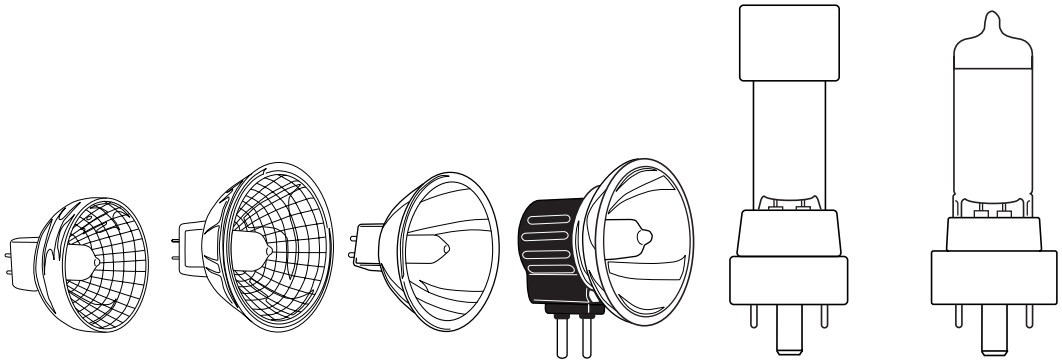
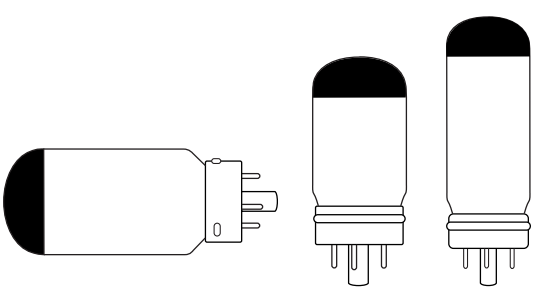
LAMP LOCATOR



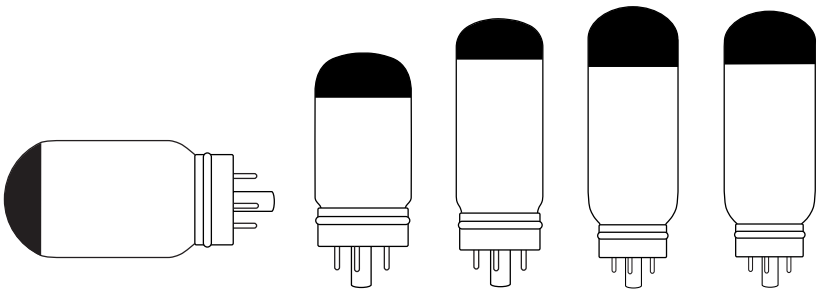
Mini Multi-Mirror® | Multi-Mirror® | Reflector | 2-Pin-Vented Base Reflector | 4-Pin Base CBA | 4-Pin Base BCK

Quartzline® Projection Lamps



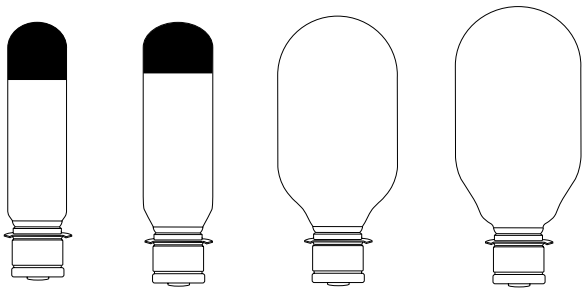
DGF | BEH | DAT / DAK, DAY / DAK

Incandescent Projection Lamps / 4-Pin Base



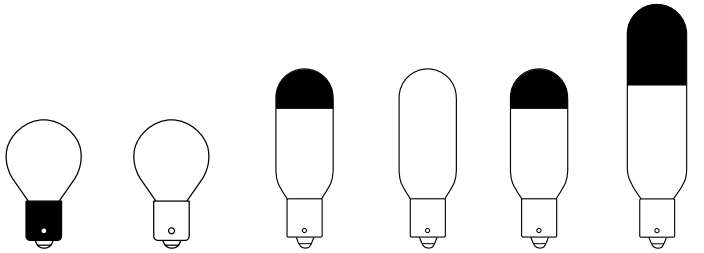
DEK / DFW / DHN | CAR, DFF | CZA / CZB | CWA | CTT / DAX, CYS

Incandescent Projection Lamps / 4-Pin Base – Proximity Reflector



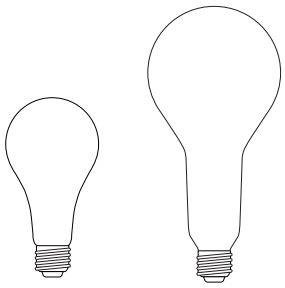
CZX / DAB | DDB | DRB, DRC | DRS

Incandescent Projection Lamps / Medium Prefocus Base



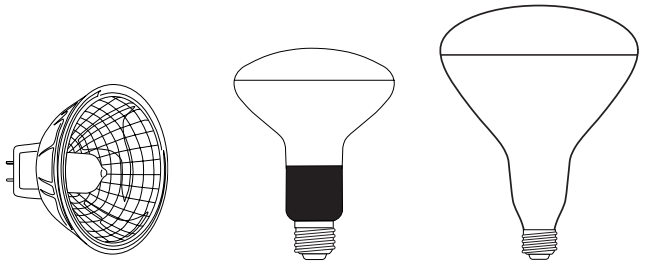
BLX, BLC, BHH, BNF | BMY | BXT | CDD, CDJ | CBJ / CBC | CLS / CLG

Incandescent Projection Lamps / Double Contact Bayonet Base



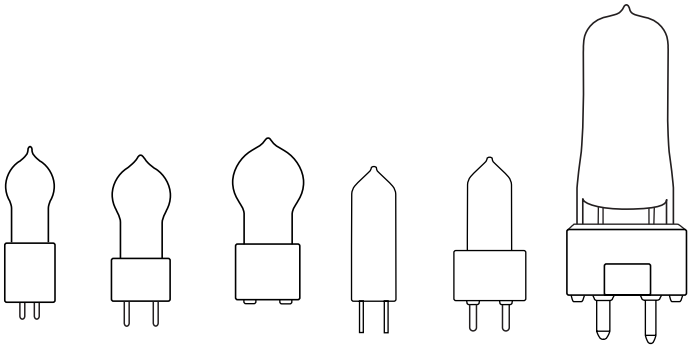
BAH, BBA, BCA, ECA | EBW, ECT

Standard Photofloods



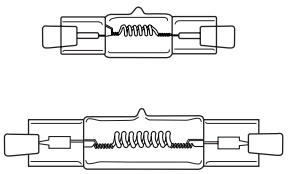
EXS, EXV, EXX, EZK | BEP | BFA, DXB, DXC, EAL

Reflector Photofloods



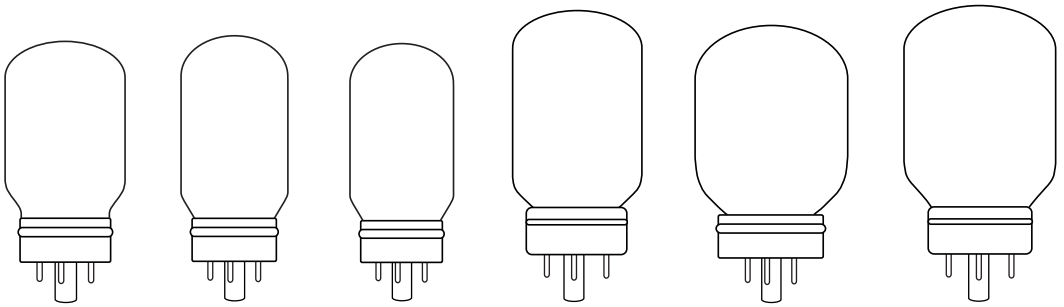
G-6 G5.3 | G-7 GZ9.5 | G-7 DYP | T-4 GY6.35 | T-4 GZ9.5 | T-6 GZ9.5

Quartzline® Projection Lamps – Single-Ended



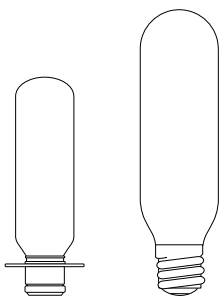
Double-Ended

Quartzline® Projection Lamps



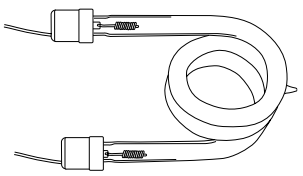
DFN / DFC | DFA | DCH / DJA / DFP | DGB / DMD | DLD / DFZ DKR | DJL

Incandescent Projection Lamps / 4-Pin Base – Focusing Reflector



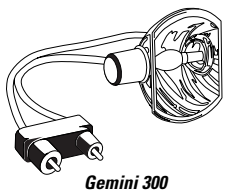
DGS | DPT

Incandescent Projection Lamps / Misc.



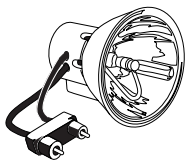
PXA-50 PXA-80

Pulsed Xenon Arc Lamps



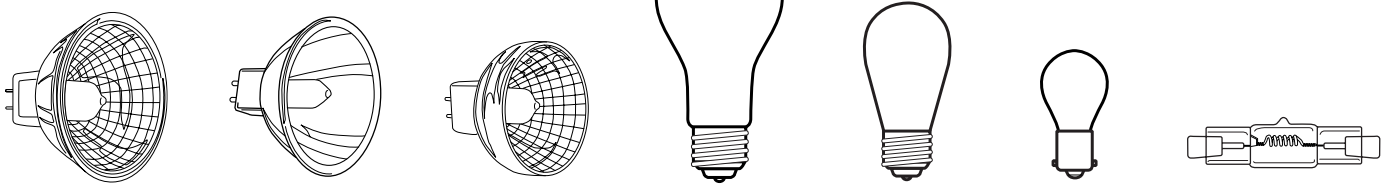
Gemini 300 EZG

High-Intensity Gemini® Arc Lamps



MARC 350 / 16T EZT

High-Intensity MARC™ Arc Lamps

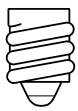


DDF ENH EJL ESD ELC ESJ ELH EVW EYA | EJV | EZF/EZJ | PH/211 PH/212 PH/213 BBA | PH/140 PH/1400 | PH/111A | FAL FFJ

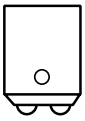
Enlarger & Printer Lamps

BASE IDENTIFICATION

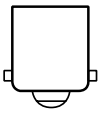
Typical bases used on Projection lamps in this catalog are shown below along with their names and common abbreviations. Where the base is an ANSI standard type, the ANSI reference code (which is the same as the IEC base code) is also shown. ANSI reference codes conform to American National Standard C81.10. C81.30. C81.50 specifications for electric lamp bases and lampholders. Illustrations are not to scale.



