2F	1.19"
757	T3.25	BA9s	Indicator	28	0.08	10/2000	0.62	15000	C-2F	1.19"
904	T5	Wedge	Auto	13.5	0.69	10/2000	4	5000	C-2F	1.50"
906	T5	Wedge	Auto	13.0	0.69	10/2000	6	1000	C-2F	1.50"
908	T5	Wedge	Emergency Lighting	6.0	1.50	10/2000	12	50	C-2R	1.50"
909	T5	Wedge	Emergency Lighting	6.0	0.62	10/2000	3	50	C-2R	1.50"
912	T5	Wedge	Auto	12.8	1.00	10/2000	12	1000	C-2R	1.50"

Miniatures



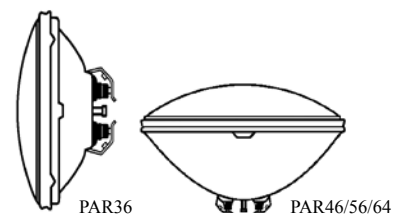
Product Code	Bulb	Base	Primary Application	Volts	Watts or Amps	Pkg. Qty.	MSCP	Avg. Life	Design Filament	MOL
Miniatures (cont'd)										
912x Xenon	T3.25	Wedge	Garden	12.8	1.00	10/600	12	10000	C-2R	1.50"
915	T5	Wedge	Emergency Lighting	12.0	0.75	10/2000	11	50	C-2R	1.50"
918	T5	Wedge	Garden	12.8	0.56	10/2000	6.5	500	C-2R	1.50"
918x Xenon	T3.25	Wedge	Garden	12.8	0.56	10/600	6.5	10000	C-2R	1.50"
921	T5	Wedge	Auto	12.8	1.40	10/2000	21	500	C-2R	1.50"
921x Xenon	T3.25	Wedge	Auto	12.8	1.4	10/600	21	10000	C-2R	1.50"
927	T5	Wedge	Emergency Lighting	6.0	12.0	10/50	8	50	C-2R	1.50"
963	T5	Wedge	Emergency Lighting	6.0	2.0	10/2000	15	50	C-2R	1.50"
1141	S8	BA15s	Auto	12.8	1.44	10/2000	21	1000	C-6	2.00"
1142	S8	BA15d	Auto	12.8	1.44	10/2000	21	1000	C-6	2.00"
1156	S8	BA15s	Auto, Stop	12.8	2.10	10/2000	32	1200	C-6	2.00"
1195	RP11	BA15s	Auto	12.5	3.00	10/500	50	300	C-2V	2.30"
1196	RP11	BA15d	Auto	12.5	3	10/500	50	300	C-2R	2.25"
1229	S8	BA15d	Emergency Lighting	40	0.38	10/1000	15	400	C-2V	2.00"
1317	B6	BA15s	Aircraft, Emergency	6	0.51	10/1000	3.4	100	C-6	1.75"
1383	R12	BA15s	Aircraft, Reading	13	20	10/1000	-	300	C-8	2.60"
1383/CS	R12	BA15s	Aircraft, Reading	13	20	10/1000	-	-	C-8	2.60"
1460X	S8	D.C. Pre-Focus	Microscope	6.5	2.75	10/500	23	100	C-6	2.00"
1493	S8	BA15d	Microscope	6.5	2.75	10/1000	23	100	C-6	2.00"
1495	T4.5	BA9s	Aircraft	28	0.30	10/1000	6	500	C-2F	1.38"
1591	S8	BA15s	Aircraft	25	0.61	10/1000	15	1000	C-2V	2.00"
1612	S8	BA15d	Instrument	5.4	1.9	10/1000	10	1000	C-6	2.00"
1619	S8	BA15s	Instrument	6.7	1.90	10/1000	15	500	C-6	2.00"
1630	S8	D.C. Pre-Focus	Instrument	6.5	2.75	10/500	23	100	C-6	2.00"
1638	S8	BA15d	Marine	28	1.02	10/1000	32	500	2C-6	2.00"
1680	S8	BA15s	Aircraft	6	4.10	10/1000	32	300	C-6	2.00"
1680X	S8	BA15s	Aircraft	6	4.10	10/1000	32	300	C-6	2.00"
1691AF	S8	BA15s	Aircraft, Frosted	28	0.61	10/1000	-	1000	2C-2R	2.00"
1777	S8	BA15s	Aircraft	12.8	1.52	10/1000	26	400	C-2R	2.00"
1813	T3.25	BA9s	Radio	14.4	0.10	10/2000	0.86	1000	C-2V	1.19"
1815	T3.25	BA9s	Indicator	14	0.20	10/2000	1.4	3000	C-2F	1.20"
1818	T3.25	BA9s	Aircraft	24	0.17	10/2000	3.3	250	C-2F	1.19"
1819	T3.25	BA9s	Indicator	28	0.04	10/2000	0.34	2500	C-2F	1.19"
1820	T3.25	BA9s	Indicator	28	0.10	10/2000	1.6	1000	C-2F	1.19"
1822	T3.25	BA9s	Indicator	36	0.10	10/2000	2.1	1000	C-2F	1.19"
1828	T3.25	BA9s	Indicator	37.5	0.05	10/2000	0.65	3000	C-2F	1.19"

