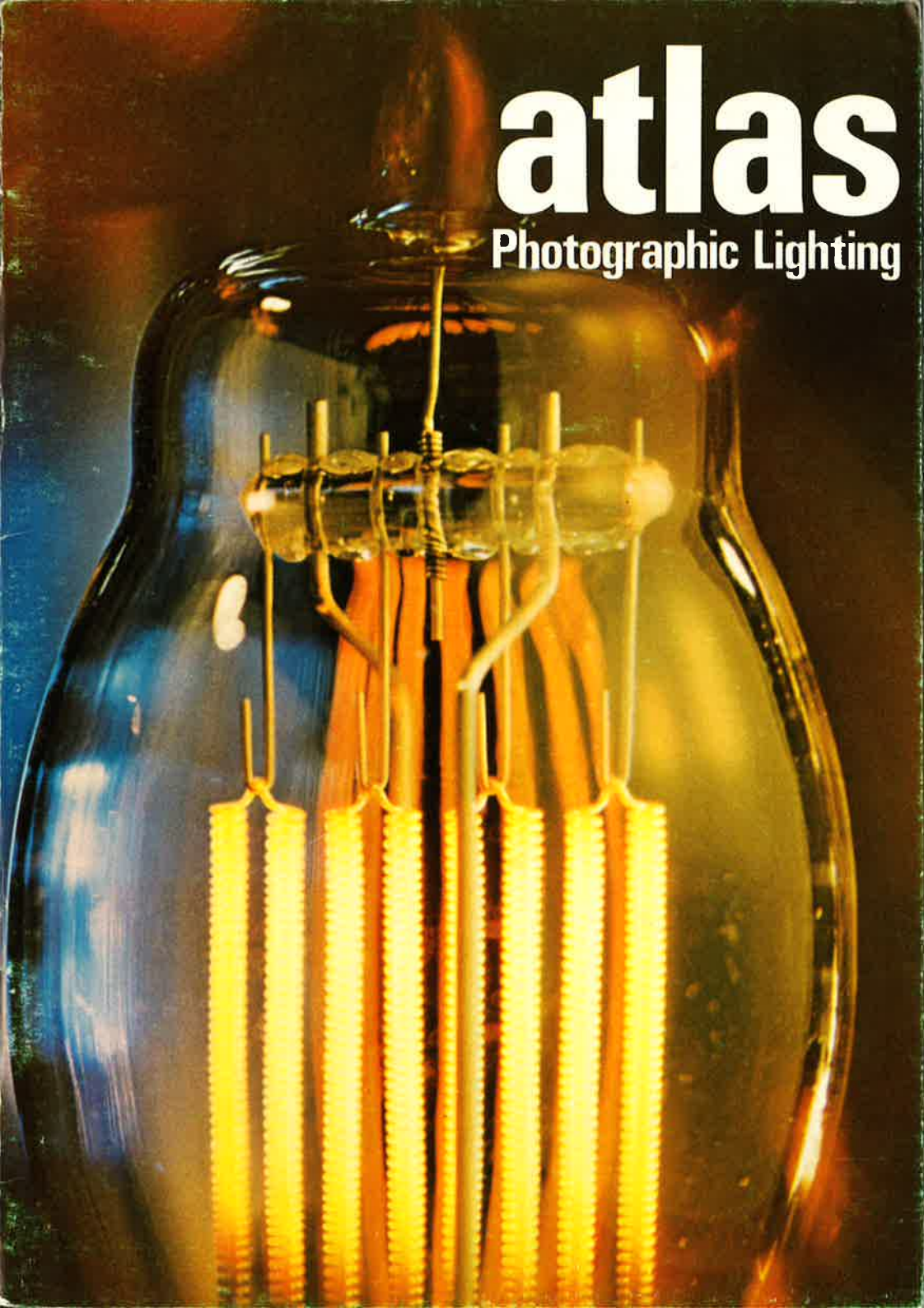


atlas

Photographic Lighting



Thorn Lighting Limited is constantly developing and improving its products. The right is reserved to change specifications without prior notification or public announcement. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. The majority of the products described herein are manufactured in the United Kingdom, products not so manufactured will bear an appropriate indication.