Candelabra
(Cand.)
E12/15

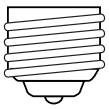


Double Contact Bayonet
(D.C. Bay.)
BA15d

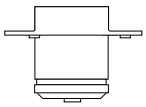


Single Contact Bayonet
(S.C. Bay.)
BA15s

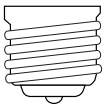
Candelabra Prefocus
(S.C. Pref.)
P30s
(D.C. Pref.)
P30d



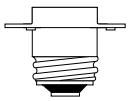
Medium
E26s



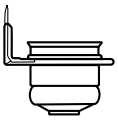
Medium Prefocus
P28/25



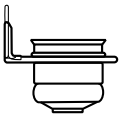
Mogul
E39



Mogul Prefocus
P40s

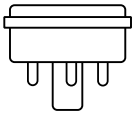


Small Indexing Ring
(Ring is a full circle)

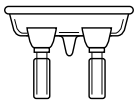


Large Indexing Ring
(Ring is flat opposite pin)

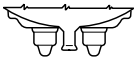
Double Contact Medium Ring
(D.C. Med. Ring)



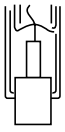
4-Pin
G17q (Std. Volts)
GX17q (Low Volts)



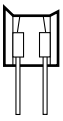
Medium Bipost
G22



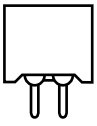
Ferrule Contact



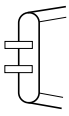
Recessed Single Contact
R7



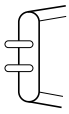
Glass 2-Pin
G6.35 (.040" diam. Pins)
GY6.35 (.050" diam. Pins)
GZ6.35 (Reflector Quartzline® lamps)



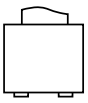
Miniature 2-Pin
G5.3



Oval 2-Pin
(Flat Pins) GY5.3

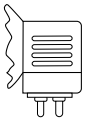


2-Pin
(Round Pins) GX5.3



2-Button

2-Pin Prefocus
GY & GZ9.5



2-Pin Vented
G7.9 (Std. Volts)
GX7.9 (Low Volts)

LIGHT CENTER LENGTH (LCL)

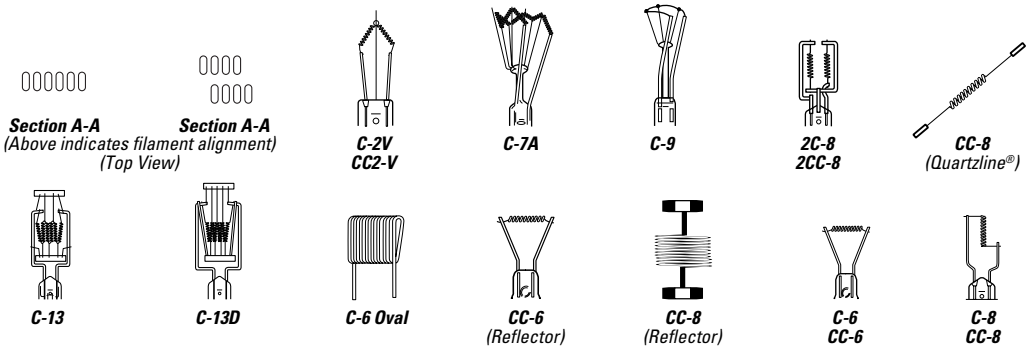
Light center length is the distance from the center of the light source to the point indicated below for the lamp base used. It is a measurement to which the lamp is designed and is subject to the manufacturer's tolerances.

Base Type	LCL Reference
All Screw Bases	Bottom base contact
Medium Prefocus	Top of base fins
Mogul Prefocus	Top of base fins
S.C. or D.C. Bayonet	Top of base pins
2-Pin Prefocus	Bottom of base ceramic
Miniature 2-Pin	Bottom of base pins
2-Pin	Bottom of base pins
Glassal 2-Pin	Bottom of base pins

Base Type	LCL Reference
2-Button	Top of ceramic base to top of filament coil
2-Pin (MR reflector)	Front face of reflector rim
2-Pin Vented	Bottom of base ceramic to lamp optical axis
4-Pin	Bottom edge of base cup
Locking 4-Pin	Bottom edge of base cup
S.C. or D.C. Prefocus	Plane of locating bosses on prefocus collar
D.C. Medium Ring	Plane of locating bosses on prefocus collar
Indexing Ring	Top of indexing ring

FILAMENT IDENTIFICATION

The configuration of the filament in all tungsten filament lamps (including Quartzline®) is identified by a prefix letter and a suffix number. The prefix letter indicates whether the filament wire is a single coil (C) or a coiled coil (CC). The suffix number indicates the form or arrangement of the filament coil or coils on its support structure. Illustrations are not to scale.



INTRODUCTION

General Electric Projection Lamps are designed for a wide variety of applications... and now extending well beyond the original picture-taking and audio-visual projection uses into such fields as: fiber optical systems, graphic arts, video camera lights, airport runway markers, micrographics, photo printers and enlargers, medical/scientific instruments, and many others.

The information contained in this section is designed to provide end-users, equipment manufacturers, and lamp distributors and dealers with:

- Essential technical data on GE Projection Lamps (Quartzline®, Incandescent, MARC™ and Flash)
- Suggested substitutes for improved performance or discontinued lamps
- Cross-reference of imported lamp codes to GE order codes
- Lamp-to-equipment guide for 8mm, 16mm, slide overhead, microfilm readers, printers, enlargers, film viewer and sound lamps

The majority of Projection Lamps described herein are characterized by:

- Precisely manufactured, tailored filaments… maximizing source brightness, optimum performance in precision optical devices
- High light-generating efficacy (lumens per watt)… to help minimize power requirements and heat generation
- Prefocus type bases, or rim-reference mounting for Multi-Mirror® lamps… to position the filament accurately in relation to the associated optics
- Design life Rated Average Life (per ANSI Standard)
- Lamps with internal or external reflectors (as in Multi-Mirror® and some 4-pin projection lamps)… permitting high-efficiency illumination system designs with a minimum of additional optical control elements

Manufacturers and designers of equipment requiring lamps should select lamps of established design whenever possible for maximum economy, as well as for ease of replacement by their customers through regular trade channels. General Electric offers application engineering assistance to all customers for applying lamps in product design. Contact your local GE Lamp Representative for additional information or assistance.

CAUTION NOTICE

As with any product, certain precautions should be observed in the handling and use of GE Projection Lamps to provide optimum performance and safety. These are given in the Caution Notices that are printed on page 8-12 for Quartzline® Projection Lamps, and on page 8-16 for ANSI-Coded Incandescent Photo Lamps.

Important Notice

This catalog contains accumulated data to February 2001. Additional information is constantly being uncovered through research and testing, which may modify the data given herein. This is particularly true of newer lamps. For the latest lamp design data and information, contact your General Electric Lamp Representative.

The data and suggested applications contained in this catalog, as well as any additional information our representative may be able to furnish, are for general information only and are not intended and should not be taken as representations or warranties as to the suitability of a lamp for any particular application or use in any particular equipment, nor are our representatives authorized to make any such representations or give any such warranties. Applications and conditions of use are many and varied, and beyond our control. We cannot possibly have the same degree of knowledge that the purchaser has with respect to the design of his equipment and the conditions of its use. Therefore, it is up to the purchaser to make his own determination as to the suitability of a lamp for his intended application or use and to assume the responsibility for that determination.

General Electric desires to supply the best possible products at all times. For this reason, General Electric reserves the right to make changes in its products when it believes such charges will improve its products.

GENERAL INFORMATION

General Electric Projection Lamps are briefly described in the alphabetical lamp index (pages 8-7 – 8-8). More extensive descriptive and performance data are found in the lamp tables, which are organized as "families" of lamps with one or more features in common – such as Multi-Mirror® Quartzline®, Single-Ended Quartzline®, 4-Pin Based Incandescent, Photoflood, etc. Within each table, lamps are listed alphabetically by GE Lamp Code. The footnotes on each page provide supplementary information. The following paragraphs explain the data columns in the tables.

GE Lamp Code
This is a 3-letter or letter-number code uniquely identifying the lamp for ordering purposes. In some instances, lamps with 3-letter (ANSI) codes are offered in more than one design voltage, in which case the voltage required should also be specified when ordering.

ANSI Codes
These are 3-letter codes assigned by the American National Standards Institute. They provide a system of assuring mechanical and electrical interchangeability among similarly coded lamps from various manufacturers. General Electric uses the assigned ANSI Codes as Lamp Ordering Codes for most Projection Lamps.

Multiple-ANSI-Coded Projection Lamps
Some GE Projection Lamps have an ordering code comprising two or more 3-letter ANSI codes – such as EM/EKS and DYS/DYV/BHC. The first code is the ANSI code, the secondary codes identify which the multiple-coded lamp can directly replace. Only the first code appears on the lamp itself. Multiple-coded lamps are so-designated by General Electric for the convenience of the customer.

Primary Application
This column indicates the original primary application of the lamp. However, lamps can be, and often are, used in other types of equipment where their design features meet the requirements of the application.

Watts (or Amps)
This column shows the rated power consumption (watts) of the lamp at its design voltage. A few lamps, in Tables 16 & 18, are rated in terms of current (amperes) drawn initially at their rated voltage. The watts shown for the lamps in Table 8 are the approximate initial values for operation at rated amperes.

Volts
The voltage shown is the design voltage of the lamp, on which the life and wattage ratings are based. Lamps for which 115-120 is shown in the Volts column are designed at 118 volts. Lamps are available only in the design voltage(s) shown. When ordering lamps listed for more than one voltage, be sure to specify the voltage required. (Supply voltage variation can significantly affect lamp life.)

Rated Average Life
Average life ratings of Projection Lamps are based on closely controlled laboratory tests of lamps, at their rated voltage, over a long period of production time. Rated Average Life is not necessarily the same as service life; mechanical shock and vibration, voltage fluctuation, temperature and other environmental factors may result in shorter service life. As with any average value, some individual lamps may operate longer, and some may operate shorter, than their Rated Average Life. (Supply voltage variation can significantly affect lamp life.)

Typical Working Distance
For Multi-Mirror® and other reflector Quartzline® lamps and MARC™ lamps, the Working Distance shown is the distance from the front surface of the reflector rim to the film plane, in the optical system for which the lamp was first designed. In most cases, it provides a uniform plane of light for the intended aperture.

Bulb
Projection Lamp bulb designations use a combination of letters and numerals to indicate bulb shape and maximum diameter in eighths of an inch. For example: a "T-12" bulb is Tubular-shaped and 12-eighths of an inch, or 1 $^1/_2$" in diameter. Illustrations of typical Projector Lamps and their respective bulb designations are shown in the tables of lamp families, pages 8-9 – 8-16.

Base
Projection Lamp base illustrations appear on page 8-4, along with their common trade names and abbreviations, plus their letter-number ANSI/IEC designations where applicable.

Filament
Typical filament configurations for Projection Lamps are shown on page 8-4, along with an explanation of the filament designation system.

Source Size
This is defined as the dimensions of the rectangular area, centered on the lamp axis, within which all luminous parts of the filament lie, when viewed perpendicular to the axis of the filament coil or to the plane of C-13 and C-13D filaments.

Operating Position
For good performance, lamps must be used within specified limitations on operating position. The following abbreviations are used in the lamp tables to indicate these limits:

BD = Base Down. Operate only vertical, base down.

BU = Base Up. Operate only vertical, base up.

BDTH = Base Down To Horizontal. Do not operate with base above horizontal.

Horiz = Horizontal. Operate only in horizontal position.

Light Center Length (LCL)
This dimension defines the location of the filament in relation to the base. It is measured from the geometric center of the filament to a specified point on, or plane through, the base. Light Center Length is subject to manufacturing tolerances. Reference points/planes from which LCL is measured are tabulated on page 8-4 for the various styles of lamp bases.

Maximum Overall Length (MOL)
This dimension include the lamp bulb and all rigid parts of the base. Since the listed lengths include maximum tolerances, actual lamps are generally slightly shorter.

Approximate Initial Lumens
The value shown is based on spherical photometry, at rated voltage, of lamps that have been seasoned for approximately 15% (or minimum of 2 hours) or more of their rated average life.

Approximate Color Temperature
The radiation within the visible spectrum from tungsten filament lamps is similar in spectral distribution to that from a "blackbody" at specific color temperatures. The Color Temperatures shown are approximate initial values in degrees kelvin (K) for lamps operated at rated voltage.

