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## INCANDESCENT PROJECTION

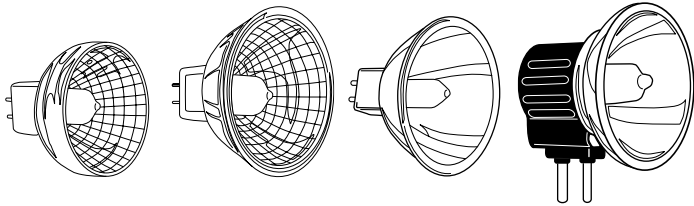
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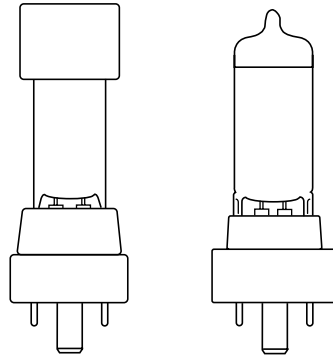


## LAMP LOCATOR



Mini Multi-Mirror®    Multi-Mirror®    Reflector    2-Pin-Vented Base Reflector

Quartzline® Projection Lamps

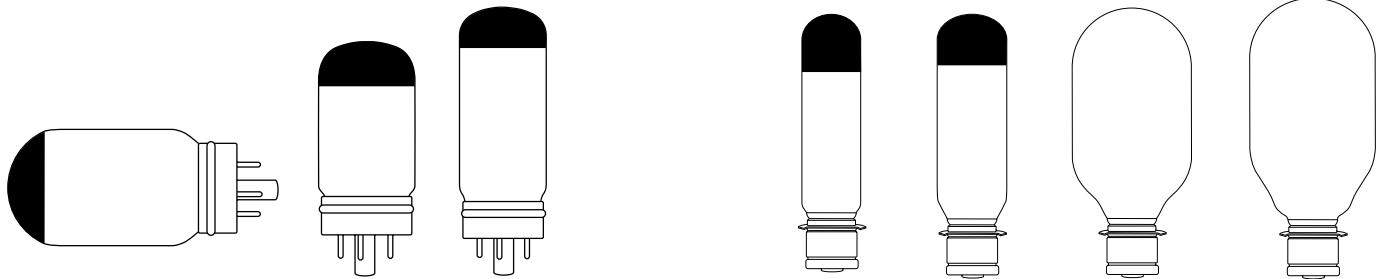


4-Pin Base CBA    4-Pin Base BCK



DAT / DAK  
DAY / DAK

Incandescent Projection Lamps / 4-Pin Base



DEK / DFW / DHN

CAR

CZA / CZB

CZX / DAB

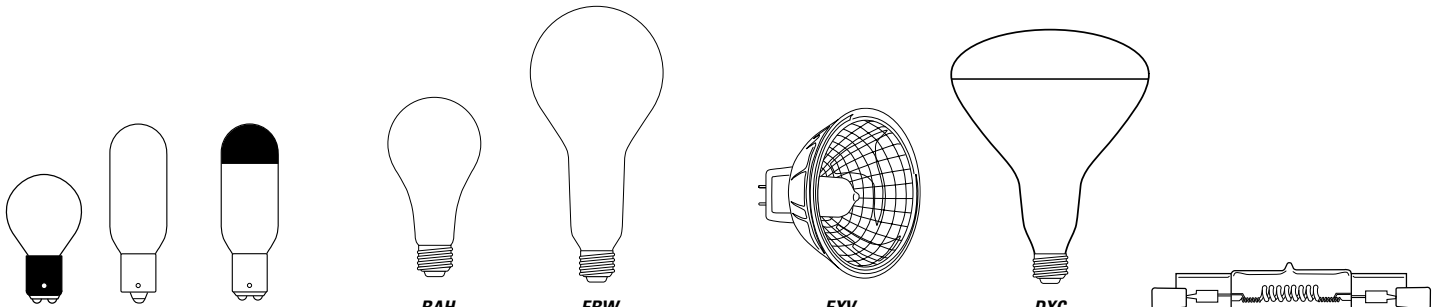
DDB

DRB  
DRC

DRS

Incandescent Projection Lamps / 4-Pin Base – Proximity Reflector

Incandescent Projection Lamps / Medium Prefocus Base



BLX  
BLC  
BNF

CDD

CBX/CBS

BAH  
BBA  
BCA  
ECA

EBW  
ECT

EXV  
EXX  
EZK

DXC  
EAL

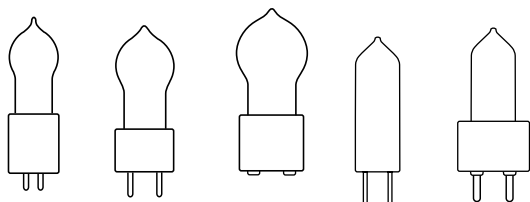
Double-Ended

Incandescent Projection Lamps / Single or Double Contact Bayonet Base

Standard Photofloods

Reflector Photofloods

Quartzline® Projection Lamps



G-6  
G5.3

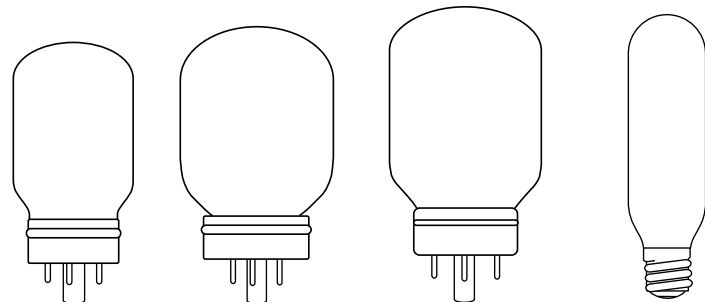
G-7  
G29.5

G-7  
2 Button

T-4  
GY6.35

T-4  
G29.5

Quartzline® Projection Lamps – Single-Ended



DFN / DFC / DCH /  
DJA / DFP

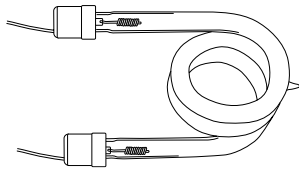
DLD / DFZ  
GX17q

DJL  
G17q

DPT  
Mog Base

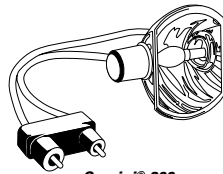
Incandescent Projection Lamps / 4-Pin Base – Focusing Reflector

Incandescent Projection Lamps / Misc.