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Lamp Caps and Filament Formations



BH P46s



P 28s



P40s



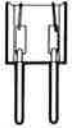
G 17q



B 15s
S.C.C.



PG 22



G 6-35



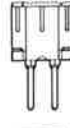
GY 9-53



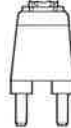
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G 22



GX 38q



G 38



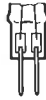
GX 9-5



B22d



B15d



G4



E40s



E27s



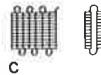
GY 7-9



A



B



C



D



E



F



G



H



J

Tungsten Halogen Equivalent Range

The demand for even higher levels of screen illumination, increased life, lumen maintenance and enhanced colour rendering has led Thorn Lighting to develop a range of Tungsten Halogen projector lamps which are direct replacements for traditional glass conventional lamps.

A1 Projector Lamps

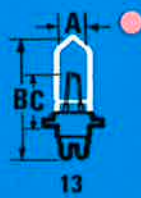
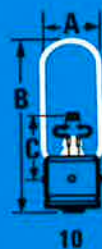
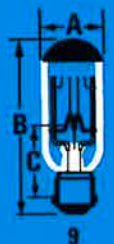
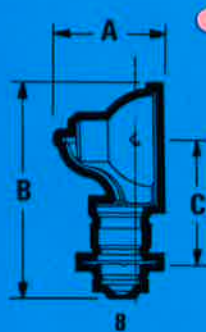
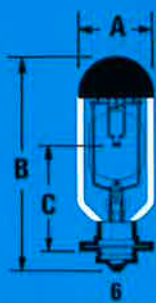
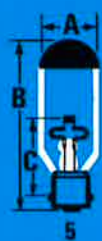
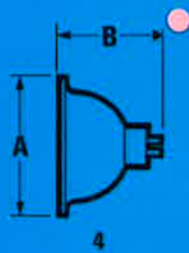
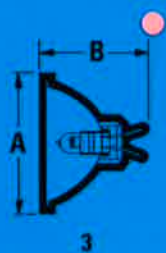
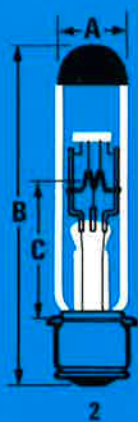
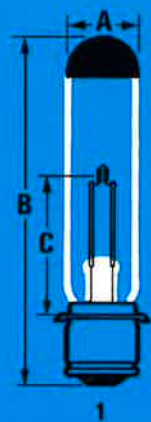
Conventional Lamp No.	Average Life	Watts	Tungsten Halogen Replacement Lamp No.	Average Life Hours
A1/17	25	50	A1/263	50
A1/182	25	150	A1/243	50
A1/178	25	300	A1/240	50
A1/180	25	500	A1/241	50
A1/205	25	500	A1/241	50
A1/206	25	750	A1/256	50
A1/207	25	1000	A1/242	50

Class 'T' Theatre Lamps

Conventional Lamp No.	Average Life	Watts	Tungsten Halogen Replacement Lamp No.	Average Life Hours
T/1	200	500	T/17	750
T/4	200	1000	T/15	750
T/6	200	1000	T/14	750
T/2	200	1000	T/16	750