Order Code	Description	Watts	Volts	Shape	Base	Table No.	Page No.
INDEX – ANSI-CODED GE PROJECTION LAMPS							
BAB (1)… Q20MR16/FL (BAB)… Large Lamp (Precise™)							
40886	BAH	300	115	A21	Medium	18	8-16
40563	BBA	250	115/120	A21	Medium	18	8-16
40564	BCA	250	115/120	A21	Medium	18	8-16
36178	BCK	500	120	T6	4-Pin	6	8-11
	BFK… use BFL/BFK						
40658	BHB	250	120	MR14	2-Pin Ven.	5	8-11
	BHC… use DYS/DYV/BHC						
29140	BLC	30	115/120	S11	D. C. Bay.	15	8-13
30232	BLK	30	120	S11	Cand.	18	8-16
29156	BLX	50	115/120	S11	D. C. Bay.	15	8-13
32137	BNF	75	120	S11	D. C. Bay.	15	8-13
29604	BRH	1000	120	T5	R.S.C.	9	8-12
18234	BRL	50	12	T3.5	G6.35	7	8-11
38675	BVE	600	120	T6	2-Pin Pref.	7	8-11
30421	BXB	4A	9	T8	S. C. Pref.	16	8-13
29525	CAL	300	120	T10	4-Pin	11	8-13
29380	CAR	150	120	T10	4-Pin	11	8-13
29171	CAX	50	115/120	T8	D. C. Bay.	15	8-13
29169	CAX	50	130	T8	D. C. Bay.	15	8-13
36117	CBA	500	120	T6	4-Pin	6	8-11
	CBS… use CBX/CBS						
29208	CBX/CBS	75	115/120	T8	D. C. Bay.	15	8-13
29257	CDD	100	120	T8	S. C. Bay.	14	8-13
29266	CDJ	100	115/120	T8	D. C. Bay.	15	8-13
29244	CEB	100	115/120	T8	D. C. Bay.	15	8-13
43330	CEM	120	120	T8	S. C. Bay.	14	8-13
	CLG… use CLS/CLG						
29494	CLS/CLG	300	120	T8.5	S. C. Bay.	14	8-13
29664	CZA/CZB	500	120	T10	4-Pin	11	8-13
	CZB… use CZA/CZB						
29677	CZX/DAB	500	120	T10★	Med. Pref.	13	8-13
	DAB… use CZX/DAB						
	DAK… use DAT/DAK or DAY/DAK						
40214	DAT/DAK	400	120	T10	4-Pin	10	8-13
29695	DAY/DAK	500	120	T10H	4-Pin	10	8-13
29360	DCA	150	21	T12	4-Pin	12	8-13
29364	DCH/DJA/DFP	150	120	T12	4-Pin	12	8-13
29836	DDB	750	125	T12H	Med. Pref.	13	8-13
43986	DDF	55	17	MR16	2-Pin	3	8-10
43537	DDL	150	20	MR16	2-Pin	3	8-10
43206	DDM	80	19	MR16	2-Pin	3	8-10
43988	DDS	80	21	MR16	2-Pin	3	8-10
43950	DED	85	14	MR16	2-Pin	3	8-10
29737	DEK/DFW/DHN	500	120	T12	4-Pin	11	8-13
	DFC… use DFN/DFC						
36122	DFE	80	30	T12	4-Pin	12	8-13
29386	DFN/DFC	150	125	T12	4-Pin	12	8-13

* No longer manufactured; available only untill stock is depleted. ★ Heat-resistant glass bulb. Q in "Bulb" column denotes Quartzline® lamp.

Order Code	Description	Watts	Volts	Shape	Base	Table No.	Page No.
INDEX – ANSI-CODED GE PROJECTION LAMPS							
	DFP… use DCH/DJA/DFP						
	DFW… use DEK/DFW/DHN						
	DFZ… use DLD/DFZ						
	DHN… use DEK/DFW/DHN						
	DHX… use DLS/DLG/DHX						
	DJA… use DCH/DJA/DFP						
29338	DJL	150	120	T14	4-Pin	12	8-13
44854	DJT	50	14	MR16	2-Pin	3	8-10
40216	DLD/DFZ	80	30	T14	4-Pin	12	8-13
	DLG… use DLS/DLG/DHX						
29366	DLS/DLG/DHX	150	22	T14	4-Pin	20	8-16
40161	DNE	150	120	MR16	2-Pin Ven.	5	8-11
39742	DNF	150	21	MR16	2-Pin Ven.	5	8-11
29959	DPT	1000	120	T20H	Mogul	17	8-13
29968	DRB	1000	115/120	T20H	Med. Pref.	13	8-13
29979	DRC	1000	120	T20H	Med. Pref.	13	8-13
29947	DRS	1000	120	T20H	Med. Pref.	13	8-13
29405	DSW	200	24	T14	4-Pin	12	8-13
30304	DVY	650	120	G6	Min. 2-Pin	7	8-11
29578	DWZ	375	30	T4	R.S.C.	9	8-12
30151	DXB	500	120	R40	Medium	19	8-16
30145	DXC	500	120	R40	Medium	19	8-16
30364	DYH	600	120	G7	Min. 2-Pin	7	8-11
32071	DYP	600	120	G7	2-Button	7	8-11
33248	DYR	650	220	G7	2-Pin Pref.	7	8-11
33250	DYR	650	240	G7	2-Pin Pref.	7	8-11
19479	DYS-5	600	120	G7	2-Pin Pf/GZ9.5	7	8-11
32955	DYS/DYV/BHC	600	120	G7	2-Pin Pref.	7	8-11
	DYV… use DYS/DYV/BHC						
37346	DZA	30	11	T3.5	Min. 2-Pin	7	8-11
37695	DZE/FDS	150	24	T4	2-Pin Pref.	7	8-11
30202	EAJ	35	12	T6.4	D.C. Bay.	15	8-13
30281	EAL	500	120	R40	Medium	19	8-16
40566	EBV	500	115/120	PS25	Medium	18	8-16
40567	EBW PH/B2	500	115/120	PS25	Medium	18	8-16
40565	ECA	250	120	A23	Medium	18	8-16
40568	ECT	500	120	PS25	Medium	18	8-16
41251	EFM	50	8	MR16	GX5.3	3	8-10
41252	EFN	75	12	MR16	GX5.3	3	8-10
41253	EFP	100	12	MR16	GX5.3	3	8-10
41254	EFR	150	15	MR16	GX5.3	3	8-10
37527	EHA	500	120	T6	2-Pin Pref.	7	8-11
14874	EHJ	250	24	T4	G6.35	7	8-11
32882	EJA	150	21	MR16	2-Pin	4	8-11
29150	EJL	200	24	MR16	2-Pin	3	8-10
29151	EJM	150	21	MR16	2-Pin	3	8-10
	EJN… use ELD/EJN						
32831	EJV	150	21	MR16	2-Pin	20	8-16
32886	EJY	80	19	MR16	2-Pin	4	8-11

Order Code	Description	Watts	Volts	Shape	Base	Table No.	Page No.
INDEX – ANSI-CODED GE PROJECTION LAMPS							
35200	**EKE**	150	21	MR16	2-Pin	3	8-10
35800	**EKP/ENA**	80	30	MR16	2-Pin	3	8-10
	EKS… use EMM/EKS						
36899	**EKX**	200	24	MR16	2-Pin	3	8-10
36902	**EKZ**	30	11	MR16	2-Pin	3	8-10
37412	**ELB**	80	30	MR16	2-Pin	4	8-11
37462	**ELC**	250	24	MR16	2-Pin	3	8-10
38306	**ELD/EJN**	150	21	MR16	2-Pin	3	8-10
38476	**ELH**	300	120	MR16	Oval 2-Pin	3	8-10
	ELR… use ELS/ELR						
41885	**ELS/ELR**	50	18	MR14	2-Pin Ven.	5	8-11
42612	**EML**	175	24	T4	Min. 2-Pin	7	8-11
40017	**EMM/EKS**	250	24	MR14	2-Pin Ven.	5	8-11
	ENA… use EKP/ENA						
	ENC… use ENW/ENC						
38685	**ENG**	300	120	MR16	Oval 2-Pin	3	8-10
38686	**ENH**	250	120	MR16	Oval 2-Pin	3	8-10
25475	**ENL**	50	12	MR16	GX5.3	3	8-10
40248	**ENW/ENC**	80	19	MR16	2-Pin	3	8-10
41705	**ENX**	360	82	MR16	Oval 2-Pin	3	8-10
19475	**ENX-5**	360	86	MR16	Oval GY5.3	3	8-10
40598	**ENZ**	50	30	MR16	2-Pin	4	8-11
41430	**EPN**	35	12	MR16	2-Pin	3	8-10
19897	**EPR**	500	120	T6	TF	7	8-11
41729	**EPT**	42	11	MR16	2-Pin	3	8-10
41882	**EPV**	90	15	MR16	2-Pin	3	8-10
41702	**EPW**	360	100	MR16	Oval 2-Pin/GY5.3	3	8-10
42614	**EPX**	90	15	MR16	2-Pin	3	8-10
41874	**ERV**	340	36	MR16	2-Pin	3	8-10
43756	**ESD**	150	120	MR16	Oval 2-Pin	3	8-10
11698	**ESJ**	85	82	MR16	Oval 2-Pin	3	8-10
11322	**ETJ**	250	120	MR16	Oval 2-Pin	3	8-10
38311	**ETT**	1000	120	T5	R.S.C.	9	8-12
41164	**EVD**	400	36	T6	2-Pin	7	8-11
10099	**EVV**	120	7	T4	2-Pin Pref.	8	8-12
11110	**EVW**	250	82	MR16	Oval 2-Pin	3	8-10
11132	**EWF**	200	24	MR16	2-Pin	3	8-10
11427	**EWR**	150	7	T4	2-Pin Pref.	8	8-12
11478	**EXL**	30	7	T3.5	2-Pin Pref.	8	8-12
11482	**EXM**	45	7	T3.5	2-Pin Pref.	8	8-12
12092	**EXR**	300	82	MR13	2-Pin	2	8-9
12003	**EXV**	100	12	MR16	2-Pin	3	8-10
12095	**EXW**	300	82	MR13	2-Pin	2	8-9
11750	**EXX**	250	120	MR16	Oval 2-Pin	3	8-10
12097	**EXY**	250	82	MR13	2-Pin	2	8-9

Order Code	Description	Watts	Volts	Shape	Base	Table No.	Page No.
INDEX – ANSI-CODED GE PROJECTION LAMPS							
13152	**EYA**	200	82	MR16	Oval 2-Pin	3	8-10
12696	**EYB**	360	82	T3.5	Min. 2-Pin	7	8-11
19322	**EYB-5**	82	86	T3.5	Miniature Bipin	7	8-11
13617	**EYH/FKT**	250	120	G6	Min. 2-Pin	7	8-12
23522	**EZA**	30	6.6A	MR16	GX5.3	3	8-10
23071	**EZC**	45	6.6A	MR16	GX5.3	3	8-10
15832	**EZF/EZJ**	225	68	MR13	2-Pin	2	8-9
	EZJ… use EZF/EZJ						
15477	**EZK**	150	120	MR16	Oval 2-Pin	3	8-10
15243	**EZL**	200	31	T4	2-Pin Pref.	8	8-12
29581	**FAL**	420	120	T4	R.S.C.	9	8-12
	FBD… use FBG/FBD						
33663	**FBG/FBD**	500	120	G6	Min. 2-Pin	7	8-12
29598	**FCB**	600	120	T4	R.S.C.	9	8-12
14876	**FCR**	100	12	T3	GZ6.35	7	8-11
13598	**FCS**	150	24	T4	G6.35	7	8-11
	FDS… use DZE/FDS						
35321	**FDT**	100	12	T3	2-Pin Pref.	7	8-11
36878	**FDV**	150	24	T4	Glass 2-Pin	7	8-11
29592	**FFJ**	600	120	T4	R.S.C.	9	8-12
30276	**FFM**	420	120	T4	R.S.C.	9	8-12
47614	**FHS**	300	82	MR13	2-Pin	2	8-9
47914	**FHX**	25	14	MR16	2-Pin	3	8-10
	FKT… use EYH/FKT						
30894	**FLS**	28	12	MR11	GZ4	1	8-9
31964	**FLT**	25	14	MR11	GZ4	1	8-9
19886	**FLW**	300	24	T4	GY6.35	7	8-11
14887	**FML**	50	14	MR16	2-Pin	3	8-10
18241	**FNT/100**	275	24	T4	G6.35	7	8-11
21613	**FXL**	410	82	MR16	GY5.3	3	8-10
30162	**PH/111A**	75	125	S11	S.C. Bay.	20	8-16
43220	**PH/140**	75	120	S14	Medium	20	8-16
40569	**PH/211**	75	120	A21	Medium	20	8-16
40570	**PH/212**	150	120	A21	Medium	20	8-16
40571	**PH/213**	250	120	A21	Medium	20	8-16
	Gas Discharge Gemini® and MARC™						
11134	**GEMINI 300 (EXG)**	300	35	PAR20	Special 2-Pin Plug	-	8-15
39936	**MARC-350/16T (EZT)**	350	45	PAR24	Special 2-Pin Plug	-	8-15
	Pulsed Xenon Arc Lamps*						
30124	**PXA-50**	4000		T3	WireTerm-CeramicCaps	-	8-14
30129	**PXA-80**	8000		T3	WireTerm-CeramicCaps	-	8-14

* No longer manufactured; available only untill stock is depleted. ★ Heat-resistant glass bulb. Q in "Bulb" column denotes Quartzline® lamp.