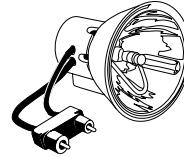
PXA-50  
PXA-80

**Pulsed Xenon Arc Lamps**



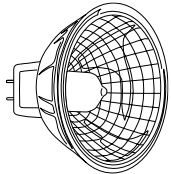
Geminir<sup>®</sup> 300  
EZG

**High-Intensity Gemini<sup>®</sup> Arc Lamps**

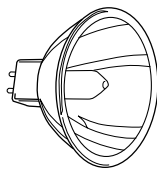


MARC 350 / 16T  
EZT

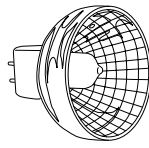
**High-Intensity MARC<sup>™</sup> Arc Lamps**



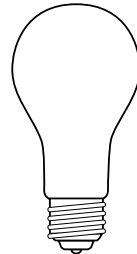
DDF ENH  
E.JL ESD  
ELC ESJ  
ELH EVW  
EYA



EJV



EZJ/EZJ



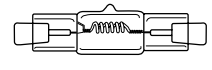
PH/211  
PH/212  
PH/213  
BBA



PH/140



PH/111A

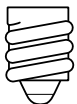


FAL  
FFJ

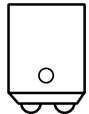
**Enlarger & Printer Lamps**

## BASE IDENTIFICATION

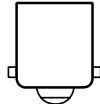
Typical bases used on Projection lamps in this catalog are shown below along with their names and common abbreviations. Where the base is an ANSI standard type, the ANSI reference code (which is the same as the IEC base code) is also shown. ANSI reference codes conform to American National Standard C81.10,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



**Candelabra**  
(Cand.)  
E12/15



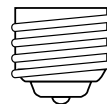
**Double Contact Bayonet**  
(D.C. Bay.)  
BA15d



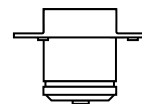
**Single Contact Bayonet**  
(S.C. Bay.)  
BA15s



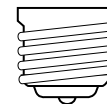
**Candelabra Prefocus**  
(S.C. Pref.)  
P30s  
(D.C. Pref.)  
P30d



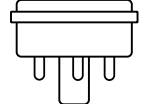
**Medium**  
E26s



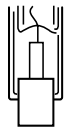
**Medium Prefocus**  
P28/25



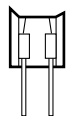
**Mogul**  
E39



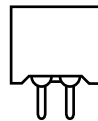
**4-Pin**  
G17q (Std. Volts)  
GX17q (Low Volts)



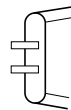
**Recessed Single Contact**  
R7



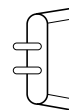
**Glass 2-Pin**  
G6.35 (.040" diam. Pins)  
GY6.35 (.050" diam. Pins)  
GZ6.35 (Reflector Quartzline<sup>®</sup> lamps)



**Miniature 2-Pin**  
G5.3



**GY5.3 2-Pin**  
(Flat Pins)



**GX5.3 2-Pin**  
(Round Pins)



**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
S.C. or D.C. Bayonet	Top of base pins
2-Pin Prefocus	Bottom of base ceramic
Miniature 2-Pin	Bottom of base pins
Glass 2-Pin	Bottom of base pins

Base Type	LCL Reference
2-Button	Top of ceramic base to top of filament coil
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. Candelabra Prefocus	Plane of locating bosses on prefocus collar



## 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.



**C-2V**  
**CC2-V**



**C-9**



**2C-8**  
**2CC-8**



**C-13**



**C-13D**



**C-6 Oval**



**C-6**  
**CC-6**



**C-8**  
**CC-8**

## 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 Photoflood)
  - Suggested substitutes for improved performance or discontinued 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 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 8-13.

### Important Notice

This catalog contains accumulated data to September 2003. 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 changes will improve its products.



## GENERAL INFORMATION

General Electric Projection Lamps are briefly described in the alphabetical lamp index (pages 8-6 – 8-7). 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.

## 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	Applications
• Dichroic reflector	• Cool light beam • Efficient light reflection	• Slide Projection • Front/Rear Screen Projection
• Precise rim reference	• Quick lamp installation • Accurate snap-in alignment	• Microfilm • Overhead Projection
• Faceted reflector	• Efficient beam for brighter image • Uniform screen image • Precision beam control	• 16mm Movie • 8mm Movie • Film Strip • Enlargers/Printers
• Halogen Quartzline® lamp	• Whiter and brighter light • No bulb blackening/blistering • Constant light output through life • Stable color temperature	• 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.

# Projection Lamps



Order Code	Description	Watts	Bulb Volts	Shape	Base	Table No.	Page No.
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## INDEX-ANSI CODED GE PROJECTION LAMPS

### BAB USE Q20MR16CG40BAB

40886	BAH	300	115	A21	Medium	18	12
40563	BBA	250	118	A21	Medium	18	12
40564	BCA	250	118	A21	Medium	18	12
36178	BCK	500	120	T6	G17q 4-Pin	6	10
40658	BHB	250	120	MR14	G7.9 2-Pin	5	10

### BHC USE DYS/DYV/BHC

29140	BLC	30	118	S11	D. C. Bay.	15	12
30232	BLK	30	125	S11	Cand.	18	12
29156	BLX	50	118	S11	D. C. Bay.	15	12
32137	BNF	75	120	S11	D. C. Bay.	15	12
29604	BRH	1000	120	T5	R7s	9	11
18234	BRL	50	12	T3.5	G6.35 2-Pin	7	10
38675	BVE	600	120	T6	GZ9.5 2-Pin Pf	7	10
30421	BXB	34	8.5	T8	S. C. Pref.	16	12
29525	CAL	300	120	T10	G17q 4-Pin	11	11
29380	CAR	150	120	T10	G17q 4-Pin	11	11
29171	CAX	50	118	T8	D. C. Bay.	15	12
29169	CAX	50	130	T8	D. C. Bay.	15	12
36117	CBA	500	120	T6	G17q 4-Pin	6	10

### CBS USE CBX/CBS

29208	CBX/CBS	75	118	T8	D. C. Bay.	15	12
29257	CDD	100	120	T8	S. C. Bay.	14	12
29266	CDJ	100	118	T8	D. C. Bay.	15	12
29244	CEB	100	118	T8	D. C. Bay.	15	12
43330	CEM	120	120	T8	S. C. Bay.	14	12
29664	CZA/CZB	500	120	T10	G17q 4-Pin	11	11

### CZB USE CZA/CZB

29677	CZX/DAB	500	120	T10	Med. Pref.	13	12
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### DAB USE CZX/DAB

### DAK USE DAT/DAK

40214	DAT/DAK	400	120	T10	G17q 4-Pin	10	11
29695	DAY/DAK	500	120	T10	G17q 4-Pin	10	11
29360	DCA	150	21	T12	GX17q 4-Pin	12	11
29364	DCH/DJA/DFP	150	120	T12	G17q 4-Pin	12	11
29836	DDB	750	125	T12	Med. Pref.	13	12
43986	DDF	55	17	MR16	GX5.3 2-Pin	3	9
43537	DDL	150	20	MR16	GX5.3 2-Pin	3	9
43206	DDM	80	19	MR16	GX5.3 2-Pin	3	9
43988	DDS	80	21	MR16	GX5.3 2-Pin	3	9
43950	DED	85	13.8	MR16	GX5.3 2-Pin	3	9
29737	DEK/DFW/DHN	500	120	T12	G17q 4-Pin	11	11