Miniatures



Product Code	Bulb	Base	Primary Application	Volts	Watts or Amps	Pkg. Qty.	MSCP	Avg. Life	Design Filament	MOL
Miniatures (cont'd)										
1829	T3.25	BA9s	Indicator	28	0.07	10/2000	1	1000	C-2F	1.19"
1835	T3.25	BA9s	Indicator	55	0.05	10/2000	1.1	5000	C-2F	1.19"
1864	T3.25	BA9s	Aircraft	28	0.17	10/2000	3	1500	C-2F	1.19"
1866	T3.25	BA9s	Radio	6.3	0.25	10/2000	0.65	5000	C-2R	1.19"
2232	S8	BA15s	Aircraft	28	0.64	10/1000	18	2000	CC-8	2.00"
2233	S8	BA15s	Aircraft	28	0.77	10/1000	21	2000	CC-8	2.00"
3011	S11	BA15s	Aircraft	28	1.29	10/500	44	1000	C-2V	2.38"
3155	S8	Plastic Wedge	Auto, Signal	12.8	1.60	10/2000	21	1500	C-6	2.10"
3156	S8	Plastic Wedge	Auto, Stop	12.8	2.10	10/2000	32	1200	C-6	2.10"

Sealed Beam

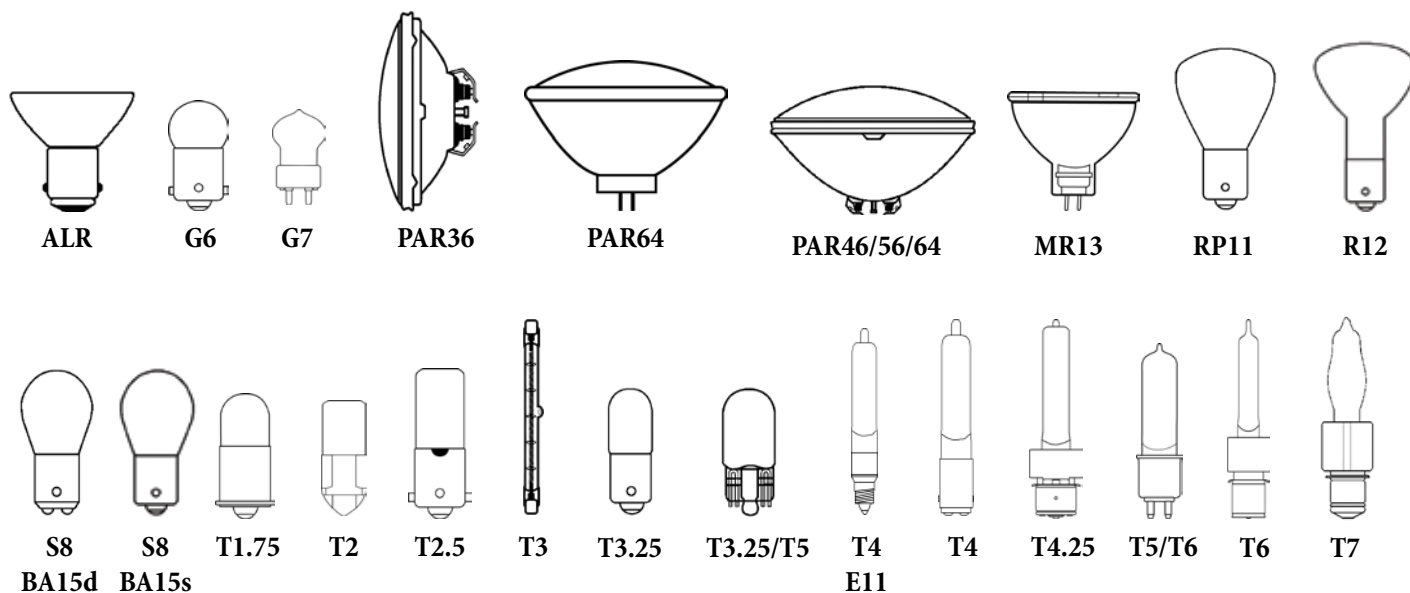


Product Code	Bulb	Base	Volts	Watts	Pkg. Qty.	CBCP	Avg. Life	Design Filament	Beam Spread	MOL
Sealed Beam										
4405	PAR36	Screw Terminals	12.8	30	1/12	50000	100	C-6	6	2.75"
4406	PAR36	Screw Terminals	12.8	35	1/12	600	300	C-6	80	2.80"
4411	PAR36	Screw Terminals	12.8	35	1/12	3000	300	C-6	-	2.80"
4414	PAR36	Screw Terminals	12.8	18	1/12	1500	300	C-6	50	2.80"
4415	PAR36	Screw Terminals	12.8	35	1/12	9000	300	C-6	40	2.80"
4446	PAR36	Screw Terminals	12.8	25	1/12	400	300	C-6	80	2.80"
4505	PAR36	Screw Terminals	28	50	1/12	45000	400	C-6	5	2.80"