A1 Class Watts Reference

Lamp Ref.	Watts	Lamp Ref.	Watts	Lamp Ref.	Watts	Lamp Ref.	Watts
Class A1		A1/91	1000	A1/212	150	A1/243	150
A1/4	100	A1/167	150	A1/215	100	A1/244	500
A1/5	250	A1/178	300	A1/216	150	A1/245	800
A1/6	300	A1/180	500	A1/220	50	A1/246	250
A1/7	500	A1/182	150	A1/223	250	A1/247	650
A1/8	500	A1/183	300	A1/225	50	A1/249	300
A1/9	750	A1/184	150	A1/227	420	A1/250	50
A1/17	50	A1/186	100	A1/228	600	A1/252	200
A1/18	150	A1/193	100	A1/229	50	A1/254	500
A1/21	100	A1/194	150	A1/230	75	A1/255	800
A1/24	150	A1/201	300	A1/231	100	A1/256	750
A1/37	300	A1/202	50	A1/232	150	A1/257	650
A1/45	100	A1/205	500	A1/233	650	A1/258	250
A1/52	750	A1/206	750	A1/234	150	A1/259	250
A1/53	750	A1/207	1000	A1/235	250	A1/263	50
A1/57	1000	A1/208	1200	A1/240	300	A1/264	600
A1/58	1000	A1/209	100	A1/241	500	A1/265	625
A1/59	1000	A1/211	150	A1/242	1000	A1/266	150



CLASS A1 50, 75 and 100 WATT

Diag. Lamp No.	Ref.	Volts	Watts	A Maximum Bulb Diameter	B Maximum Overall Length	C Light Centre Length	Nominal Lumens x1000	Base	Filament Formation	Average Life Hours	Special Features	Operating Position
7	A1/17	8	50	33×44	96	47±0.5	—	P30s	J	25	A B G H N	BD
6	A1/202	8	50	31	96	47±1	—	P30s	J	25	A B E H	BD
12	A1/220	12	50	11.5	44	30±0.25	1.4	G6.35	J	50	I	BD±90
9	A1/225	240/250	50	26	67	35±1	0.675	S.C.C. BA15s	F4	100	A J	BD
4	A1/229	8	50	50	42	—	—	G6.35	H	50	H I K	HOR.
3	A1/250	8	50	50	50	—	—	Special 2 Tab	H	50	H I K	HOR.
8	A1/263	8	50	36	85	47±0.5	—	P30s	H	50	H I K	BD
4	A1/230	12	75	50	42	—	—	G6.35	D	50	H I L	HOR.
1	A1/4	12	100	26	135	55.5±0.5	2.7	P28s	J	25	A	BD
2	A1/4	115	100	26	135	55.5±0.5	1.85	P28s	F3	25	A	BD
2	A1/4	240, 250	100	26	135	55.5±0.5	1.65	P28s	F4	25	A	BD
9	A1/21	115	100	26	78	35±1	1.85	S.C.C. BA15s	F3	25	A	BD
9	A1/21	240, 250	100	26	78	35±1	1.65	S.C.C. BA15s	F4	25	A	BD
13	A1/45	12	100	11.5	45	18±0.2	3	PG22	J	50	I	BD±90
5	A1/186	12	100	26	78	35±1	2.8	S.C.C. BA15s	J	25	A	BD
10	A1/193	12	100	26	78	29.5±0.5	2.8	BA21s 4 Pin	J	25	—	BD
11	A1/209	12	100	11	45	24±0.5	3	G6.35	J	50	I	BD±90
12	A1/215	12	100	11	44	30±0.25	3	G6.35	J	50	I	BD±90
4	A1/231	12	100	50	42	—	—	G6.35	H	50	H I L	HOR.

Lamp information on Red background indicates that the lamp operates on the Tungsten Halogen principle.