GE MULTI-MIRROR® QUARTZLINE® PROJECTION LAMPS

Invented By GE For Optimized Projection System Performance.

The Multi-Mirror® and its new companion, the Mini Multi-Mirror®, are reflector halogen Quartzline® lamps with innovative GE features that result in better system efficiency, screen uniformity, lamp-to-lamp consistency and relamping convenience.

Feature	Benefit
• Dichroic reflector	• Cool light beam • Efficient light reflection
• Precise rim reference	• Quick lamp installation • Accurate snap-in alignment
• Faceted reflector	• Efficient beam for brighter image • Uniform screen image • Precision beam control
• Halogen Quartzline® lamp	• Whiter and brighter light • No bulb blackening/blistering • Constant light output through life • Stable color temperature

Applications

- Slide Projection
- Front/Rear Screen Projection
- Microfilm
- Overhead Projection
- 16mm Movie
- 8mm Movie
- Film Strip
- Enlargers/Printers
- Fiber Optics
- Medical/Scientific Instruments
- Video Camera Lights
- Airport Runways
- Display

Each GE Multi-Mirror® lamp type is optically tailored to its application. First, the appropriate type of multi-faceted reflector is determined. Then a filament tube developed, using advanced Quartzline® technology. Finally, the two are combined, using sophisticated, computerized precision-assembly techniques. The result – consistently high performance... lamp after lamp after lamp.

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
MULTI-MIRROR® MR11/MR13														
MR-11 FACETED DICHROIC REFLECTOR, 1 3/8" (35MM) DIAMETER, 1 3/8" (35MM) MAX. OVERALL LENGTH. OPERATE BASE DOWN TO HORIZONTAL. TABLE 1.														
MR11	GZ4	28	**30894**	**FLS**	12	10	CC-6	1000		3000	Microfilm			
		25	**31964**	**FLT**	14	10	CC-6	500		3050	Microfilm			
MR-13 FACETED DICHROIC REFLECTOR, 1 2/3" (35MM) DIAMETER, 1 3/4" (35MM) MAX. OVERALL LENGTH. OPERATE BASE DOWN TO HORIZONTAL. TABLE 2.														
MR13	2-Pin	300	**12092**	**EXR**	82	20	CC-8	35		3350	Slide Projection		6.000	
			12095	**EXW**	82	20	CC-8	15		3450	Slide Projection		6.000	
		250	**12097**	**EXY**	82	20	CC-8	200		3200	Slide Projection		6.000	
		225	**15832**	**EZF/EZJ**	68	20	CC-8	350			Color Printer	R		
		300	**47614**	**FHS**	82	20	CC-8	70		3300	Slide Projection		6.000	

MULTI-MIRROR® QUARTZLINE®

MR-16 FACETED DICHROIC REFLECTOR, 2" DIAMETER, 1 3/4" MAX. OVERALL LENGTH. OPERATE BASE DOWN TO HORIZONTAL EXCEPT AS NOTED. TABLE 3.

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
MR16	2-Pin	55	**43986**	**DDF**	17	20	CC-6	300		3100	Enlarger, Projection		2.188	
		150	**43537**	**DDL**	20	20	C-6	500		3150	Microfilm		7.75	
		80	**43206**	**DDM**	19	20	CC-6	50		3350	Slide Projection		6	
			43988	**DDS**	21	20	CC-6	1000		3125	Microfilm		6.5	
		85	**43950**	**DED**	14	20	C-6	1000		3150	Microfilm		6.5	
		50	**44854**	**DJT**	14	20	CC-6	1000		3150	Microfilm		6	
	GX5.3	50	**41251**	**EFM**	8	20	C-6	50		3300	8mm Projection		1.25	
		75	**41252**	**EFN**	12	20	CC-6	50		3350	8mm Projection		1.25	
		100	**41253**	**EFP**	12	20	CC-6	50		3350	8mm Projection		1.25	
		150	**41254**	**EFR**	15	20	CC-6	50		3350	8mm Projection		1.25	
	2-Pin	200	**29150**	**EJL**	24	20	CC-6	50		3400	16mm, Color Printer		1.25	
		150	**29151**	**EJM**	21	20	CC-6	40		3350	8mm Projection		1.5	
			35200	**EKE**	21	20	CC-6	250		3250	8mm Projection, Fiber Optics		1.75	
		80	**35800**	**EKP/ENA**	30	20	CC-6	25		3350	8mm Projection		1.75	
		200	**36899**	**EKX**	24	20	CC-6	25		3400	Microfilm		5.5	
		30	**36902**	**EKZ**	11	20	C-6	200		3100	16mm Projection		1.5	
		250	**37462**	**ELC**	24	20	CC-6	50		3400	Fiber Optics, Color Printer		1.25	
		150	**38306**	**ELD/EJN**	21	20	CC-6	40		3350	Microfilm		6.5	
	Oval 2-Pin	300	**38476**	**ELH**	120	20	CC-8	35		3350	Slide Projection		6	
			38685	**ENG**	120	20	CC-8	15		3450	Slide Projection		6	
		250	**38686**	**ENH**	120	20	CC-8	175		3250	Slide Projection		6	
	GX5.3	50	**25475**	**ENL**	12	20	C-6	4000		3050	Fiber Optics, Display Lighting		1.5	
	2-Pin	80	**40248**	**ENW/ENC**	19	20	CC-6	200		3200	8mm Projection		1.75	
	Oval 2-Pin	360	**41705**	**ENX**	82	20	CC-8	75		3300	Overhead Projection		11.75	
	Oval GY5.3	360	**19475**	**ENX-5**	86	20	CC-8	75		3300	Overhead Projection			
	2-Pin	35	**41430**	**EPN**	12	20	C-6	50		3300	8mm Projection		1.125	
		42	**41729**	**EPT**	11	20	C-6	10000		2900	Fiber Optics		1.5	
		90	**41882**	**EPV**	15	20	CC-6	500		3150	Microfilm		6.125	
	Oval 2-Pin/ GY5.3	360	**41702**	**EPW**	100	20	CC-8	75		3250	Overhead Projection		11.75	
	2-Pin	90	**42614**	**EPX**	15	20	CC-6	500		3150	Microfilm		6.5	
		340	**41874**	**ERV**	36	20	CC-8	75		3300	Overhead Projection		11.75	
	Oval 2-Pin	150	**43756**	**ESD**	120	20	CC-8	12		3350	Enlarger, Projection		1.75	
		85	**11698**	**ESJ**	82	20	CC-8	40		3350	Enlarger, Projection		1.75	
		250	**11322**	**ETJ**	120	20	CC-8	175		3300	Fiber Optics		1.5	
			11110	**EVW**	82	20	CC-8	50		3300	Overhead Projection	4, S	11.75	
	2-Pin	200	**11132**	**EWF**	24	20	CC-8	50		3300	Overhead Projection	4	11.75	
		100	**12003**	**EXV**	12	20	CC-6	50	3100	3350	Camera Light	2		
	Oval 2-Pin	250	**11750**	**EXX**	120	20	CC-8	25	6750	3300	Camera Light	2		
		200	**13152**	**EYA**	82	20	CC-8	50		3300	Enlarger			
	GX5.3	30	**23522**	**EZA**	6.6A	20	C-8	1000		2900	Airport			
		45	**23071**	**EZC**	6.6A	20	C-8	1000		2950	Airport			
	Oval 2-Pin	150	**15477**	**EZK**	120	20	CC-8	200		3200	Camera Light	2		
	2-Pin	25	**47914**	**FHX**	14	20	CC-6	250		3200	Microfilm		4.25	
		50	**14887**	**FML**	14	20	CC-6	1000		3150	Microfilm		8.438	
	GY5.3	410	**21613**	**FXL**	82	20	CC-8	38		3300	Overhead Projection		11.75	

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
QUARTZLINE® REFLECTOR																		
MR-16 DICHROIC REFLECTOR, 2" DIAMETER, 1 3/4" MAX. OVERALL LENGTH. OPERATE BASE DOWN TO HORIZONTAL. TABLE 4.																		
MR16	2-Pin	150	**32882**	**EJA**	21	20	CC-6			40		3350			Fiber Optics		1.100	
		80	**32886**	**EJY**	19	20	CC-6			25		3400			Fiber Optics		1.500	
			37412	**ELB**	30	20	CC-6			18		3400			8mm Projection		1.250	
		50	**40598**	**ENZ**	30	20	CC-6			25		3450			8mm Projection		1.250	

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
QUARTZLINE® REFLECTOR LAMPS 2-PIN-VENTED BASE																		
MR-14 (1 3/4" DIAMETER) OR MR-16 (2" DIAMETER) DICHROIC REFLECTOR. TABLE 5.																		
MR14	2-Pin Ven.	250	**40658**	**BHB**	120	24	CC-8	1.66		25		3350		HO	16mm Projection	B	2.625	
MR16	2-Pin Ven.	150	**40161**	**DNE**	120	24	CC-8	1.77		12		3350		HO	8mm Projection	B	2.750	
			39742	**DNF**	21	24	CC-6	1.77		25		3400		HO	8mm Projection	B	2.750	
MR14	2-Pin Ven.	50	**41885**	**ELS/ELR**	18	24	CC-6	1.41		650		3100		HD	Microfilm	B	4.750	
		250	**40017**	**EMM/EKS**	24	24	CC-6	1.66		50		3400		HD	16mm Projection	B	2.625	

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
QUARTZLINE® 4-PIN BASE																		
PRIMARY APPLICATION: SLIDE PROJECTION. ANSI BASE DESIGNATION: G17Q. TABLE 6.																		
T6	4-Pin	500	**36178**	**BCK**	120	24	C-13D	3.25	1.56	50		3200		HD	Slide Projection	D		
			36117	**CBA**	120	24	C-13D	3.62	1.75	50		3200		HD	Slide Projection	C, D		

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
QUARTZLINE® SINGLE-ENDED																		
APPLICATIONS: PROJECTION, MICROFILM, STUDIO, ETC. TABLE 7.																		
T3.5	G6.35	50	**18234**	**BRL**	12	100	C-6	1.72	1.17	50	1400	3400		–				
T6	2-Pin Pref.	600	**38675**	**BVE**	120	24	C-13D	3.5	1.75	75		3200		HD		D		.35 x .35
G6	Min. 2-Pin	650	**30304**	**DVY**	120	24	CC-6	2.48	1.43	25	20000	3300		HD		E, F		.50 x .20
G7	Min. 2-Pin	600	**30364**	**DYH**	120	24	CC-6	2.5	1.43	75	17000	3200		U		F		.50 x .25
	2-Button	600	**32071**	**DYP**	120	24	CC-6	2.25	1	75	17000	3200		HO				.50 x .25
	2-Pin Pref.	650	**33248**	**DYR**	220	24	2CC-8	2.5	1.43	50	16500	3200		U		F		.45 x .45
			33250	**DYR**	240	24	2CC-8	2.5	1.43	50	16500	3200		U		F		.45 x .45
	2-Pin Pf/ GZ9.5	600	**19479**	**DYS-5**	120	24	CC-6	2.5	1.43	150	15500	3200		HD	Projection, Microfilm, Studio, etc.			.45 x .45
	2-Pin Pref.	600	**32955**	**DYS/DYV/BHC**	120	24	CC-6	2.5	1.43	75	17000	3200		HD		F		.50 x .25
T3.5	Min. 2-Pin	30	**37346**	**DZA 24PK**	11	24	C-6	2	1.06	400	530	3100		HD				.15 x .05
T4	2-Pin Pref.	150	**37695**	**DZE/FDS**	24	24	C-6 Oval	2.68	1.31	100	4000	3250		HD				.25 x .15
T6	2-Pin Pref.	500	**37527**	**EHA**	120	24	C-13D	3	1.43	50		3300		HD		D		.35 x .35
T4	G6.35	250	**14874**	**EHJ 100PK**	24	100	C-6 Oval	2.25	1.31	50	8000	3400		HD				.30 x .15
	Min. 2-Pin	175	**42612**	**EML**	24	24	C-6	2.12	1.06	125	5000	3200		HD				.21 x .19
T6	TF	500	**19897**	**EPR**	120	24	C-13D	1.56	2.68	50		3250						.31 x .30
T6	GY6.35	400	**41164**	**EVD**	36	24	C-6	2.34	1.4	50	14500	3200		HD	Overhead Projector	F		
T3.5	Min. 2-Pin	360	**12696**	**EYB**	82	24	CC-8	2.25	1.25	75	10000	3300		HD				.30 x .20
	Miniature Bipin	82	**19322**	**EYB-5**	86	24	CC-8	2.25	1.25	75		3200		HD	Projection, Microfilm, Studio, etc.			.30 x .20