### DFC USE DFN/DFC

36122	DFE	80	30	T12	GX17q 4-Pin	12	11
29386	DFN/DFC	150	125	T12	G17q 4-Pin	12	11

### DFP USE DHC/DJA/DFP

### DFW USE DEK/DFW/DHN

### DFZ USE DLD/DFZ

Order Code	Description	Watts	Bulb Volts	Shape	Base	Table No.	Page No.
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## INDEX-ANSI CODED GE PROJECTION LAMPS (CONTINUED)

### DHN USE DEK/DFW/DHN

### DHX USE DLS/DLG/DHX

### DJA USE DHC/DJA/DFP

29338	DJL	150	120	T14	G17q 4-Pin	12	12
44854	DJT	50	13.8	MR16	GX5.3 2-Pin	3	9
40216	DLD/DFZ	80	30	T14	GX17q 4-Pin	12	12

### DLG USE DLS/DLG/DHX

29366	DLS/DLG/DHX	150	22	T14	GX17q 4-Pin	12	12
40161	DNE	150	120	MR16	G7.9 2-Pin	5	10
39742	DNF	150	21	MR16	GX7.9 2-Pin	5	10
29959	DPT	1000	120	T20	Mogul	17	12
29968	DRB	1000	118	T20	Med. Pref.	13	12
29979	DRC	1000	120	T20	Med. Pref.	13	12
29947	DRS	1000	120	T20	Med. Pref.	13	12
29405	DSW	200	24	T14	GX17q 4-Pin	12	12
30304	DVY	650	120	G6	G5.3 2-Pin	7	10
29578	DWZ	375	30	T4	R7s	9	11
30151	DXB	500	120	R40	Medium	19	13
30145	DXC	500	120	R40	Medium	19	13
36952	DXX	800	230	T4	R7s	9	11
36953	DXX	800	240	T4	R7s	9	11
30364	DYH	600	120	G7	G5.3 2-Pin	7	10
32071	DYP	600	120	G7	2-Button	7	10
33248	DYR	650	220	G7	GZ9.5 2-Pin Pf	7	10
33250	DYR	650	240	G7	GZ9.5 2-Pin Pf	7	10
32955	DYS/DYV/BHC	600	120	G7	GZ9.5 2-Pin Pf	7	10

### DYV USE DYS/DYV/BHC

19479	DYS-5	600	120	G7	GZ9.5 2-Pin Pf	7	10
37346	DZA	30	10.8	T3.5	G5.3 2-Pin	7	10
37695	DZE/FDS	150	24	T4	GZ9.5 2-Pin Pf	7	10
30202	EAJ	35/25	12	T6.4	D. C. Bay.	15	12
30281	EAL	500	120	R40	Medium	19	13
40566	EBV	500	118	PS25	Medium	18	12
40567	EBW PH/B2	500	118	PS25	Medium	18	12
40565	ECA	250	120	A23	Medium	18	12
40568	ECT	500	120	PS25	Medium	18	12
41251	EFM	50	8	MR16	GZ6.35 2-Pin	3	9
41252	EFN	75	12	MR16	GZ6.35 2-Pin	3	9
41253	EFP	100	12	MR16	GZ6.35 2-Pin	3	9
41254	EFR	150	15	MR16	GZ6.35 2-Pin	3	9
37527	EHA	500	120	T6	GZ9.5 2-Pin Pf	7	10
14874	EHJ	250	24	T4	G6.35 2-Pin	7	10
32882	EJA	150	21	MR16	GX5.3 2-Pin	4	10
29150	EJL	200	24	MR16	GX5.3 2-Pin	3	9
29151	EJM	150	21	MR16	GX5.3 2-Pin	3	9

### EJN USE ELD/EJN

32831	EJV	150	21	MR16	GX5.3 2-Pin	4	10
32886	EJY	80	19	MR16	GX5.3 2-Pin	4	10
35200	EKE	150	21	MR16	GX5.3 2-Pin	3	9



Order Code	Description	Watts	Bulb Volts	Shape	Base	Table No.	Page No.
<b>INDEX-ANSI CODED GE PROJECTION LAMPS (CONTINUED)</b>							
35800	EKP/ENA	80	30	MR16	GX5.3 2-Pin	3	9
<b>EKS USE EMM/EKS</b>							
36899	EKX	200	24	MR16	GX5.3 2-Pin	3	9
36902	EKZ	30	10.8	MR16	GX5.3 2-Pin	3	9
37412	ELB	80	30	MR16	GX5.3 2-Pin	4	10
37462	ELC	250	24	MR16	GX5.3 2-Pin	3	9
15377	ELC/500	250	24	MR16	GX5.3 2-Pin	3	9
22023	ELC/C	250	24	MR16	GX5.3 2-Pin	3	9
38306	ELD/EJN	150	21	MR16	GX5.3 2-Pin	3	9
38476	ELH	300	120	MR16	GY5.3 2-Pin	3	9
<b>ELR USE ELS/ELR</b>							
41885	ELS/ELR	50	18	MR14	GX7.9 2-Pin	5	10
42612	EML	175	24	T4	G5.3 2-Pin	7	10
40017	EMM/EKS	250	24	MR14	GX7.9 2-Pin	5	10
<b>ENA USE EKP/ENA</b>							
<b>ENC USE ENW/ENC</b>							
38685	ENG	300	120	MR16	GY5.3 2-Pin	3	9
38686	ENH	250	120	MR16	GY5.3 2-Pin	3	9
25475	ENL	50	12	MR16	GX5.3 2-Pin	3	9
40248	ENW/ENC	80	19	MR16	GX5.3 2-Pin	3	9
41705	ENX	360	82	MR16	GY5.3 2-Pin	3	9
19475	ENX-5	360	86	MR16	GY5.3 2-Pin	3	9
40598	ENZ	50	30	MR16	GX5.3 2-Pin	4	10
41430	EPN	35	12	MR16	GX5.3 2-Pin	3	9
19897	EPR	500	120	T6	TF	7	10
41729	EPT	42	10.8	MR16	GX5.3 2-Pin	3	9
41882	EPV	90	14.5	MR16	GX5.3 2-Pin	3	9
41702	EPW	360	100	MR16	GY5.3 2-Pin	3	9
42614	EPX	90	14.5	MR16	GX5.3 2-Pin	3	9
41874	ERV	340	36	MR16	GX5.3 2-Pin	3	9
43756	ESD	150	120	MR16	GY5.3 2-Pin	3	9
11698	ESJ	85	82	MR16	GY5.3 2-Pin	3	9
11322	ETJ	250	120	MR16	GY5.3 2-Pin	3	9
38311	ETT	1000	120	T5	R7s	9	11
10099	EVV	120	6.6A	T4	GZ9.5 2-Pin	8	11
11110	EVW	250	82	MR16	GY5.3 2-Pin	3	9
11132	EWV	200	24	MR16	GX5.3 2-Pin	3	10
11427	EWR	150	6.6A	T4	GZ9.5 2-Pin	8	11
11478	EXL	30	6.6A	T3.5	GZ9.5 2-Pin	8	11
11482	EXM	45	6.6A	T3.5	GZ9.5 2-Pin	8	11
12092	EXR	300	82	MR13	GX5.3 2-Pin	2	9
12003	EXV	100	12	MR16	GX5.3 2-Pin	3	10
12095	EXW	300	82	MR13	GX5.3 2-Pin	2	9
11750	EXX	250	120	MR16	GY5.3 2-Pin	3	10
12097	EXY	250	82	MR13	GX5.3 2-Pin	2	9
13152	EYA	200	82	MR16	GY5.3 2-Pin	3	10
12696	EYB	360	82	T3.5	G5.3 2-Pin	7	11
19322	EYB-5	360	86	T3.5	G5.3 2-Pin	7	11
13617	EYH/FKT	250	120	G6	G5.3 2-Pin	7	11