4509	PAR36	Screw Terminals	13	100	1/12	110000	25	C-6	12x6	2.75"
4515	PAR36	Screw Terminals	6.4	30	1/12	55000	100	C-6	7x6	2.75"
H4515	PAR36	Screw Terminals	6.4	30	1/12	65000	100	C-6	7x6	2.75"
4535	PAR46	Screw Terminals	6.4	30	1/12	95000	100	C-6	5.5	3.75"
4545	PAR56	Screw Terminals	12	100	1/12	225000	100	C-6	9	4.50"
4546	PAR36	Screw Terminals	4.7	.050A	1/12	6300	100	C-2R	3	2.80"
4552	PAR64	Screw Terminals	28	250	1/6	500000	25	CC-8	7x8	3.75"
4553	PAR46	Screw Terminals	28	250	1/12	300000	25	CC-8	11x12	3.13"
4559	PAR64	Screw Terminals	28	600	1/6	600000	25	C-6	11x12	3.75"
4587	PAR36	Screw Terminals	28	250	1/12	40000	25	CC-8	40	2.80"
4596	PAR36	Screw Terminals	28	250	1/12	150000	25	CC-8	11x12	2.75"
7613	PAR36	Screw Terminals	6	8	1/12	400	50	C-6	30	2.80"
7613-1	PAR36	Slip-on Terminals	6	8	1/6	400	50	C-6	30	2.80"

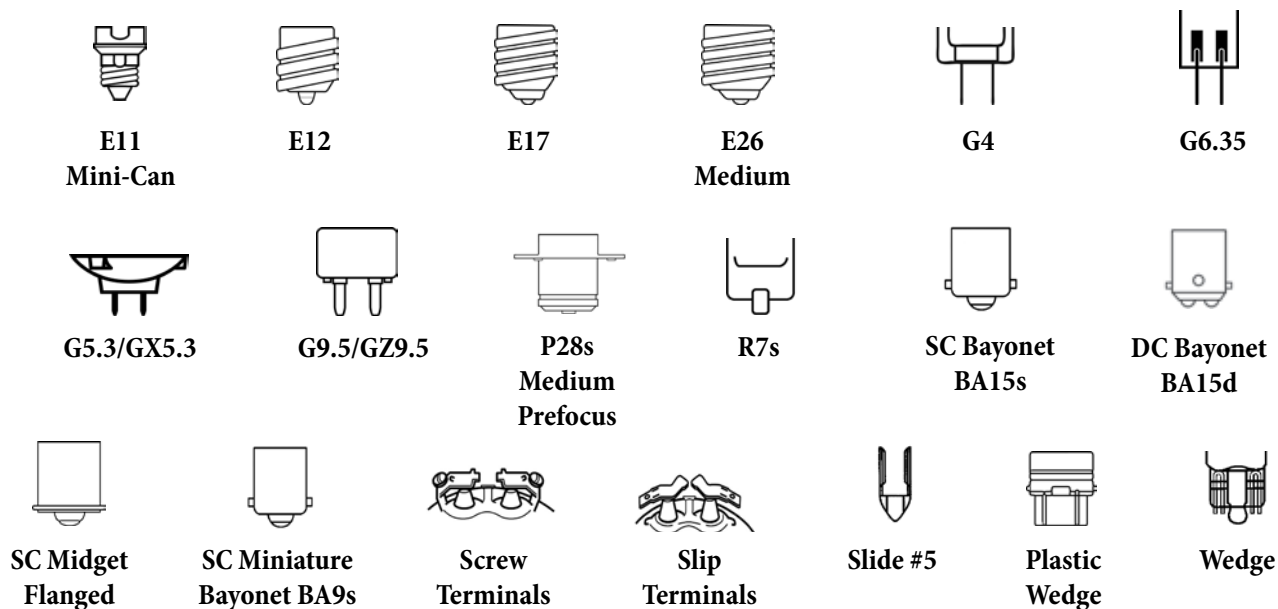
Product Number	Product Code	Description	Pkg. Qty.
Tube Guards			
91020	TG32T8CL	4' T8 Clear Tube Guard with Endcap	24
91021	TG40T12CL	4' T12 Clear Tube Guard with Endcap	24
91022	TG96T8CL	8' T8 Clear Tube Guard with Endcap	24
91023	TG96T12CL	8' T12 Clear Tube Guard with Endcap	24
Adapters			
91003	ADP/E26/E12	Porcelain Adapter E26 to E12	1/200
91001	ADP/E26/GU24	Locking Adapter E26 to GU24	1/200
91002	ADP/E39/E26	Porcelain Adapter E39 to E26	1/200
Extenders			
91000	ADP/E26/E26	Porcelain Extender E26	1/200