SPECIAL FEATURES

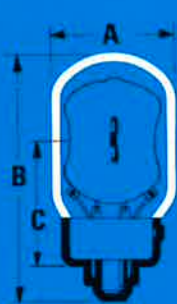
- A Obscured top
- B Forced cooling necessary. Maximum bulb wall temperature 500°C.
- C Offset filament
- D Solid source filament
- E Internal integral aluminised mirror
- F Internal integral dichroic mirror
- G Silvered bulb
- H Due to incorporated mirror nominal lumens not shown

- I Minimum bulb wall temperature 350°C
- J Pearl bulb
- K External integral aluminised mirror
- L External integral dichroic mirror
- M Internal proximity reflector
- N Tungsten Halogen equivalent available see page 2
- O Linear overhead projector lamp
- P 3 or 4 amp H.B.C. fuse necessary
- Q 5 or 6 amp H.B.C. fuse necessary
- R 6 or 7 amp H.B.C. fuse necessary
- S 10 amp H.B.C. fuse necessary
- T Opalised bulb
- U Satin etched bulb

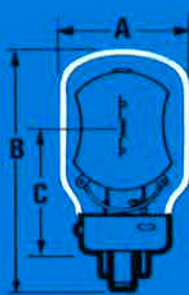
- V Reflector photoflood
 - W Reflector photospot
 - X Light output measured in centre beam candles
 - Y Class CP and T Halogen lamps require separate H.B.C. fuse in the circuit, see instruction leaflet in the carton for individual lamp requirements
 - Z Higher lumens apply to low voltage lamps
- Dual voltage lamps are indicated by oblique e.g. 240/250.
Lamp ratings stepped at 10 volt are indicated by a comma e.g. 240, 250.

- A1/17 } Focal Distance 33.5mm
- A1/202 }
- A1/263 }
- A1/229 }
- A1/230 } Focal Distance 32mm
- A1/231 }
- A1/250 }

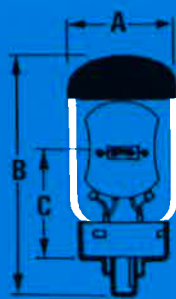
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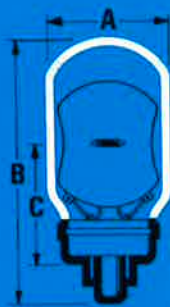
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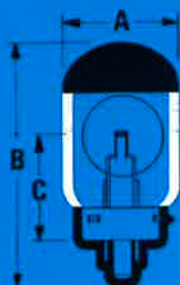
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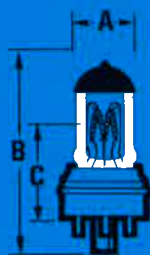
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23



24



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26



27

CLASS A1 150 WATT

Diag. No.	Lamp Ref.	Volts	Watts	A	B	C	Nominal Lumens x1000	Base	Filament Formation	Average Life Hours	Special Features	Operating Position
				Maximum Bulb Diameter	Maximum Overall Length	Light Centre Lengths						
14	A1/18	21.5	150	39	81	39.7 ± 1	—	G17q	G	25	B E H	HOR
15	A1/24	125	150	39 x 42	81	39.7 ± 1	—	G17q	G	25	B C E H	HOR
24	A1/167	240, 250	150	26	90	35 ± 1	2.7	S.C.C. BA15s	F4	25	A	BD
19	A1/175	240, 250	150	26	135	55.5 ± 0.5	2.7	P28s	F4	25	A	BD
21	A1/182	240, 250	150	30	76	33.5 ± 1	2.7	G17q	F4	25	A N	BD
16	A1/184	21.5	150	39	91	39.7 ± 1	—	G17q	G	25	A B E H	BD
17	A1/194	21.5	150	48	86	39.7 ± 1	—	G17q	G	25	B E H	HOR
18	A1/210	21.5	150	39	91	39.7 ± 1	—	G17q	G	25	B C E H	BD
20	A1/211	21.5	150	39	91	39.7 ± 1	—	G17q	G	25	A B F H	BD ± 90
23	A1/212	24	150	33	103	39.7 ± 0 -1.5	4.1	G17q	J	25	A B C	BD
25	A1/216	24	150	13.5	47	32 ± 0 -0.25	5	G6.35	J	50	I	BD ± 90
26	A1/232	15	150	50	42	—	—	G6.35	H	50	H L	HOR
25	A1/234	15	150	11.5	45	30 ± 0.25	4.7	G6.35	J	50	I	BD ± 90
22	A1/243	240	150	15	76	33.5 ± 1	3	G17t	F4	50	A I P	BD
27	A1/266	21	150	51	43	—	—	GY7.9	G	50	H L	HOR

Lamp information on Red background indicates that the lamp operates on the Tungsten Halogen principle.