Order Code	Description	Watts	Bulb Volts	Shape	Base	Table No.	Page No.
<b>INDEX-ANSI CODED GE PROJECTION LAMPS (CONTINUED)</b>							
23522	EZA	30	6.6A	MR16	GX5.3 2-Pin	3	10
41783	EZA/4	32	6.6A	MR16	Wire Term.	3	10
23071	EZC	45	6.6A	MR16	GX5.3 2-Pin	3	10
15832	EZF/EZJ	225	68	MR13	GX5.3 2-Pin	2	9
<b>EZJ USE EZF/EZJ</b>							
15477	EZK	150	120	MR16	GY5.3 2-Pin	3	10
15243	EZL	200	6.6A	T4	GZ9.5 2-Pin	8	11
29581	FAL	420	120	T4	R7s	9	11
<b>FBD USE FBG/FBD</b>							
33663	FBG/FBD	500	120	G6	G5.3 2-Pin	7	11
29598	FCB	600	120	T4	R7s	9	11
14876	FCR	100	12	T3	GY6.35 2-Pin	7	11
13598	FCS	150	24	T4	G6.35 2-Pin	7	11
<b>FDS USE DZE/FDS</b>							
35321	FDT	100	12	T3	GZ9.5 2-Pin Pf	7	11
36878	FDV	150	24	T4	G6.35 2-Pin	7	11
29592	FFJ	600	120	T4	R7s	9	11
30276	FFM	420	120	T4	R7s	9	11
47614	FHS	300	82	MR13	GX5.3 2-Pin	2	9
47914	FHX	25	13.8	MR16	GX5.3 2-Pin	3	10
<b>FKT USE EYH/FKT</b>							
30894	FLS	28	12	MR11	GZ4 2-Pin	1	9
31964	FLT	28	13.8	MR11	GZ4 2-Pin	1	9
19886	FLW	300	24	T4	GY6.35 Ceramic	7	11
14887	FML	50	13.8	MR16	GX5.3 2-Pin	3	10
18241	FNT/100	275	24	T4	G6.35 2-Pin	7	11
21613	FXL	410	82	MR16	GY5.3 2-Pin	3	10
11134	GEMINI 300(EZG)	300	35	PAR20	Special 2-Pin Plug	21	13
39936	MARC 350-16T EZT	350	45	PAR24	Special 2-Pin Plug	21	13
30162	PH/111A	75	125	S11	S.C. Bay.	20	13
43220	PH/140	75	120	S14	Medium	20	13
40569	PH/211	75	120	A21	Medium	20	13
40570	PH/212	150	120	A21	Medium	20	13
40571	PH/213	250	120	A21	Medium	20	13
30124	PXA 50	4000		T3	WireTerm/Ceramic	21	13
30129	PXA/80	8000		T3	WireTerm/Ceramic	21	13



## HEADINGS IN THIS CATALOG SECTION

The following terms and descriptions can help you when checking Projection lamp specifications and when ordering products. Within each product line, lamps are divided into families. Within families, lamps are listed by ANSI code.

### 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.

### 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 "T12" 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 – 8-13.

### Base

Projection Lamp base illustrations appear on page 8-3, along with their common trade names and abbreviations, plus their letter-number ANSI/IEC designations where applicable.

### Watts (or Amps)

This column shows the rated power consumption (watts) of the lamp at its design voltage. A few lamps, in Table 8, 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.

### Order Code:

It is important to use this five-digit code when ordering to ensure that you receive the exact product you require.

### Description

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.

### Volts

The voltage shown is the design voltage of the lamp, on which the life and wattage ratings are based. 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.)

### Case Quantity:

Number of product units packed in a case.

### Filament

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

### 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 8-3 for the various styles of lamp bases.

### Rated Life

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 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 median value, some individual lamps will operate longer, and some will operate shorter, than their Rated Life. (Supply voltage variation can significantly affect lamp life.)

### 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.

### 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.

### CBCP (Center Beam Candlepower):

For reflector type lamps. Center Beam Candlepower is the intensity (candelas) at the center or maximum intensity of the beam.

### 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.
- HD = Base Down to Horizontal. Do not operate base above horizontal.
- H22 = Operate base down to 22° base up.
- U = Operate in any position.

### Additional Information

Typical application and/or other important information.

### 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.

### 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 Shape	Base	Order Watts	Order Code	Description	Case Qty.	Filament Design	MOL	LCL	Rated Life Hours	Color Temp. K	Burn Position	Additional Information	Footnote	Typical Working Distance (WxH)	Source Size
MR16	GX5.3 2-Pin	55	43986	DDF	17	20 CC-6	1.75		300	3100	HD	Enlarger, Projection	A	2.19	

# DDF

ANSI Code.