Bulb, Base and Filament Identification Guide

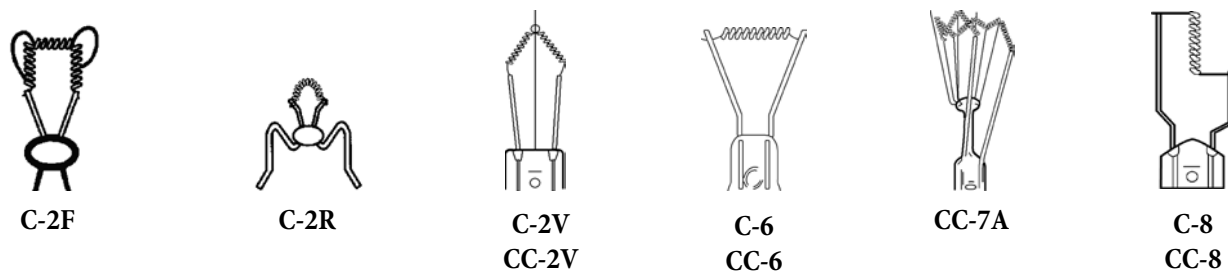
BULB SHAPES



BASE TYPES




FILAMENT DESIGNATIONS



CC indicates coiled-coil filament.

Symbols, Footnotes and Abbreviations

SYMBOLS		FOOTNOTES	
†	New product introduced within the past year.	16	Rated average life: vertical $\pm 15^\circ$. Other positions 75% of rated life.
N	Nickel-plated brass base.	17	In general, horizontal lumens will be 5-10% lower than the vertical lumen values.
Δ	Heat-resistant glass.	18	Do not operate in aviaries or around fowl or small animals.
\$	Energy saving product.	19	Halogen PAR Caution: Before using bulb, see operating instructions on package. Adhering to these operating instructions will greatly reduce the risk of personal injury or fire. The halogen capsule contained inside this glass bulb operates under pressure, at high temperatures and could unexpectedly shatter. Should the outer bulb break, particles of extremely hot glass could be discharged into the fixture and/or surrounding area, creating a risk of personal injury or fire.
$\text{\textcircled{E}}$	This lamp meets Federal Minimum Efficiency standards.		Operating Instructions: Turn power off and let lamp cool before replacing or inspecting to avoid electrical shock or burn. For indoor and outdoor use. A weather-protected fixture is recommended for wet locations. Suitable for use in open fixtures. Do not exceed the fixture maximum wattage rating. Do not use if outer glass is scratched or broken. Lamp may continue to operate if outer glass breaks, however immediately discontinue use. Do not use in close proximity to combustible materials.
	ProLume® Eco-Shield® Low-Mercury Fluorescent lamps pass the Federal TCLP for hazardous wastes.	20	Use only in heat-resistant lamp holders and fixtures rated for reflector or PAR lamps.
x	Product will be discontinued when inventory is depleted.	21	Operate base down to horizontal.
		22	Operate base up.
FOOTNOTES		ABBREVIATIONS	
1	Indoor use only. Outdoor use requires weather-protected fixture. All self-ballasted lamps meet part 18 of the FCC rules. These products may cause interference with AM radios, cordless telephones and remote control devices. If interference continues, move the lamp away from the device or plug into a different outlet.	23	Do not allow hot bulb to come in contact with liquid or metal parts of the fixture, as glass may shatter. Do not use outdoors or operate near flammable materials. Operate in heat-resistant sockets.
2	ProLume® lamps with an integrated electronic ballast designed for 120-volt operation. Lamps operated at a higher voltage or in recessed or enclosed fixtures will have reduced life. Do not use with dimmers. Before using with photocell or electronic timing devices, check device for compatibility with compact fluorescent lamps. Use with incompatible devices will result in premature lamp failure. These products are UL listed.	24	Do not use in equipment where base temperature will exceed 500°F.
3	Lamp rated for outdoor use in a horizontal to base up operating position and does not require a weather protected fixture. All self-ballasted lamps meet part 18 of the FCC rules. These products may cause interference with AM radios, cordless telephones and remote control devices. If interference continues, move the lamp away from the device or plug into a different outlet.	25	CAUTION: Do not operate near flammable material. Operate only in heat-resistant sockets. WARNING: Use with care. May cause serious burns. The unattended use of infrared heat by children or incapacitated persons is dangerous. Do not place closer than 18" to surface area. Do not use for therapeutic applications unless recommended by a physician. For food warming, use only lamps with heat-resistant glass and/or heat-resistant coating.