SPECIAL FEATURES

- A Obscured top
- B Forced cooling necessary. Maximum bulb wall temperature 500°C.
- C Offset filament
- D Solid source filament
- E Internal integral aluminised mirror
- F Internal integral dichroic mirror
- G Silvered bulb
- H Due to incorporated mirror nominal lumens not shown

- I Minimum bulb wall temperature 350°C
- J Pearl bulb
- K External integral aluminised mirror
- L External integral dichroic mirror.
- M Internal proximity reflector
- N Tungsten Halogen equivalent available see page 2
- O Linear overhead projector lamp
- P 3 or 4 amp H. B. C. fuse necessary
- Q 5 or 6 amp H. B. C. fuse necessary
- R 6 or 7 amp H. B. C. fuse necessary
- S 10 amp H. B. C. fuse necessary
- T Opalised bulb
- U Satin etched bulb

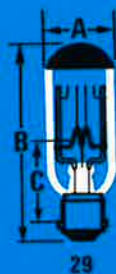
- V Reflector photoflood
 - W Reflector photospot
 - X Light output measured in centre beam candles
 - Y Class CP and T Halogen lamps require separate H. B. C. fuse in the circuit, see instruction leaflet in the carton for individual lamp requirements
 - Z Higher lumens apply to low voltage lamps
- Dual voltage lamps are indicated by oblique e.g. 240/250.
Lamp ratings stepped at 10 volt are indicated by a comma e.g. 240, 250.

- A1/18 }
A1/184 } Focal Distance 43.5mm
- A1/194 }
A1/211 }
- A1/24 - Focal Distance 57.2mm
- A1/210 - Focal Distance 56.0 mm

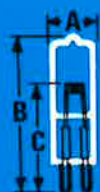
All dimensions are shown in mm.



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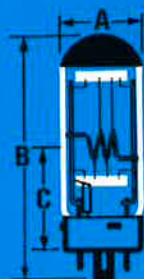
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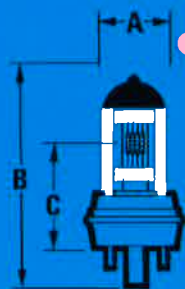
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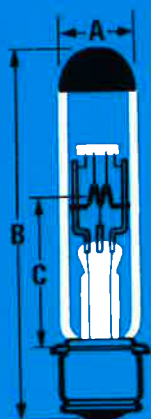
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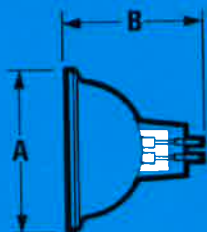
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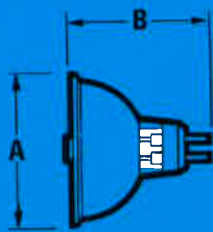
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38