Bulb Shape	Base	Order Watts	Description	Case Qty.	Filament Design	MOL	LCL	Rated Life Hours	Lumens Initial	Color Temp. K	Burn Position	Additional Information	Footnote	Typical Working Distance (WxH)	Source Size
<b>QUARTZLINE® MULTI-MIRROR® REFLECTORS</b>															
<b>MR-11 FACETED DICHROIC REFLECTOR. 1 3/8" DIAMETER (35MM). TABLE 1.</b>															
MR11	GZ4 2-Pin	28 30894	FLS	12	10 CC-6	1.38		1000		3000	HD	Microfilm	A		
		31964	FLT	13.8	10 CC-6	1.38		500		3050	HD	Microfilm	A		
<b>MR-13 FACETED DICHROIC REFLECTOR. 1 2/3" DIAMETER(42MM). TABLE 2.</b>															
MR13	GX5.3 2-Pin	300 12092	EXR	82	20 CC-8	1.75		35		3350	HD	Slide projection	A	6.00	
		12095	EXW	82	20 CC-8	1.75		15		3450	HD	Slide projection	A	6.00	
		250 12097	EXY	82	20 CC-8	1.75		200		3200	HD	Slide projection	A	6.00	
		225 15832	EZF/EZJ	68	20 CC-8	1.75		350			HD	Color printer.	A, R		
		300 47614	FHS	82	20 CC-8	1.75		70		3300	HD	Slide projection	A	6.00	
<b>MR-16 FACETED DICHROIC REFLECTOR. 2" DIAMETER (51MM). TABLE 3.</b>															
MR16	GX5.3 2-Pin	55 43986	DDF	17	20 CC-6	1.75		300		3100	HD	Enlarger, Projection	A	2.19	
		150 43537	DDL	20	20 C-6	1.75		500		3150	HD	Microfilm	A	7.75	
		80 43206	DDM	19	20 CC-6	1.75		50		3350	HD	Slide projection	A	6.00	
		80 43988	DDS	21	20 CC-6	1.75		1000		3125	HD	Microfilm	A	6.50	
		85 43950	DED	13.8	20 C-6	1.75		1000		3150	HD	Microfilm	A	6.50	
		50 44854	DJT	13.8	20 CC-6	1.75		1000		3150	HD	Microfilm	A	6.00	
GZ6.35	2-Pin	50 41251	EFM	8	20 C-6	1.75		50		3300	HD	8mm projection	A	1.25	
		75 41252	EFN	12	20 CC-6	1.75		50		3350	HD	8mm projection	A	1.25	
		100 41253	EFP	12	20 CC-6	1.75		50		3350	HD	8mm projection	A	1.25	
		150 41254	EFR	15	20 CC-6	1.75		50		3350	HD	8mm projection	A	1.25	
GX5.3	2-Pin	200 29150	EJL	24	20 CC-6	1.75		50		3400	HD	16mm, Color printer	A	1.25	
		150 29151	EJM	21	20 CC-6	1.75		40		3350	HD	8mm projection	A	1.50	
		150 35200	EKE	21	20 CC-6	1.75		250		3250	HD	8mm projection, fiber optics	A	1.75	
		80 35800	EKP/ENA	30	20 CC-6	1.75		25		3350	HD	8mm projection	A	1.75	
		200 36899	EKX	24	20 CC-6	1.75		25		3400	HD	Microfilm	A	5.50	
		30 36902	EKZ	10.8	20 C-6	1.75		200		3100	HD	16mm projection	A	1.50	
		250 37462	ELC	24	20 CC-6	1.75		50		3400	HD	Fiber optics, color printer	A	1.25	
		250 22023	ELC/C	24	20 CC-6	1.75		50		3400	HD	Fiber optics, color printer	A	1.25	
		250 15377	ELC/500	24	20 CC-6	1.75		500		3350	HD	Fiber optics, disco	A	1.25	
		150 38306	ELD/EJN	21	20 CC-6	1.75		40		3350	HD	Microfilm	A	6.50	
GY5.3	2-Pin	300 38476	ELH	120	20 CC-8	1.75		35		3350	HD	Slide projection	A	6.00	
		300 38685	ENG	120	20 CC-8	1.75		15		3450	HD	Slide projection	A	6.00	
		250 38686	ENH	120	20 CC-8	1.75		175		3250 11700	HD	Slide projection	A	6.00	
GX5.3	2-Pin	50 25475	ENL	12	20 C-6	1.75		4000		3050	HD	Fiber optics, display lighting	A	1.50	
		80 40248	ENW/ENC	19	20 CC-6	1.75		200		3200	HD	8mm projection	A	1.75	
GY5.3	2-Pin	360 41705	ENX	82	20 CC-8	1.75		75		3300	HD	Overhead projection	A	11.75	
		19475	ENX-5	86	20 CC-8	1.75		75		3300	HD	Overhead projection	A		
GX5.3	2-Pin	35 41430	EPN	12	20 C-6	1.75		50		3300	HD	8mm projection	A	1.13	
		42 41729	EPT	10.8	20 C-6	1.75		10000		2900	HD	Fiber optics	A	1.50	
		90 41882	EPV	14.5	20 CC-6	1.75		500		3150	HD	Microfilm	A	6.13	
GY5.3	2-Pin	360 41702	EPW	100	20 CC-8	1.75		75		3250	HD	Overhead projection	A	11.75	
GX5.3	2-Pin	90 42614	EPX	14.5	20 CC-6	1.75		500		3150	HD	Microfilm	A	6.50	
		340 41874	ERV	36	20 CC-8	1.75		75		3300	HD	Overhead projection	A	11.75	
GY5.3	2-Pin	150 43756	ESD	120	20 CC-8	1.75		12		3350	HD	Enlarger, projection	A	1.75	
		85 11698	ESJ	82	20 CC-8	1.75		40		3350	HD	Enlarger, projection	A	1.75	
		250 11322	ETJ	120	20 CC-8	1.75		175		3300	HD	Fiber Optics	A	1.50	
		250 11110	EVW	82	20 CC-8	1.75		50		3300	H22	Overhead projection	A	11.75	