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
QUARTZLINE® SINGLE-ENDED (CONTINUED)																		
APPLICATIONS: PROJECTION, MICROFILM, STUDIO, ETC. TABLE 7. (CONTINUED)																		
G6	Min. 2-Pin	250	**13617**	**EYH/FKT**	120	24	CC-6	2.5	1.43	200	6000	3000		HD		F		.55 x .17
		500	**33663**	**FBG/FBD**	120	24	CC-6	3	1.75	50	13200	3200		U				.50 x .20
T3	GZ6.35	100	**14876**	**FCR 100PK**	12	100	C-6 Oval	1.75	1.18	50	2800	3300		HD				.20 x .15
T4	G6.35	150	**13598**	**FCS 100PK**	24	100	C-6 Oval	2	1.18	50	4500	3300		HD				.25 x .15
T3	2-Pin Pref.	100	**35321**	**FDT**	12	24	C-6 Oval	2.12	1.06	50	2900	3300		HD				.23 x .15
T4	Glass 2-Pin	150	**36878**	**FDV**	24	24	C-6 Oval	2	1.18	100	4300	3050		U				.25 x .15
	GY6.35	300	**19886**	**FLW**	24	48	C-6 Oval	2.15	1.21	50	10200	3500		HD				.34 x .23
	G6.35	275	**18241**	**FNT/100**	24	100	C-6 Oval	2.25	1.31	50	10000	3400		HD				.14 x .28

Shape	Base	Watts	Order Code	Description	Amps	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
QUARTZLINE® SINGLE-ENDED - AIRPORT																		
TABLE 8.																		
T4	2-Pin Pref.	120	**10099**	**EVV**	6.6	24	C-6 Oval	2.5	1.54	500	3150	3200		BD				.250 x .120
		150	**11427**	**EWR**	6.6	24	C-6 Oval	2.5	1.54	500	4100	3200		BD				.250 x .162
T3.5	2-Pin Pref.	30	**11478**	**EXL**	6.6	24	C-8	1.75	1	1000	375	2900		HD				.053 x .130
		45	**11482**	**EXM**	6.6	24	C-8	1.75	1	1000	750	2950		HD				.057 x .190
T4	2-Pin Pref.	200	**15243**	**EZL**	6.6	24	C-6 Oval	2.5	1.54	500	5000	3100		BD				.280 x .185

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
QUARTZLINE® DOUBLE-ENDED PROJECTION																		
RECESSED SINGLE-CONTACT BASE. ANSI DESIGNATION: R7S. CC-8 FILAMENT. OPERATE ANY POSITION. TABLE 9.																		
T5	R7s	1000	**29604**	**BRH**	120	24	CC-8	3.75	0.75	60	30000	3350			Overhead Projection			.70 x .21
T4	R7s	375	**29578**	**DWZ**	30	24	CC-8	3.12	0.37	1000	7500	3000			Bowling Score Projection			.35 x .18
T5	R7s	1000	**38311**	**ETT**	120	24		3.75		70		3350			Special			
T4	R7s	420	**29581**	**FAL**	120	24		2.62		90	11000	3200		U	Printer, Overhead	F		.35 x .17
		600	**29598**	**FCB**	120	24	CC-8	3.75	0.68	120	17000	3250			Overhead Projection	F		.45 x .18
			29592	**FFJ**	120	24		2.62		85	17000	3250		U	Printer, Overhead	F		.60 x .17
		420	**30276**	**FFM**	120	24	CC-8	3.12	0.5	90	11000	3200			Copyboard	F		.50 x .25

CAUTION NOTICE

QUARTZLINE PROJECTION LAMPS

CAUTION – GENERAL ELECTRIC QUARTZLINE® (tungsten halogen) PROJECTION LAMPS OPERATE UNDER PRESSURE AT HIGH TEMPERATURE AND MAY UNEXPECTEDLY SHATTER. Protect people and surroundings from the possibility of injury or fire from hot, flying fragments with a suitable enclosure, shield, lens or screen. Do not operate equipment with lamp compartment open. Observation of the following operating instructions will help avoid early failure and possible shattering of lamp.

1. Use lamp only in equipment specifying this lamp type and which provides adequate ventilation to maintain lamp within safe operating temperatures. If in doubt, contact equipment manufacturer.
2. Operate lamp only in the position indicated by the instructions on the lamp package, or as noted in the GE catalog description of the lamp.
3. Do not operate equipment in excess of 110% of rated voltage.
4. Do not bump or bounce equipment during operation.
5. Protect lamp from moisture, scratches or abrasions. Avoid touching bulb or inside of reflector since fingerprints may affect performance.
6. Replace lamp if it blisters or prematurely darkens.
7. Replace lamp socket if deterioration of socket is noticed.

Extended direct exposure to Quartzline® Projection Lamps not enclosed in an outer glass envelope may cause ultraviolet irritation of skin and eyes. Use of a glass or plastic lens will provide adequate protection from this ultraviolet light.

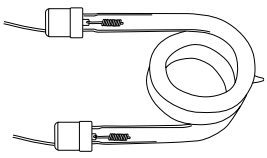
To avoid electrical shock or burns, be sure power is off and lamp has fully cooled before replacing lamp.

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
INCANDESCENT PROJECTION																		
4-PIN BASE. ANSI BASE DESIGNATION: G17Q. TABLE 10.																		
T10	4-Pin	400	**40214**	**DAT/DAK**	120	24	C-13D	4	1.56	25	9800	3200		BD	Slide Projection	I		
		500	**29695**	**DAY/DAK**	120	24	C-13D	4	1.56	30	12500	3200		BD	Slide Projection	G, J		
4-PIN BASE – PROXIMITY REFLECTOR. ANSI BASE DESIGNATION: G17Q. TABLE 11.																		
T10	4-Pin	300	**29525**	**CAL**	120	24	C-13	4	1.56	25		3200		BD	Slide, Film Strip	I		
		150	**29380**	**CAR**	120	24	2CC-8	3.12	1.31	15		3100		BD	Slide, Film Strip	J		
		500	**29664**	**CZA/CZB**	120	24	C-13D	4	1.56	25		3300		BD	Slide Projection	I		
T12	4-Pin	500	**29737**	**DEK/DFW/DHN**	120	24	C-13D	3.62	1.75	25		3250		HO	Slide Projection	H, I		
4-PIN BASE – FOCUSING REFLECTOR. ANSI BASE DESIGNATION: GX17Q (LOW-VOLT), G17Q (STD. VOLT). TABLE 12.																		
T12	4-Pin	150	**29360**	**DCA**	21	24	CC-6	3.56	1.56	15		3250		HD	8mm Projection	I		
			29364	**DCH/DJA/DFP**	120	24	CC-6	3.37	1.56	15		3150		BD	8mm Projection			
		80	**36122**	**DFE**	30	24	CC-8	3.18	1.56	15		3400		HD	8mm Projection			
		150	**29386**	**DFN/DFC**	125	24	CC-8	3.18	1.56	15		3150		HD	8mm Projection			
T14	4-Pin	150	**29338**	**DJL**	120	24	CC-8	3.5	1.56	15		3150		HD	8mm Projection			
		80	**40216**	**DLD/DFZ**	30	24	CC-6	3.5	1.56	15		3400		HD	8mm Projection	K		
		200	**29405**	**DSW**	24	24	CC-8	3.37	1.56	25		3300		HD	8mm Projection	K		
MEDIUM PREFOCUS BASE. ANSI BASE DESIGNATION: P28/25. TABLE 13.																		
T10	Med. Pref.	500	**29677**	**CZX/DAB**	120	24	C-13D	5.75	2.18	25	12500	3200		BD	8mm Projection	G, J		
T12	Med. Pref.	750	**29836**	**DDB**	125	24	C-13D	5.75	2.18	25	19500	3250		BD	16mm Projection	G, J		
T20	Med. Pref.	1000	**29968**	**DRB**	115/120	24	C-13	5.75	2.18	25	32000	3350		BD	Overhead Projection	G		
			29979	**DRC**	120	24	C-13	5.75	2.18	50	30000	3250		BD	Overhead & Opaque Projection	G		
			29947	**DRS**	120	24	C-13D	5.75	2.18	25	28500	3325		BD	Overhead Projection	G		
SINGLE CONTACT BAYONET BASE. ANSI BASE DESIGNATION: BA15S. TABLE 14.																		
T8	S. C. Bay.	100	**29257**	**CDD**	120	24	CC-2V	3.12	1.37	50	2000	2975		BD	Slide Projection			
		120	**43330**	**CEM**	120	24	2CC-8	3.12	1.37	200	1950	3000		BD	Wheel Align Projection	J		
T8.5	S. C. Bay.	300	**29494**	**CLS/CLG**	120	24	C-13	4.12	1.37	25	7600	3200		BD	Slide Projection	J		
DOUBLE CONTACT BAYONET BASE. ANSI BASE DESIGNATION: BA15D. TABLE 15.																		
S11	D. C. Bay.	30	**29140**	**BLC**	115/120	120	CC-2V	2.37	1.37	50	400	2775		U	Editor Projection			
		50	**29156**	**BLX**	115/120	120	CC-2V	2.37	1.37	50	780	2850		HD	Toy Projection			
		75	**32137**	**BNF**	120	120	CC-2V	2.37	1.37	25	1300	2900		HD	Toy Projection			
T8	D. C. Bay.	50	**29171**	**CAX**	115/120	24	CC-2V	3.12	1.37	50	775	2875		BD	Optical Projection			
		50	**29169**	**CAX**	130	24	CC-2V	3.12	1.37	50	775	2875		BD	Optical Projection			
		75	**29208**	**CBX/CBS**	115/120	24	CC-13	3.12	1.37	50	1200	2925		BD	Slide Projection	J		
		100	**29266**	**CDJ**	115/120	24	CC-2V	3.12	1.37	50	2000	2975		BD	Slide Projection			
			29244	**CEB**	115/120	24	CC-13	3.12	1.37	50	1850	2975		BD	Slide Projection			
T6.4	D.C. Bay.	35	**30202**	**EAJ**	12	24	C-6	4	1.76	300	620			U	Flashtube Modeling	L		
SINGLE CONTACT PREFOCUS BASE. ANSI BASE DESIGNATION: P30S. TABLE 16.																		
T8	S. C. Pref.	4A	**30421**	**BXB**	9	24	C-8 (7)	3.12	1.62	100	690			HD	Sound Reproduction	M		
MISCELLANEOUS. TABLE 17.																		
T20	Mogul	1000	**29959**	**DPT**	120	12	C-13	9.06	4.75	50	28000	3200		BD	Opaque Projection	G		

PULSED XENON ARC (PXA) LAMPS FOR THE GRAPHIC ARTS

PXA (Pulsed Xenon Arc) family... designed for the Graphic Arts Industry. They pulse 120 times/second... @ 1/100th second/flash... and provide:

- High light output
- Stable color temperature (6000 K)... from ultraviolet to infrared
- Increased production
- Lower power consumption
- Lower cost operation



PXA-50 & PXA-80...

Typical helical source... small... powerful.... used in ultra-small, highly efficient reflectors... on copyboards... or for platemaking.

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
PULSED XENON ARC																		
PXA LAMPS FOR THE GRAPHIC ARTS.																		
T3	WireTerm-CeramicCaps	4000	**30124**	**PXA-50**		6		4.62			125000				PXA lamps for the graphic arts			
		8000	**30129**	**PXA-80**		6		4.62			240000				PXA lamps for the graphic arts			

CAUTION NOTICE

Pulsed Xenon lamps emit high levels of ultraviolet (UV) radiation and must be completely enclosed in an inter-locked system with all walls made of UV absorbing material. The lamp must be made inoperative before the system is opened. The operator or user should never be exposed to the high level of UV radiation emitted by PXA lamps.