39

CLASS A1 200, 250 and 300 WATT

Diag. Lamp No. Ref.	Volts	Watts	A	B	C	Nominal Lumens x1000	Base	Filament Formation	Average Life Hours	Special Features	Operating Position	
			Maximum Bulb Diameter	Maximum Overall Length	Light Centre Length							
37	A1/252	24	200	50	45	—	G5.3	G	25	H I L	H O R	
36	A1/5	115	250	33	135	55.5 ± 0.5	5.5	P28s	F3	50	A	BD
36	A1/5	240, 250	250	33	135	55.5 ± 0.5	5.2	P28s	F5	50	A	BD
30	A1/223	24	250	13.5	55	33 ± 0.25	8.5	G6.35	J	50	I	BD ± 90
31	A1/235	24	250	12.5	56	23 ± 0.2	8.5	PG22	J	50	I	BD ± 90
38	A1/246	24	250	50	50	—	—	G6.35	J	50	H I L	BD
39	A1/258	24	250	44	47.5	—	—	GY7.9	G	50	H I L	H O R
37	A1/259	24	250	50	45	—	—	G5.3	G	25	H I L	H O R
36	A1/6	115	300	33	135	55.5 ± 0.5	7.4	P28s	F3	25	A B	BD
36	A1/6	240, 250	300	33	135	55.5 ± 0.5	6.9	P28s	F5	25	A B	BD
28	A1/37	115	300	28	105	35 ± 1	7.4	S.C.C. BA15s	F3	25	A B	BD
28	A1/37	240, 250	300	28	105	35 ± 1	6.9	S.C.C. BA15s	F5	25	A B	BD
34	A1/178	240, 250	300	33	103	39.7 ± 1	6.9	G17q	F5	25	A B N	BD
29	A1/183	240, 250	300	31	81	35 ± 1	6.9	S.C.C. BA15s	F5	25	A B	BD
33	A1/201	240, 250	300	33	103	39.7 ± 1	—	G17q	F5	25	A B H M N	BD
35	A1/240	240, 250	300	15	87	39.7 ± 1	7.2	G17t	F4	50	A I P	BD
32	A1/249	240, 250	300	15	62	40 ± 0.5	7.2	G6.35	F4	50	A I P	BD

Lamp information on Red background indicates that the lamp operates on the Tungsten Halogen principle.

SPECIAL FEATURES

- A Obscured top
- B Forced cooling necessary. Maximum bulb wall temperature 500 C.
- C Offset filament
- D Solid source filament
- E Internal integral aluminised mirror
- F Internal integral dichroic mirror
- G Silvered bulb
- H Due to incorporated mirror nominal lumens not shown

- I Minimum bulb wall temperature 350° C
- J Pearl bulb
- K External integral aluminised mirror
- L External integral dichroic mirror
- M Internal proximity reflector
- N Tungsten Halogen equivalent available see page 2
- O Linear overhead projector lamp
- P 3 or 4 amp H.B.C. fuse necessary
- Q 5 or 6 amp H.B.C. fuse necessary
- R 6 or 7 amp H.B.C. fuse necessary
- S 10 amp H.B.C. fuse necessary
- T Opalised bulb
- U Satin etched bulb

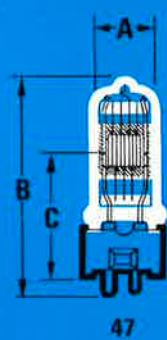
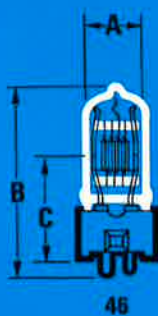
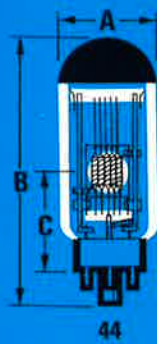
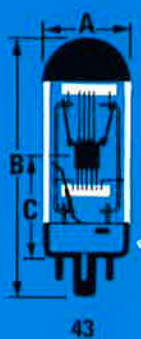
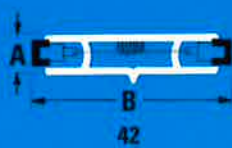
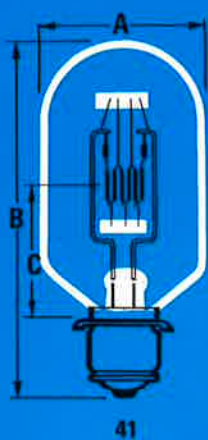
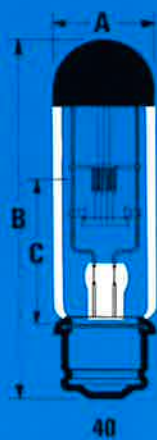
- V Reflector photoflood
 - W Reflector photospot
 - X Light output measured in centre beam candles
 - Y Class CP and T Halogen lamps require separate H. B. C. fuse in the circuit, see instruction leaflet in the carton for individual lamp requirements
 - Z Higher lumens apply to low voltage lamps
- Dual voltage lamps are indicated by oblique e.g. 240/250.
Lamp ratings stepped at 10 volt are indicated by a comma e.g. 240, 250.