# Projection Lamps



Bulb Shape	Base	Order Watts	Description	Case Volts	Filament Qty.	Design	MOL	LCL	Rated Life Hours	Lumens Initial	Color Temp. K	Burn CBCP	Position	Additional Information	Footnote	Typical Working Distance (WxH)	Source Size
<b>QUARTZLINE® MULTI-MIRROR® REFLECTORS (CONTINUED)</b>																	
<b>MR-16 FACETED DICHOIC REFLECTOR. 2" DIAMETER (51MM). TABLE 3. (CONTINUED)</b>																	
MR16	GX5.3 2-Pin	200	11132 EWF	24	20	CC-8	1.75		50		3300		H22	Overhead projection	A	11.75	
		100	12003 EXV	12	20	CC-6	1.75		50	3100	3350	3100	U	Camera Light	A		
		250	11750 EXX	120	20	CC-8	1.75		25	6750	3300	6750	U	Camera Light	A		
		200	13152 EYA	82	20	CC-8	1.75		50		3300		HD	Enlarger	A		
		30	23522 EZA	6.6A	20	C-8	1.75		1000		2900		HD	Airport	A		
	Wire Term.	32	41783 EZA/4	6.6A	20	C-8	1.75		1000		2900	4500	HD	Airport	A		
	GX5.3 2-Pin	45	23071 EZC	6.6A	20	C-8	1.75		1000		2950		HD	Airport	A		
	GY5.3 2-Pin	150	15477 EZK	120	20	CC-8	1.75		200		3200	3600	U	Camera Light	A		
	GX5.3 2-Pin	25	47914 FHX	13.8	20	CC-6	1.75		250		3200		HD	Microfilm	A	4.13	
		50	14887 FML	13.8	20	CC-6	1.75		1000		3150		HD	Microfilm	A	8.44	
	GY5.3 2-Pin	410	21613 FXL	82	20	CC-8	1.75		38		3300		HD	Overhead projection	A	11.75	
<b>QUARTZLINE® REFLECTOR LAMPS</b>																	
<b>MR-16 SMOOTH DICHOIC REFLECTOR. 2" DIAMETER (51MM). TABLE 4.</b>																	
MR16	GX5.3 2-Pin	150	32882 EJA	21	20	CC-6	1.75		40		3350		HD	Fiber Optics	A	1.10	
		150	32831 EJV	21	20	CC-6	1.75		40		3350		HD	8mm proj., printer	A	1.75	
		80	32886 EJY	19	20	CC-6	1.75		25		3400		HD	Fiber Optics	A	1.50	
			37412 ELB	30	20	CC-6	1.75		18		3400		HD	8mm projection	A	1.25	
		50	40598 ENZ	30	20	CC-6	1.75		25		3450		HD	8mm projection	A	1.25	
<b>MR-14 (1 3/4" DIAMETER) OR MR-16 (2" DIAMETER) DICHOIC REFLECTOR. 2-PIN VENTED BASE. TABLE 5.</b>																	
MR14	G7.9 2-Pin	250	40658 BHB	120	24	CC-8	1.67		25		3350		HD	16mm projection	A	2.63	
MR16	G7.9 2-Pin	150	40161 DNE	120	24	CC-8	1.77		12		3350		HD	8mm projection	A	2.75	
	GX7.9 2-Pin	150	39742 DNF	21	24	CC-8	1.77		25		3400		HD	8mm projection	A	2.75	
MR14	GX7.9 2-Pin	50	41885 ELS/ELR	18	24	CC-8	1.41		650		3100		HD	Microfilm	A	4.75	
		250	40017 EMM/EKS	24	24	CC-8	1.66		50		3400		HD	16mm projection	A	2.63	
<b>QUARTZLINE® SINGLE-ENDED</b>																	
<b>4-PIN SLIDE PROJECTION. TABLE 6.</b>																	
T6	G17q 4-Pin	500	36178 BCK	120	24	C-13D	3.25	1.56	50		3200		HD	Slide Projection.	A, D		
			36117 CBA	120	24	C-13D	3.62	1.75	50		3200		HD	Slide Projection. Opaque	A, C, D		
<b>APPLICATIONS: PROJECTION, MICROFILM, STUDIO, ETC. TABLE 7.</b>																	
T3.5	G6.35 2-Pin	50	18234 BRL	12	100	C-6	1.72	1.17	50	1400	3400		U		A		
T6	GZ9.5 2-Pin Pf	600	38675 BVE	120	24	C-13D	3.50	1.75	75		3200		HD		A, D	.35 x .35	
G6	G5.3 2-Pin	650	30304 DVY	120	24	CC-6	2.48	1.44	25	20000	3300		HD		A, E	.50 x .20	
G7	G5.3 2-Pin	600	30364 DYH	120	24	CC-6	2.50	1.44	75	17000	3200		U		A	.50 x .25	
	2-Button	600	32071 DYP	120	24	CC-6	2.25	1.00	75	17000	3200		HD		A	.50 x .25	
	GZ9.5 2-Pin Pf	650	33248 DYR	220	24	2CC-8	2.50	1.44	50	16500	3200		U		A	.45 x .45	
			33250 DYR	240	24	2CC-8	2.50	1.44	50	16500	3200		U		A	.45 x .45	
		600	19479 DYS-5	120	24	CC-6	2.50	1.44	150	15500	3200		HD		A	.45 x .45	
			32955 DYS/DYV/BHC	120	24	CC-6	2.50	1.44	75	17000	3200		HD		A	.50 x .25	
T3.5	G5.3 2-Pin	30	37346 DZA	10.8	24	C-6	2.00	1.06	400	530	3100		HD		A	.15 x .05	
T4	GZ9.5 2-Pin Pf	150	37695 DZE/FDS	24	24	C-6 Oval	2.68	1.31	100	4000	3250		HD		A	.25 x .15	
T6	GZ9.5 2-Pin Pf	500	37527 EHA	120	24	C-13D	3.00	1.44	50		3300		HD		A, D	.35 x .35	
T4	G6.35 2-Pin	250	14874 EHJ	24	100	C-6 Oval	2.25	1.31	50	8000	3400		HD		A	.30 x .15	
	G5.3 2-Pin	175	42612 EML	24	24	C-6	2.12	1.06	125	5000	3200		HD		A	.21 x .19	
T6	GY6.35 2-Pin	400	41164 EVD	36	24	C-6	2.34	1.40	50	14500	3200		HD	Overhead projector	A		
	TF	500	19897 EPR	120	24	C-13D	1.56	2.68	50		3250		HD		A	.31 x .30	