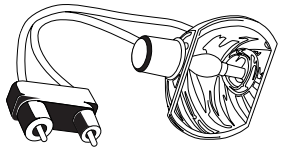
HIGH-INTENSITY ARC LAMPS

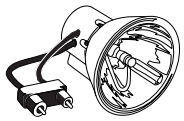
Designed for high brightness and energy efficiency.
The optimum choices for:

- Energy efficiency – 60 lumens/watt
- Vivid, natural color rendition
- Daylight color
- Compact, high brightness arc sources
- Optically precise light beam control
- Dichroic reflector optical assembly
- Precise rim reference lamp mounting

GEMINI® AND MARC™ LAMPS

Originally designed by GE for 16mm film projectors, Gemini® and MARC™ lamps are also being used increasingly where high intensity daylight color is desired from a safe, compact, efficient light source. Gemini and MARC lamps have significantly improved light levels in such applications as medical examination, surgical illumination and follow-spot lighting equipment. The use of Gemini and MARC systems continues to grow as designers and users discover the unique advantages of these high intensity arc lamps.





Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	Additional Information	Footnote	Typical Working Distance
GEMINI® AND MARC™												
OPERATING POSITION: PLANE OF REFLECTOR RIM VERTICAL SPECIAL POWER SUPPLY REQUIRED – SEE BELOW.												
PAR20	Special 2-Pin Plug	300	11134	**GEMINI 300 (EZG)**	35	4	75		6000	Replaces MARC 300/16A	O, P	37mm
PAR24	Special 2-Pin Plug	350	39936	**MARC-350/16T (EZT)**	45	4	50	50	5000		O	52mm

POWER SUPPLY TO OPERATE GEMINI® AND MARC™ LAMPS

For information on the special power supply used to operate these lamps, contact:

Scientecular Lab Company
98 McKinney Avenue
Central Islip, NY 11722-4120
(516) 232-3345

NAPS/Fortron Source
328 Ley Road, Suite 300
Ft. Wayne, IN 46808
(219) 471-1368
Fax: (219) 471-1368

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
PHOTOFLOOD																		
STANDARD. TABLE 18.																		
A21	Medium	300	**40886**	**BAH 24PK**	115	24	C-9	4.93		20	9000	3200			Photocopy, Inside Frost	Q		
		250	**40563**	**BBA 24PK**	115 120	24	C-9	4.93		3	8500 8000	3400		U	No. 1 Photoflood, Inside Frost	Q		
			40564	**BCA 24PK**	115/120	24	C-9	4.93		3	5000	4800			No. B1, Blue, Inside Frost	Q		
S11	Cand.	30	**30232**	**BLK**	120	120	CC-2V	2.25		50	400	2700			Photocopy, Inside Frost	Q		
PS25	Medium	500	**40566**	**EBV 24PK**	115/120	24	C-9	6.93		6	17000	3400			No. 2, Inside Frost	Q		
			40567	**EBW PH/B2 24PK**	115/120	24	C-9	6.93		6	10500	4800			No. B2, Blue , Inside Frost	Q		
A23	Medium	250	**40565**	**ECA 24PK**	120	24	C-9	6		20	6500	3200			Inside Frost	Q		
PS25	Medium	500	**40568**	**ECT 24PK**	120	24	C-9	6.93		60	13650	3200			Inside Frost	Q		
REFLECTOR. TABLE 19.																		
R40	Medium	500	**30151**	**DXB**	120	24	CC-2V	6.62		6		3300	45000		Spot Beam, I.F., (RSP-2)	Q		
			30145	**DXC**	120	24	C-9	6.62		6		3300	5500		Flood Beam, I.F., (RFL-2)	Q		
			30281	**EAL**	120	24	CC-2V	6.62		15		3200	6800		Medium Beam, I.F.	Q		

Shape	Base	Watts	Order Code	Description	Volts	Case Qty.	Filament Design	MOL	LCL	Rated Avg. Life Hours	Lumens Initial	Color Temp. K	CBCP	Burn Position	Additional Information	Footnote	Typical Working Distance	Approx. Source Size (WxH)
ENLARGER & PRINTER																		
TABLE 20.																		
S11	S.C. Bay.	75	**30162**	**PH/111A**	125	120		2.37		15	1120	2900		HD	Enlarger, White			
S14	Medium	75	**43220**	**PH/140**	120	120		3.37		35	1150	2900		U	Enlarger, White			
A21	Medium	75	**40569**	**PH/211 24PK**	120	24		4.93		65	1000	3000		U	Enlarger, White			
		150	**40570**	**PH/212 24PK**	120	24		4.93		100	2300	3050		U	Enlarger, White			
		250	**40571**	**PH/213 24PK**	120	24		4.93		3	7000	3400		U	Enlarger, White			
T14	4-Pin	150	**29366**	**DLS/DLG/DHX**	22	24	CC-6	3.43	1.56	15		3250		HD	8mm Projection, Internal Dichroic Reflector	K		
MR16	2-Pin	150	**32831**	**EJV**	21	20	CC-6	1.75		40		3350		HD	8mm, Printer, Reflector Quartzline®		1.750	

CAUTION NOTICE

INCANDESCENT PROJECTION, ENLARGER, AND PRINTER LAMPS

CAUTION - GENERAL ELECTRIC GLASS PROJECTION LAMPS WITH THREE-LETTER ANSI CODES OPERATE UNDER PRESSURE, ABOVE ROOM TEMPERATURE AND MAY UNEXPECTEDLY SHATTER. Protect people and surroundings from the possibility of injury or fire from hot, flying fragments with a suitable enclosure, shield, lens or screen. Do not operate projection equipment with the lamp compartment open. Observation of the following operating instructions will help avoid early lamp failure.

1. Use lamp only in equipment specifying this lamp type and which provides adequate ventilation to maintain lamp within safe operating temperatures. If in doubt, contact equipment manufacturer.
2. Operate lamp only in the position indicated by the instructions on the lamp or lamp package, or as noted in the GE catalog description of the lamp.
3. Do not bump or bounce equipment during operation.
4. Protect lamp from moisture, scratches or abrasions.
5. Replace lamp if it blisters or prematurely darkens.
6. Replace lamp socket if deterioration of socket is noticed.

To avoid electrical shock or burns, be sure power is off and lamp has fully cooled before replacing lamp.

For the most up-to-date product information, see www.gelighting.com.
All footnote references found at the end of this section (page 8-17). To convert inches to millimeters, multiply by 25.4.

FOOTNOTES

#	Footnote
2	Operate in any position
4	Operate base down to 22 base up
A	No longer manufactured; available only until stocks are depleted
B	Working Distance is from rear edge of base-pin insulating block to film plane, in optical system for which lamp was first designed. Small Base Pin is toward reflector for low-volt lamps, toward rear for 120-volt lamps.
C	Opaque Ceramic top on bulb
D	Proximity Reflector
E	Ultraviolet absorbing bulb
F	For these tungsten halogen lamps (unless completely enclosed within a projector or other optical device), screening techniques should be used where appropriate to protect people and surroundings in case of shattering
G	Heat resistant glass bulb
H	Collector grid
I	Gold Top (opaque)
J	Black Top (opaque)
K	Dichroic reflector
L	Two-filament lamp
M	Filament offset 3 3/16" from base axis, in plane perpendicular to plane through base axis and base pins
N	Base pins of lamp are approximately perpendicular to plane of lead wires
O	Should not be operated for periods of less than three minutes. Short operating cycles reduce life and degrade performance
P	On GE solid state power supplies. Average lamp life is 50 hours on all other GE power supplies
Q	Approximate beam spread to 1/2 center-beam intensity
R	Red-enhanced dichroic filter
S	Operate base-down to 22 degrees base-up

SUBSTITUTE LAMP GUIDE

For the lamps listed below, there is no appropriate GE substitute lamp. Those that are footnoted "Discontinued by General Electric" (example: BAF*) are obsolete types – in most cases, no longer produced by any lamp manufacturer. The remainder of the lamps below are currently produced General Electric types with unique design/construction features tailored specifically to the requirements of the projection equipment for which they are originally designed. Consequently, we can offer substitute lamp for direct replacement.

All currently listed ANSI-coded GE Projection Lamps appear in the Substitute Guide – either in the table below (no substitute), or in the first column of the substitution tables beginning on page 8-18.

No General Electric Substitute Lamp is Available for the Following Lamps

BAF*	BHA*	BSS	CAY*	CNX*	CYL*	DDN	DLT*	DXX	EFR	EPT	EZS
BAJ*	BHB	BSW	CBA	CPB*	CYN*	DDP	DLY*	DYA	EGX	EPV	EZT
BAL*	BHD	BTD	CBX	CPF*	CYR*	DDS	DMB*	DYF	EHA	EPW*	FAF*
BAS*	BHG*	BTK*	CCB*	CPG*	CZC*	DEA*	DMG*	DYG	EHJ	EPX	FAL
BBB	BHH	BTT*	CCK	CPR*	CZD*	DED	DMH*	DYH	EJA	EPZ	FBC*
BBJ*	BHK*	BVA*	CCR*	CPW*	CZG*	DEF	DMJ	DYJ	EJM	ERV	FBF*
BBX*	BHR*	BVB*	CDW*	CRC*	CZJ*	DEJ*	DML*	DYP	EJV	ESC*	FPG
BCA	BHW*	BVE	CDK*	CRL*	CZS*	DES*	DMS	DYR	EJY	ESD	FBK*
BCJ*	BJC*	BVK	CDR*	CRS*	DAC*	DET*	DNC*	DYS	EJZ*	ESJ	FBL*
BCS*	BJJ*	BVL	CER*	CRX*	DAE*	DEX*	DNE	DYT	EKB	ETJ	FBM*
BCW*	BJS*	BVR	CFA*	CSD*	DAG*	DFH*	DNF	DYY	EKC*	ETS*	FBZ*
BDD*	BJW*	BWC*	CFR*	CST*	DAN*	DFJ*	DNK*	DZA	EKL	ETT	FCB
BDK	BKC*	BWJ*	CFY*	CTB*	DAR*	DFN	DRL*	DZB	EKN	EVV	FCE*
BDW	BKG*	BWR*	CGD*	CTL	DAS*	DFR*	DSR*	DZE	EKP	EWF	FCH*
BEB*	BKR*	BWY*	CGE	CTM*	DBK*	DGA*	DSW	DZR*	EKX	EWM*	FCK
BEC*	BKV	BXB	CGJ*	CTR*	DBR*	DGE*	DTS	EAD*	EKZ	EWR	FCR
BEP	BLC	BXE	CGP	CTW*	DBT*	DGJ*	DTW*	EAH*	ELA	EXL	FDT
BES*	BLG*	BXJ	CHG*	CVJ*	DBX*	DGS*	DWB*	EAJ	ELD	EXM	FEA*
BEV*	BMA*	BXK*	CHS*	CVS	DCE*	DGX*	DWE*	EAK*	ELE	EXS	FEB*
BEY	BMJ*	BXT	CHW*	CWG*	DCF	DHB*	DWF*	EAL	ELJ	EXV	FFJ
BFA	BMK*	BXW*	CHY	CWR*	DCH*	DHH*	DWH*	EAP*	ELS	EYA	FFM
BFB*	BMS	BYD*	CJD*	CWY*	DCL*	DHJ*	DWK	EAW*	EMC	EYB	FGA*
BFC*	BNB*	BYJ*	CJT*	CXD*	DCN*	DHW*	DWL*	EBR	EMG*	EYH	FGB*
BFJ*	BNK*	BYM*	CJW*	CXG*	DCS*	DJD*	DWN*	EBW	EMH*	EZD	FGC*
BFR*	BNS*	BYR*	CKB*	CXH*	DCW	DJR*	DWW*	EBY	EML	EZE	FGD*
BFT*	BPG*	BYT*	CKS*	CYA*	DCY	DJT	DWZ*	ECA	EMM	EZF	FGR*
BFX*	BPR*	BZB*	CLD*	CYB*	DCF	DKF*	DXB	ECV	ENL	EZG	FHZ*
BFY*	BRD	BZD*	CMS*	CYC	DDJ	DKK*	DXC	EDK*	ENX	EZJ	FML
BGB*	BRK	BZG*	CNJ*	CYE*	DDK	DKY*	DXF*	EFM	ENZ	EZK	GEMINI-300 (EZG)
BGK*	BSX	CAD*	CNP*	CYF*	DDL	DLC*	DXL	EFN	EPG	EZL	MARC-300/16 (EZM)
BGW*	BSK	CAG*	CNS*	CYG*	DDM	DLD	DXT*	EFP	EPN	EZM	MARC-350/16T (EZT)

* No longer manufactured; available only until stock s are depleted.