A1/252 } Focal Distance 32mm
A1/259 }

A1/246 – Focal Distance 32mm

A1/258 – Focal Distance 65.8mm

All dimensions are shown in mm.



CLASS A1 420 and 500 WATT

Diag. Lamp No.	Ref.	Volts	Watts	A	B	C	Nominal Lumens x1000	Base	Filament Formation	Average Life Hours	Special Features	Operating Position
				Maximum Bulb Diameter	Maximum Overall Length	Light Centre Length						
42	A1/227	120	420	13.5	66.5	—	11	R7s	G	75	IO	HOR ± 4
40	A1/7	115	500	33	135	55.5 ± 0.5	12.5	P28s	C8	25	AB	BD
40	A1/7	240, 250	500	33	135	55.5 ± 0.5	11.4	P28s	C11	25	AB	BD
41	A1/8	115	500	66	135	55.5 ± 0.5	11.5	P28s	A6	50	—	BD
41	A1/8	240, 250	500	66	135	55.5 ± 0.5	11	P28s	A8	50	—	BD
43	A1/180	240, 250	500	33	103	39.7 ± 1	11.4	G17q	C8	25	AB N	BD
44	A1/205	240, 250	500	33	103	39.7 ± 1	—	G17q	C8	25	AB H N	BD
45	A1/241	240, 250	500	23	94	39.7 ± 1	—	G17t	C10	50	A H I M P	BD
46	A1/244	240, 250	500	23	75	36.5 ± 0.5	14.5	GY9.5	A8	75	IP	BD ± 90
47	A1/254	240, 250	500	23	75	36.5 ± 0.5	—	GY9.5	A8	75	H I M P	BD ± 90

Lamp information on Red background indicates that the lamp operates on the Tungsten Halogen principle.

SPECIAL FEATURES

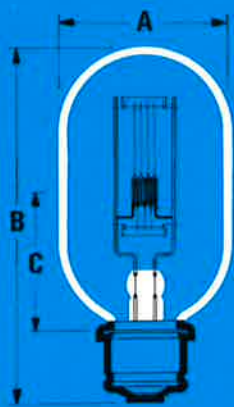
- A Obscured top
- B Forced cooling necessary. Maximum bulb wall temperature 500°C.
- C Offset filament
- D Solid source filament
- E Internal integral aluminised mirror
- F Internal integral dichroic mirror
- G Silvered bulb
- H Due to incorporated mirror nominal lumens not shown

- I Minimum bulb wall temperature 350°C
- J Pearl bulb
- K External integral aluminised mirror
- L External integral dichroic mirror
- M Internal proximity reflector
- N Tungsten Halogen equivalent available see page 2
- O Linear overhead projector lamp
- P 3 or 4 amp H.B.C. fuse necessary
- Q 5 or 6 amp H.B.C. fuse necessary
- R 6 or 7 amp H.B.C. fuse necessary
- S 10 amp H.B.C. fuse necessary
- T Opalised bulb
- U Satin etched bulb

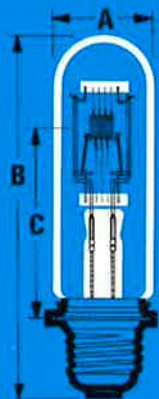
- V Reflector photoflood
- W Reflector photospot
- X Light output measured in centre beam candles
- Y Class CP and T Halogen lamps require separate H.B.C. fuse in the circuit, see instruction leaflet in the carton for individual lamp requirements
- Z Higher lumens apply to low voltage lamps

Dual voltage lamps are indicated by oblique e.g. 240/250.
Lamp ratings stepped at 10 volt are indicated by a comma e.g. 240, 250.