Bulb Shape	Base	Order Watts	Description	Case Qty.	Filament Design	MOL	LCL	Rated Life Hours	Lumens Initial	Color Temp. K	Burn Position	Additional Information	Footnote	Typical Source Working Distance (WxH)
<b>QUARTZLINE® SINGLE-ENDED (CONTINUED)</b>														
<b>APPLICATIONS: PROJECTION, MICROFILM, STUDIO, ETC. TABLE 7. (CONTINUED)</b>														
T3.5	G5.3 2-Pin	360	<b>12696 EYB</b>	82	24 CC-8	2.25	1.25	75	10000	3300	HD		A	.30 x .20
			<b>19322 EYB-5</b>	86	24 CC-8	2.25	1.25	75		3200	HD		A	.30 x .20
G6	G5.3 2-Pin	250	<b>13617 EYH/FKT</b>	120	24 CC-6	2.50	1.44	200	6000	3000	HD		A	.55 x .17
		500	<b>33663 FBG/FBD</b>	120	24 CC-6	3.00	1.75	50	13200	3200	U		A	.50 x .20
T3	GY6.35 2-Pin	100	<b>14876 FCR</b>	12	100 C-6 Oval	1.75	1.18	50	2800	3300	HD		A	.20 x .15
T4	G6.35 2-Pin	150	<b>13598 FCS</b>	24	100 C-6 Oval	2.00	1.18	50	4500	3300	HD		A	.25 x .15
T3	GZ9.5 2-Pin Pf	100	<b>35321 FDT</b>	12	24 C-6 Oval	2.12	1.06	50	2900	3300	HD		A	.23 x .15
T4	G6.35 2-Pin	150	<b>36878 FDV</b>	24	24 C-6 Oval	2.00	1.19	100	4300	3050	U		A	.25 x .15
	GY6.35 Ceramic	300	<b>19886 FLW</b>	24	48 C-6 Oval	2.15	1.21	50	10200	3500	HD		A	.34 x .23
	G6.35 2-Pin	275	<b>18241 FNT/100</b>	24	100 C-6 Oval	2.25	1.31	50	10000	3400	HD		A	.14 x .28
<b>QUARTZLINE® SINGLE-ENDED – AMP RATED. TABLE 8.</b>														
T4	GZ9.5 2-Pin	120	<b>10099 EVV</b>	6.6A	24 C-6 Oval	2.50	1.54	500	3150	3200	BD	Airport	A	.25 x .12
		150	<b>11427 EWR</b>	6.6A	24 C-6 Oval	2.50	1.54	500	4100	3200	BD	Airport	A	.25 x .16
T3.5	GZ9.5 2-Pin	30	<b>11478 EXL</b>	6.6A	24 C-8	1.75	1.00	1000	375	2900	HD	Airport	A	.05 x .13
		45	<b>11482 EXM</b>	6.6A	24 C-8	1.75	1.00	1000	750	2950	HD	Airport	A	.06 x .19
T4	GZ9.5 2-Pin	200	<b>15243 EZL</b>	6.6A	24 C-6 Oval	2.50	1.54	500	5000	3100	BD	Airport	A	.28 x .19
<b>QUARTZLINE® DOUBLE-ENDED PROJECTION. TABLE 9.</b>														
T5	R7s	1000	<b>29604 BRH</b>	120	24 CC-8	3.75		60	30000	3350	U	Overhead Projection	A	.70 x .21
T4	R7s	375	<b>29578 DWZ</b>	30	24 CC-8	3.13		1000	7500	3000	U	Bowling Projector	A	.35 x .18
		800	<b>36952 DXX</b>	230	24 CC-8	3.13		75	21400	3200	U	Copyboard, Studio	A	.90 x .17
			<b>36953 DXX</b>	240	24 CC-8	3.13		75	21400	3200	U	Copyboard, Studio	A	.90 x .17
T5	R7s	1000	<b>38311 ETT</b>	120	24 CC-8	3.75		70		3350	U	Spec. (PH1000H)	A	
T4	R7s	420	<b>29581 FAL</b>	120	24 CC-8	2.63		90	11000	3200	U	Printer	A	.35 x .17
		600	<b>29598 FCB</b>	120	24 CC-8	3.75		120	17000	3250	U	Overhead Projection	A	.45 x .18
			<b>29592 FFJ</b>	120	24 CC-8	2.63		85	17000	3250	U	Printer	A	.60 x .17
		420	<b>30276 FFM</b>	120	24 CC-8	3.13	0.50	90	11000	3200	U	Copyboard	A	.50 x .25
<b>INCANDESCENT PROJECTION</b>														
<b>4-PIN BASE. TABLE 10.</b>														
T10	G17q 4-Pin	400	<b>40214 DAT/DAK</b>	120	24 C-13D	4.00	1.56	25	9800	3200	BD	Slide Projection	A	
		500	<b>29695 DAY/DAK</b>	120	24 C-13D	4.00	1.56	30	12500	3200	BD	Slide Projection.	A, J	
<b>4-PIN BASE – PROXIMITY REFLECTOR. TABLE 11.</b>														
T10	G17q 4-Pin	300	<b>29525 CAL</b>	120	24 C-13	4.00	1.56	25		3200	BD	Slide, Film Strip.	A, I	
		150	<b>29380 CAR</b>	120	24 2CC-8	3.13	1.31	15		3100	BD	Slide, Film Strip.	A, J	
		500	<b>29664 CZA/CZB</b>	120	24 C-13D	4.00	1.56	25		3300	BD	Slide Projection Gold Top (opaque)	A, I	
T12	G17q 4-Pin	500	<b>29737 DEK/DFW/DHN</b>	120	24 C-13D	3.62	1.75	25		3250	HD	Slide Projection.	A, H, I	
<b>4-PIN BASE – FOCUSING REFLECTOR. TABLE 12.</b>														
T12	GX17q 4-Pin	150	<b>29360 DCA</b>	21	24 CC-6	3.56	1.56	15		3250	HD	8mm Projection.	A, I	1.75
	G17q 4-Pin	150	<b>29364 DCH/DJA/DFP</b>	120	24 CC-6	3.38	1.56	15		3150	BD	8mm Projection	A	2.25
	GX17q 4-Pin	80	<b>36122 DFE</b>	30	24 CC-8	3.19	1.56	15		3400	HD	8mm Projection	A	2.25
	G17q 4-Pin	150	<b>29386 DFN/DFC</b>	125	24 CC-8	3.19	1.56	15		3150	HD	8mm Projection	A	2.25