GE SUBSTITUTE LAMP GUIDE

If a requested ANSI-Coded lamp is not found in the index to this section (pages 8-7 – 8-8), it may be listed as a GE Stage/Studio lamp. Check the ANSI Code Reference Table in the current GE Stage/ Studio Lamp Catalog (SS-123P). If no current listing is found, a GE substitute lamp may nevertheless be available — as identified in the following Substitute Lamp Guide. Note: there are not GE substitute lamps for the ANSI codes listed on page 8-17.

This Substitute Lamp Guide (Showing GE lamps that may be substituted, if requested) is arranged under three main column headings:

1. **Lamp Requested...** the lamp asked for by the customer. Arranged alphabetically by code, lamps are further identified by their wattage and lamp end (clear or opaque). Many of the codes listed are further obsolete lamps; some are for other than photographic applications.
2. **This Lamp May Be Substituted...** a GE lamp that may be used instead of the requested lamp. These columns are identical to those of the requested lamp, for quick wattage and lamp-end comparison.
3. **Substitute Lamp Differs In These Respects, etc...** everything under this and the six sub-column headings pertains to the substitute lamp as compared to the requested lamp. For example: if the word "more" appears in the "light" column, the substitute lamp gives more light than the lamp requested.

Most of the recommended substitute lamps in this guide are directly interchangeable with the lamp requested. However, additional information may be needed in some instances:

Lower Wattage... When a lower wattage lamp is used as a substitute, the projected image will generally not be as bright as with the requested lamp.

Opaque End... Normally, a substitute lamp having an opaque end makes an excellent replacement for a clear end lamp (everything else being equal). However, opaque end lamps cannot be used where a highly specialized application requires light from the end of the lamp.

Proximity Reflector... The CZA type lamp may be substituted for the corresponding non-proximity type such as DAY/DAK...providing the socket does not position the lamp's reflector between the projector lens and the lamp filament.

Non-proximity... Ordinarily, non-proximity lamps should not be substituted for proximity reflector lamps since projectors designed for proximity lamps have no internal reflector.

Internal Dichroic Reflector... Lamps with internal dichroic reflectors may substitute for internal metal reflector lamps...for example: DEF for DCA, or DLS for DLG. Dichroic lamps of equal wattage and design life give the same amount of light with about 50% less heat at the film aperture.

Internal Metal Reflector... Internal metal reflector lamps should not be used as replacements for internal dichroic reflector lamps...for example: DCA for DEF, or DLG for DLS...because the cooling system of projectors designed for dichroic lamps is usually inadequate for the increased heat at the film aperture from metal-reflector lamps.

Code	Watts or Amperes	Lamp End	GE Code	Watts or Amperes	Lamp End	Light	Life	Heat	Lamp Dimensions	Other
LAMP REQUESTED			**SUBSTITUTE LAMP**			**HOW SUBSTITUTE DIFFERS FROM REQUESTED LAMP**				
BAH	300	frosted	BBA	250	frosted	less	less	less	same	—
BAK	.75A	clear	BRS	.75A	clear	same	less	same	same	—
BCK	500	clear	CZA	500	opaque	same	less	same	longer	Glass lamp
BDJ	200	clear	FEV	200	clear	more	more	same	smaller	Quartzline® lamp
BEH	150	opaque	CAR	150	opaque	same	same	same	same	Proximity reflector may not work in some projectors
BFD	750	clear	BFL	750	opaque	less	same	less	same	Monoplane filament
BFH	750	clear	BTP	750	clear	more	more	more	smaller	Quartzline® lamp
BFK	750	opaque	BFL	750	opaque	same	same	same	same	Special bulb for bowling score projectors
			DGH	750	opaque	more	more	same	bulb 1" narrower	—
BFL	750	opaque	DGH	750	opaque	more	more	same	bulb 1" narrower	—
BHC	600	clear	DYS	600	clear	same	same	same	shorter lamp	Better performance
BHF	100	opaque	BHD	100	clear	same	same	same	same	—
BKF	45	clear	BLC	30	clear	less	less	less	same	—
BLX	50	clear	BLC	30	clear	less	same	less	same	—
BMD	100	clear	BMY	100	clear	less	more	more	same	Larger filament
BMG	100	clear	BNF	75	clear	less	same	less	same	—
BNF	75	clear	BLX	50	clear	less	more	less	same	—

Code	Watts or Amperes	Lamp End	GE Code	Watts or Amperes	Lamp End	Light	Life	Heat	Lamp Dimensions	Other
LAMP REQUESTED			**SUBSTITUTE LAMP**			**HOW SUBSTITUTE DIFFERS FROM REQUESTED LAMP**				
BRH	1000	clear	DXW	1000	clear	less	more	same	same	3200 K
			DXN	1000	clear	more	less	same	same	3400 K
BTC	1000	clear	DGS	1000	clear	more	less	more	same	—
BTS	800	clear	DVY	650	clear	less	more	less	same	G-6 bulb
BWB	2000	clear	BWA	2000	clear	less	more	same	same	3200 K
BXE	7.5A	clear	7.5A/T8/92SC(10V)	7.5A	clear	same	same	same	same	—
BXM	4A	clear	4A/T8SCP(9V)	4A	clear	same	same	same	same	—
CAC	50	clear	CAX	50	clear	less	same	same	same	Larger filament
CAE	100	opaque	CDD	100	clear	same	same	same	same	—
CAJ	50	opaque	CAX	50	clear	same	same	same	same	Larger filament
CAR	150	opaque	BEH	150	opaque	same	same	same	same	Projector must have internal reflector
			DFF	150	opaque	less	more	less	same	—
CAS	50	clear	BZW	50	clear	less	same	less	same	—
CAW	50	opaque	CAX	50	clear	same	same	same	same	—
CAX	50	clear	BLX	50	clear	less	same	same	bulb 3/8″ wider	—
CBF	500	opaque	DEK	500	opaque	less	more	less	slightly longer & wider	Burn horizontal only Not tungsten-halogen
CBS	75	clear	CBX	75	opaque	same	same	same	same	—
CCM	200	opaque	CGP	150	opaque	less	same	less	same	—
CDD	100	clear	CEM	100	opaque	less	more	same	same	—
CDJ	100	clear	CEB	100	clear	same	same	same	same	Larger filament
CDK	100	opaque	CBX	75	opaque	less	same	less	same	Different filament
CEA	100	opaque	CEB	100	clear	same	same	same	same	—
CEB	100	clear	CBX	75	opaque	less	same	less	same	—
CEL	110	opaque	CBX	75	opaque	less	less	less	same	—
CEM	120	opaque	CDD	100	opaque	more	less	less	same	—
CFK	150	clear	CGP	150	opaque	same	same	same	same	—
CLG	300	clear	CLS	300	opaque	same	same	same	same	—
CLL	500	opaque	CLS	300	opaque	less	same	less	same	Monoplane filament
CLM	300	clear	CLS	300	opaque	less	same	less	same	Monoplane filament
CMV	300	opaque	CLS	300	opaque	less	same	same	same	—
CTT (for CTS use CTT)	1000	opaque	CZA	500	opaque	less	same	less	—	Lamp 5/8″ shorter, 1/4″ narrower
CVX	200	opaque	CVS	200	clear	same	same	same	same	—
CWA	750	opaque	CZA	500	opaque	less	same	less	—	Lamp 5/8″ shorter, 1/4″ narrower
CWD	300	opaque	CAL	300	opaque	same	same	same	same	Proximity reflector may not work in some projectors
CXF	200	opaque	CTL	150	opaque	less	same	less	same	—
CXF	200	clear	CTL	150	opaque	less	same	less	same	Different filament
CXP	300	opaque	CAL	300	opaque	less	same	same	same	Proximity reflector
CZA	500	opaque	CAL	300	opaque	less	same	less	same	—
CZB	500	opaque	CZA	500	opaque	less	more	same	same	—
CZF	500	opaque	CZX	500	opaque	same	same	same	same	—
DAB	500	opaque	CZX	500	opaque	less	more	less	same	—
DAH	500	opaque	DEK	500	opaque	same	less	same	same	—
DAK	500	opaque	DAT	400	opaque	less	same	less	same	—
			DAY	500	opaque	same	more	same	same	Heat resistant bulb
DAN	200	frosted	BEP	300	frosted	more	same	more	1 1/4″ wider	—
DAY	500	opaque	DAT	400	opaque	less	less	less	same	—
DBR	300	clear	CTL	150	opaque	less	same	less	bulb 1/4″ narrower	—
DCA	150	opaque	DEF	150	opaque	same	same	less	same	Dichroic reflector
DCC	500	clear	CZX	500	opaque	same	same	same	same	—
DDB	750	opaque	CZX	500	opaque	less	same	less	bulb 1/4″ narrower	—
DDW	750	opaque	DDB	750	opaque	less	same	same	same	—
			CZX	500	opaque	less	more	less	bulb 1/4″ narrower	—
DDY	750	opaque	DGH	750	opaque	less	more	less	same	—