4	UL approved for totally enclosed fixtures with a maximum ballast case temperature of 90°C for GU24 base lamps, 75°C for medium base lamps.	26	Operate only in porcelain sockets.
5	Average life under specified test conditions with lamps turned off and restarted every three hours. Lamp life is longer if lamps are started less frequently.	27	Do not operate in aviaries or around fowl or small animals.
6	Initial lumens are based on 800-mA. operation. For 1000mA. operation, lumens are approximately 10% higher and wattage approximately 15% higher.		
7	This energy saving lamp is only recommended for use on high power factor lead, indoor ballasts that meet ANSI standards. The lamp is not recommended for use in drafty areas or locations where the ambient temperature drops below 60°F, except as noted. Do not operate on low power factor ballasts, reduced light or reduced current ballasts, dimming ballasts or emergency system inverter ballasts.	/735	Suffix used to indicate lamps with CRI of 70+ and color temperature of 3500K.
8	Lamp designed for use with Programmed Start ballast. Lamp operates at 170mA. Minimum starting temperature is -15°F, with peak operating temperature at 95°F.	/741	Suffix used to indicate lamps with CRI of 70+ and color temperature of 4100K.
9	Lamps classified as E-type are used ONLY in suitably enclosed luminaries. See lamp warning.	/835	Suffix used to indicate lamps with CRI of 80+ and color temperature of 3500K.
10	Lamps classified as O-type comply with ANSI standard C78.387 for containment testing and may be used in open luminaries. See lamp warning.	/841	Suffix used to indicate lamps with CRI of 80+ and color temperature of 4100K.
11	20,000 average rated life based on 10hrs/start. 30,000 average rated life based on 120 hrs/start.	/850	Suffix used to indicate lamps with CRI of 80+ and color temperature of 5000K.
12	Color characteristics may vary somewhat from one lamp to another. Time should be allowed for lamp to stabilize in color when it is turned on for the first time or if for any reason its operating position is changed. This may require several hours of operation, with more than one start. Lamp color and output may change temporarily if the lamp is subjected to excess vibration or shock. Lamp color characteristics may change after long accumulated operating time.	/BA15s	Suffix used to indicate lamps with a BA15s (Single Contact) base.
13	Use with 4000 Volt pulse-rated sockets only.	CL	Code abbreviation for a Clear lamp.
14	Performance may not be satisfactory unless operated within specified operating positions.	/CS	Suffix used to indicate CoverShield® safety coated lamps.
15	Requires ballast that is designed to operate all popular brands of metal halide lamps. 1000W types will operate from H36 conventional lag type ballast for Mercury Vapor lamps at ambient temperatures of 50°F or higher. 1000W types must not be operated at 1500W or higher.	/CSTF	Suffix used to indicate CoverShield® PFA safety coated lamps.
		DX	Code abbreviation for Daylight lamps.
		/FL	Suffix used to indicate Flood lamps.
		RED	Code abbreviation for a Red heat lamp.