# Projection Lamps



Bulb Shape	Base	Order Watts	Order Code	Description	Case Volts	Case Qty.	Filament Design	MOL	LCL	Rated Life Hours	Lumens Initial	Color Temp. K	Burn CBCP	Position	Additional Information	Footnote	Typical Source Working Distance (WxH)	
<b>INCANDESCENT PROJECTION (CONTINUED)</b>																		
<b>4-PIN BASE – FOCUSING REFLECTOR. TABLE 12. (CONTINUED)</b>																		
T14	G17q 4-Pin	150	29338	DJL	120	24	CC-8	3.50	1.56	15		3150	HD	8mm Projection		A	1.75	
	GX17q 4-Pin	80	40216	DLD/DFZ	30	24	CC-6	3.50	1.56	15		3400	HD	8mm Projection.		A, K	1.75	
		150	29366	DLS/DLG/DHX	22	24	CC-6	3.44	1.56	15		3250	HD	8mm Projection.		A, K	1.75	
		200	29405	DSW	24	24	CC-8	3.38	1.56	25		3300	HD	8mm Projection.		A, K	1.75	
<b>MEDIUM PREFOCUS BASE. ANSI BASE DESIGNATION: P28/25. TABLE 13.</b>																		
T10	Med. Pref.	500	29677	CZX/DAB	120	24	C-13D	5.75	2.19	25	12500	3200	BD	8mm Projection.		A, J		
T12	Med. Pref.	750	29836	DDB	125	24	C-13D	5.75	2.19	25	19500	3250	BD	16mm Projection.		A, J		
T20	Med. Pref.	1000	29968	DRB	118	24	C-13	5.75	2.19	25	32000	3350	BD	Overhead projection		A		
			29979	DRC	120	24	C-13	5.75	2.19	50	30000	3250	BD	Overhead and opaque projection		A		
			29947	DRS	120	24	C-13D	5.75	2.19	25	28500	3325	BD	Overhead projection		A		
<b>SINGLE CONTACT BAYONET BASE. ANSI BASE DESIGNATION: BA15S. TABLE 14.</b>																		
T8	S. C. Bay.	100	29257	CDD	120	24	CC-2V	3.13	1.38	50	2000	2975	BD	Slide Projection		A		
		120	43330	CEM	120	24	2CC-8	3.13	1.38	200	1950	3000	BD	Wheel Align Projection.		A, J		
<b>DOUBLE CONTACT BAYONET BASE. ANSI BASE DESIGNATION: BA15D. TABLE 15.</b>																		
S11	D. C. Bay.	30	29140	BLC	118	120	CC-2V	2.38	1.38	50	400	2775	U	Editor Projection				
		50	29156	BLX	118	120	CC-2V	2.38	1.38	50	780	2850	HD	Toy Projection				
		75	32137	BNF	120	120	CC-2V	2.38	1.38	25	1300	2900	HD	Toy Projection				
T8	D. C. Bay.	50	29171	CAX	118	24	CC-2V	3.13	1.38	50	775	2875	BD	Optical Projection				
		50	29169	CAX	130	24	CC-2V	3.13	1.38	50	775	2875	BD	Optical Projection				
		75	29208	CBX/CBS	118	24	CC-13	3.13	1.38	50	1200	2925	BD	Slide Projection.		A, J		
		100	29266	CDJ	118	24	CC-2V	3.13	1.38	50	2000	2975	BD	Slide Projection		A		
			29244	CEB	118	24	CC-13	3.13	1.38	50	1850	2975	BD	Slide Projection		A		
T6.4	D.C. Bay.	35	30202	EAJ	12	24	C6	4.00	1.77	300	620		U	Flashtube Modeling.		A, L		
		25					C6			300	420							
<b>SINGLE CONTACT PREFOCUS BASE. ANSI BASE DESIGNATION: P30S. TABLE 16.</b>																		
T8	S. C. Pref.	34	30421	BXB	8.5	24	C-8	3.13	1.63	100	690		HD	Sound Reproduction. Filament offset $\frac{3}{16}$ " from base axis.				
<b>MISCELLANEOUS. TABLE 17.</b>																		
T20	Mogul	1000	29959	DPT	120	12	C-13	9.06	4.75	50	28000	3200	BD	Opaque Projection		A		
<b>PHOTOFLOOD</b>																		
<b>STANDARD. TABLE 18.</b>																		
A21	Medium	300	40886	BAH	115	24	C-9	4.94		20	9000	3200	U	Photocopy, Inside Frost		A		
		250	40563	BBA	118	24	C-9	4.94		3	8000	3400	U	No. 1 Photoflood, Frost		A		
			40564	BCA	118	24	C-9	4.94		3	5000	4800	U	No B1 Blue, Inside Frost		A		
S11	Cand.	30	30232	BLK	125	120	CC-2V	2.25		50	400	2700	U	Photocopy, Inside Frost		A		
PS25	Medium	500	40566	EBV	118	24	C-9	6.94		6	17000	3400	U	No 2, Inside Frost		A		
			40567	EBW PH/B2	118	24	C-9	6.94		6	10500	4800	U	No. B2, Blue, Inside Frost		A		
A23	Medium	250	40565	ECA	120	24	C-9	6.00		20	6500	3200	U	Inside Frost		A		
PS25	Medium	500	40568	ECT	120	24	C-9	6.94		60	13650	3200	U	Inside Frost		A		



Bulb Shape	Base	Order Watts	Order Code	Description	Case Qty.	Filament Design	MOL	LCL	Rated Life Hours	Lumens Initial	Color Temp. K	Burn Position	Additional Information	Footnote	Typical Working Distance (WxH)	Source Size
<b>PHOTOFLOOD (CONTINUED)</b>																
<b>REFLECTOR. TABLE 19.</b>																
R40	Medium	500	30151	DXB	120	24 CC-2V	6.63		6		3300	45000	Spot Beam, 15 degrees.	A, Q		
			30145	DXC	120	24 C-9	6.63		6		3300	5500	Flood Beam, 90 degrees.	A, Q		
			30281	EAL	120	24 CC-2V	6.63		15		3200	6800	Medium Beam, 60 degrees.	A, Q		
<b>ENLARGER &amp; PRINTER. TABLE 20.</b>																
S11	S.C. Bay.	75	30162	PH/111A	125	120	2.38		15	1120	2900	HD	Enlarger, White	A		
S14	Medium	75	43220	PH/140	120	120	3.38		35	1150	2900	U	Enlarger, White	A		
A21	Medium	75	40569	PH/211	120	24	4.94		65	1000	3000	U	Enlarger, White	A		
			150	40570	PH/212	120	24	4.94	100	2300	3050	U	Enlarger, White	A		
			250	40571	PH/213	120	24	4.94	3	7000	3400	U	Enlarger, White	A		
<b>PULSED XENON ARC, GEMINI®, AND MARC™. TABLE 21.</b>																
T3	WireTerm/ Ceramic	4000	30124	PXA 50		6	4.63			125000	6000	U	Graphic Arts	A, B		
			8000	30129	PXA/80		4.63			240000	6000	U	Graphic Arts	A, B		
PAR20 Special	2-Pin Plug	300	11134	GEMINI 300(EZG)	35	4			75		6000	H	Replaces MARC 300/16A.	A, O	1.46	
PAR24 Special	2-Pin Plug	350	39936	MARC 350-16T EZT	45	4			50	50	5000	H		A, O	2.05	

## POWER SUPPLY TO OPERATE GEMINI® AND MARC™ LAMPS

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

Scientecular Lab Company	NAPS/Fortron Source
98 McKinney Avenue	328 Ley Road, Suite 300
Central Islip, NY 11722-4120	Ft. Wayne, IN 46808
(516) 232-3345	(219) 471-1368
	Fax: (219) 471-1368

## WARNING AND CAUTION NOTICES

### A

#### ▲ WARNING

##### Risk of electrical shock

- Turn power off before inspection, installation or removal

##### Risk of fire

- Keep combustible material away from lamp
- Use in enclosed fixtures rated for this product

##### Pressurized lamp-unexpected rupture may cause injury, fire, or property damage

- Do not exceed 110% of rated voltage
- Avoid direct water/liquid contact
- Use in enclosed fixtures rated for this product
- Do not use lamp if outer glass is scratched or broken

#### ▲ CAUTION

##### Risk of burn

- Allow lamp/fixture to cool before handling
- Turn off power before installing lamp

Lamp may shatter and cause injury if broken

- Do not use lamp if outer glass is scratched or broken
- Dispose of lamp in enclosed container

## FOOTNOTES

### # Footnote

- B Pulsed Xenon lamps emit high levels of ultraviolet (UV) radiation and must be completely enclosed in an interlocked 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.
- C Opaque Ceramic top on bulb.
- D Proximity Reflector.
- E Ultraviolet absorbing bulb.
- 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.
- O Should not be operated for periods of less than three minutes.
- Q Approximate beam spread to 1/2 center-beam intensity.
- R Red-enhanced dichroic filter.



**NOTES**

A series of horizontal lines for taking notes, starting below the 'NOTES' header and extending down the page.