Code	Watts or Amperes	Lamp End	GE Code	Watts or Amperes	Lamp End	Light	Life	Heat	Lamp Dimensions	Other
LAMP REQUESTED			**SUBSTITUTE LAMP**			**HOW SUBSTITUTE DIFFERS FROM REQUESTED LAMP**				
DEK	500	opaque	CBA	500	opaque end	same	more	same	same	Quartzline®
DEL	500	opaque	DEK	500	opaque	less	more	same	same	25 hour life-33% less light
DEP	750	opaque	DAY	500	opaque	less	same	less	smaller	Heat resistant bulb
		opaque	DEK	500	opaque	more	less	more	shorter	—
DFC	150	clear	DFN	150	clear	same	same	same	—	—
DFE	80	clear	DGB	`80	clear	same	same	same	longer	—
DFF	150	opaque	CAR	150	opaque	more	less	same	same	—
DFN	150	clear	DCH	150	clear	less	same	same	longer	—
DFP	150	clear	DCH	150	clear	same	same	same	longer	—
DFW	500	opaque	DEK	500	opaque	same	same	same	shorter	—
DFZ	80	clear	DLD	80	clear	same	more	same	smaller	—
DGL	1000	clear	DGS	1000	clear	more	less	same	same	10 hour
DGR	750	opaque	DAY	500	opaque	less	more	less	smaller	Heat resistant bulb
DHN	500	opaque	DEK	500	opaque	same	same	same	shorter	—
DHR	1200	opaque	DHT	1200	opaque	same	same	same	same	—
DHS	1200	clear	DGS	1000	clear	less	more	less	same	—
DHX	150	clear	DLS	150	clear	same	same	same	same	Different shaped bulb
DJA	150	clear	DCH	150	clear	same	same	same	same	—
DJB	200	clear	DCH	150	clear	less	same	less	same	—
DKR	150	clear	DLS	150	clear	same	same	same	same	Longer focal length
DLE	80	clear	DLD	80	clear	same	same	same	shorter	—
DLG	150	clear	DLS	150	clear	same	same	less	same	Dichroic reflector
DLH	250	opaque	DJL	150	clear	less	same	less	same	—
DLN	750	opaque	DEK	500	opaque	less	same	less	shorter bulb	—
DMD	80	clear	DGB	80	clear	same	same	same	—	Different shape bulb
DMX*	500	clear	BTM	500	clear	more	more	same	smaller	Tungsten-halogen lamp
DMY	5000	clear	DPY	5000	clear	more	more	same	1″ longer	Monoplane filament
DMZ	5000	clear	DPY	5000	clear	less	more	same	1″ longer	Monoplane filament
DNT/FMD	750	clear	EGF	750	clear	more	same	same	smaller	CC-8 filament
DNV/FME	1000	clear	EGJ	1000	clear	same	more	same	smaller	CC-8 filament
DPK	5000	clear	DPY	5000	clear	more	more	same	smaller	Quartzline® lamp
DPZ	5000	clear	DPY	5000	clear	less	more	same	same	3200 K
DRB	1000	clear	DRC	1000	clear	less	more	less	same	50 hour lamp
DRC	1000	clear	DRB	1000	clear	more	less	more	same	25 hour lamp
DRW	1000	clear	DPT	1000	clear	more	same	same	same	—
DSD	1000	frosted	DKZ	1000	frosted	more	more	same	larger	PS-52 bulb
DSN	750	clear	EGR	750	clear	more	same	same	smaller	Quartzline®-3200 K
DTZ	10M	clear	DTY	10M	clear	less	more	same	same	3200 K
DVB	1000	clear	CYV	1000	clear	more	more	same	smaller	Quartzline®-3200 K
DVE	2000	clear	CYX	2000	clear	same	more	same	smaller	Quartzline® lamp
DVJ	2000	clear	CYX	2000	clear	same	more	same	smaller	Quartzline® lamp
DVN	25	clear	25S6	25	clear	same	same	same	same	—
DVS	500	clear	Q500T3/CL(130V)	50	clear	more	less	same	same	130 volt lamp
DVV	1500	clear	FER	1000	clear	less	more	less	same	—
			FEY	2000	clear	more	same	more	same	1/3 more heat
DVY	650	clear	DYH	600	clear	less	more	less	same	3200 K
DWA	650	—	FGS	250	—	less	less	less	same	Repacement lamp only
DWC	150	frosted	150R/FL	150	frosted	same	same	same	same	—
DWT	1000	clear	Q1000T6/CL	1000	clear	same	same	same	same	—
DWW	460	clear	FAL	420	clear	less	more	less	same	—
DWY	650	clear	FAD	650	clear	less	more	same	same	3200 K lamp
DXD	500	frosted	DXB	500	frosted	more	less	more	same	118V lamp
DXE	500	frosted	DXC	500	frosted	more	less	more	same	118V lamp
DXH	375	frosted	EAL	500	frosted	more	same	more	same	1/3 more heat
DXN	1000	clear	BRH	1000	clear	less	more	same	same	3350 K lamp
DXS	1000	frosted	DXR	1000	frosted	more	less	less	same	—
DXV	800	clear	DXX(230V)	800	clear	less	more	same	same	3200 K

Code	Watts or Amperes	Lamp End	GE Code	Watts or Amperes	Lamp End	Light	Life	Heat	Lamp Dimensions	Other
LAMP REQUESTED			**SUBSTITUTE LAMP**			**HOW SUBSTITUTE DIFFERS FROM REQUESTED LAMP**				
DXY	650	—	DWE	650	—	less	more	same	same	Quartzline® lamp
DYV	600	clear	DYS	600	clear	same	same	same	same	—
DZM	250	clear	DZE	150	clear	less	more	less	same	—
EBV	500	frosted	ECT	500	frosted	less	more	same	same	3200 K
ECC	1000	clear	BVV	1000	clear	same	more	same	smaller	Quartzline® lamp
ECG	2000	clear	CYX	2000	clear	same	more	same	smaller	Quartzline® lamp
ECJ	2000	clear	CYX	2000	clear	same	more	same	smaller	Quartzline® lamp
ECK	2000	clear	CYX	2000	clear	less	more	same	smaller	Quartzline®-3200 K
ECL	2000	clear	CYX	2000	clear	less	more	same	smaller	Quartzline®-3200 K
ECM	5000	clear	DPY	5000	clear	less	more	same	smaller	Quartzline®-3200 K
ECP	10M	clear	DTY	10M	clear	less	more	same	smaller	Quartzline®-3200 K
ECT	500	frosted	EBV	500	frosted	more	less	same	same	3400 K
ECX	1000	clear	DKZ	1000	frosted	same	more	same	same	Quartzline® lamp
ECY	1500	frosted	DKX	1500	frosted	same	more	same	same	Quartzline® lamp
EDF	1000	clear	DPT	1000	clear	same	more	same	same	—
EDL	2000	clear	CYX	2000	clear	less	more	same	smaller	Quartzline®-3200 K
EDM	2000	clear	CYX	2000	clear	less	more	same	smaller	Quartzline®-3200 K
EDN	5000	clear	DPY	5000	clear	less	more	same	smaller	Quartzline®-3200 K
EDR	100	clear	100T8 1/2/9	100	clear	same	same	same	same	—
EDZ	500	frosted	EBV	500	frosted	more	less	more	same	118V lamp
EEM	1000	frosted	DKZ	1000	frosted	same	more	same	same	Quartzline® lamp
EER	2000	clear	CYX	2000	clear	same	less	same	smaller	—
EFJ	1000	frosted	FCV	1000	frosted	more	less	same	same	—
EGD	500	clear	EGC	500	clear	more	same	same	same	—
EGL	1000	clear	EGJ	1000	clear	more	same	same	same	—
EGS	750	clear	EGR	750	clear	less	more	same	same	3200 K
EGV	1000	clear	EGT	1000	clear	less	more	same	same	3200 K
EHB	500	clear	EHC	500	clear	more	less	same	same	—
EHK	1000	clear	FEL	1000	clear	more	less	same	same	—
EHM	300	clear	Q300T2 1/2/CL	300	clear	same	same	same	same	—
EHP	400	clear	Q300T4/CL	300	clear	same	same	same	same	—
EHR	400	clear	Q400T4/CL	400	clear	same	same	same	same	—
EHS	1000	clear	FER	1000	clear	more	same	same	same	—
EHT	250	clear	Q250CL/MC	250	clear	same	same	same	same	—
EHZ	300	frosted	Q300T2 1/2	300	frosted	same	same	same	same	—
EJB	800	clear	EME	800	clear	less	more	less	same	240V lamp
EJC	800	frosted	EMF	800	clear	less	more	less	same	240V lamp
EJE	1000	frosted	EJD	1000	clear	same	same	same	same	—
EJL	200	clear	EJA	150	clear	less	less	less	same	—
EJN	150	clear	ELD	150	clear	same	same	same	same	Multi-Mirror® reflector-better coverage
EJS	150	clear	EJM	150	clear	less	more	same	same	—
EJV	150	clear	EKE	150	clear	same	more	less	same	200 hour lamp
EKD*	650	clear	DYS	600	clear	less	more	less	same	—
EKE	150	clear	EJV	150	clear	same	less	more	same	25 hour lamp
EKG	80	clear	ENW	80	clear	same	more	less	same	200 hour lamp
EKH	800	clear	EME	800	clear	less	more	less	same	240V lamp
EKP	80	clear	EPK	80	clear	more	less	more	same	—
EKS	250	clear	EMM	250	clear	same	more	same	same	—
EKV	1100	clear	ELJ	1050	clear	less	more	less	same	3200 K
ELB	80	clear	ENZ	50	clear	less	more	less	same	—
ELC	250	clear	EJL	200	clear	less	same	less	same	—
ELH	300	clear	ENG	300	clear	more	less	more	same	—
			ENH	250	clear	less	more	less	same	—
ELR	65	clear	ELS	50	clear	less	more	less	same	—
ELV	150	clear	DNF	150	clear	more	less	same	same	25 hour lamp
EMB	150	clear	EJV	150	clear	less	more	less	same	—
EMJ	5000	clear	DPY	5000	clear	same	more	same	smaller	Quartzline® reflector
ENA	80	clear	EKP	80	clear	same	more	same	same	Dichroic reflector

Code	Watts or Amperes	Lamp End	GE Code	Watts or Amperes	Lamp End	Light	Life	Heat	Lamp Dimensions	Other
LAMP REQUESTED			**SUBSTITUTE LAMP**			**HOW SUBSTITUTE DIFFERS FROM REQUESTED LAMP**				
ENB	150	clear	EJV	150	clear	more	less	same	same	—
			EKE	150	clear	less	more	same	same	—
ENC	80	clear	ENW	80	clear	same	more	less	same	—
ENG	300	clear	ELH	300	clear	less	more	less	same	—
			ENH	300	clear	less	more	less	same	
ENH	250	clear	ELH	300	clear	more	less	more	same	—
			ENG	300	clear	more	less	more	same	—
ENN	80	clear	ELB	80	clear	more	less	more	same	—
ENX	360	clear	EVW	250	clear	less	less	less	same	—
EPK	80	clear	EKP	80	clear	less	more	less	same	—
ESH	85	clear	EZW	85	clear	less	more	less	same	—
ESL	150	clear	Q150CL/MC2V	150	clear	same	same	same	same	—
ESM	250	frosted	Q250MC	250	frosted	same	same	same	same	—
ESN	100	clear	Q100CL/MC	100	clear	same	same	same	same	—
ESP	150	clear	Q150CL/DC/2V	150	clear	same	same	same	same	—
ESR	100	clear	Q100CL/DC	100	clear	same	same	same	same	—
ESS	250	clear	250CL/DC	25	clear	same	same	same	same	—
EST	1000	clear	DXN	1000	clear	same	more	same	same	—
ESX*	25	clear	FHX	250	clear	more	less	same	same	250 hour lamp
ETT	1000	clear	DXN	1000	clear	more	less	same	same	—
EVA	100	clear	FCR	100	clear	more	less	less	same	50 hour lamp
EWG	300	clear	EYK	300	clear	less	more	less	same	—
EXR	300	clear	EXW	300	clear	more	less	more	same	—
			FHS	300	clear	less	more	less	same	—
EXW	300	clear	EXR	300	clear	less	more	less	same	—
			FHS	300	clear	less	more	less	same	—
EXX	250	clear	EZK	150	clear	less	more	less	same	3200 K
EXY	250	clear	EZE	150		less	less	less	same	—
EZB	250		FGS	250		more	less	same	same	3400 K
EZW	85	clear	ESH	85	clear	more	less	more	same	—
FAP	650	—	FAY	650	—	more	more	same	same	Quartzline® lamp
FAZ	650	—	DXK	650	—	more	more	same	same	Narrower beam
FBD	500	clear	FBG	500	clear	same	same	same	shorter	More rugged construction
FCL	500	clear	Q500T3/CL	500	clear	same	same	same	same	—
FCS	150	clear	FDV	150	clear	less	more	less	same	—
FCZ	500	frosted	Q500T3	500	frosted	same	same	same	same	—
FDS	150	clear	DZE	150	clear	more	less	more	same	—
FDV	150	clear	FCS	150	clear	more	less	more	same	—
FGJ	650	—	FAY	650	—	more	more	same	same	Narrower beam
FGP	1000	—	FGN	1000	—	more	same	same	same	Narrower beam
FGS	250	—	EZB	250	—	less	more	same	same	2950 K
FGV	1000	frosted	FFT	1000	clear	same	same	same	same	—
FGW	150	clear	DZE	150	clear	more	less	same	same	—
FHS	300	clear	EXR	300	clear	more	less	more	same	—
			EXW	300	clear	more	less	more	same	—
FHX	25	clear	ESX	25	clear	less	more	same	same	500 hour lamp
FKA	650	clear	BTL	500	clear	less	less	less	same	—
			BTN	750	clear	more	less	more	same	15% more heat
FKC	1000	clear	BTR	1000	clear	more	less	same	smaller	—
FKL	650	clear	BTL	500	clear	less	less	less	same	—
			BTP	750	clear	more	more	more	same	15% more heat
FKT	250	clear	EYH	250	clear	more	same	same	same	G-6 bulb
FKV	650	clear	EHC	500	clear	less	same	less	same	—
			EHF	750	clear	more	same	more	same	15% more heat
FMD	750	clear	EGF	750	clear	more	same	same	smaller	CC-8 filament
FME	1000	clear	EGJ	1000	clear	same	more	same	smaller	CC-8 filament
FXL	410	clear	ENX	360	clear	less	more	less	same	—
MARC® 300/16A	300	clear	GEMINI™ 300(EZM)	300	clear	same	more	same	same	—

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