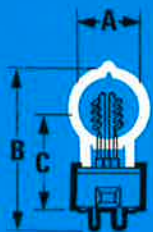
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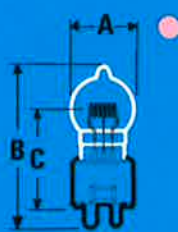
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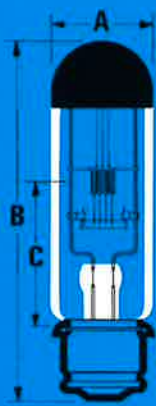
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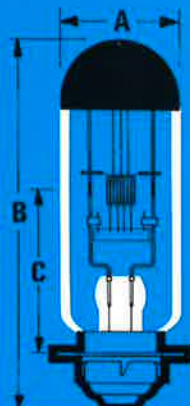
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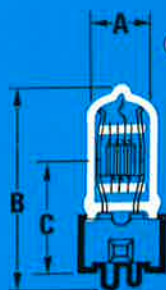
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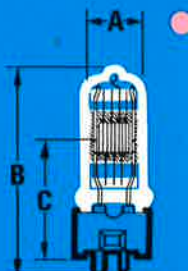
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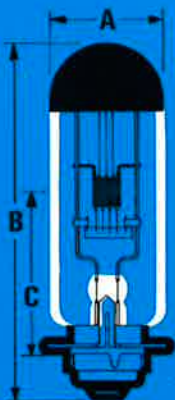
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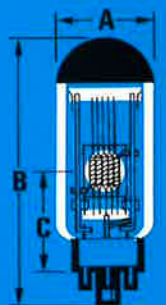
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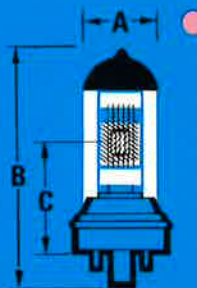
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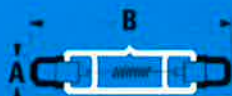
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58



59

CLASS A1 600, 625, 650 and 750 WATT

Diag. Lamp No. Ref.	Volts	Watts	A	B	C	Nominal Lumens x1000	Base	Filament Formation	Average Life Hours	Special Features	Operating Position
			Maximum Bulb Diameter	Maximum Overall Length	Light Centre Length						
59 A1/228	120	600	13.5	91.5	—	17	R7s	G	75	IO	HOR-4
59 A1/228	240/250	600	13.5	91.5	—	16.25	R7s	G	75	IOP	HOR-4
51 A1/264	120	600	23	65	36.5±1	16	GY9.5	G	75	IR	BD±90
55 A1/265	220/230, 240	625	23	87	44.5±0.55	—	GY9.5	A8	75	H I M P	BD±90
50 A1/233	240/250	650	23	85	36.5±1	16.5	GY9.5	E2	75	IP	BD±90
54 A1/247	115	650	23	75	36.5±0.5	18.25	GY9.5	A6	75	IR	BD±90
54 A1/247	240	650	23	75	36.5±0.5	17.75	GY9.5	A8	75	IP	BD±90
55 A1/267	240	650	23	78	36.5±0.5	—	GY9.5	A8	75	H I M P	BD±90
52 A1/9	115	750	39	140	55.5±0.5	19.5	P28s	C8	25	A B	BD
52 A1/9	240, 250	750	39	140	55.5±0.5	18	P28s	C10	25	A B	BD
49 A1/52	115	750	37	153	81±0.5	19.5	P39s	C8	25	B C	BU
53 A1/53	115	750	39	135	59±0.5	19.5	B.H. P46s	C8	25	A B	BD
53 A1/53	240, 250	750	39	135	59±0.5	18	B.H. P46s	C10	25	A B	BD
57 A1/206	115	750	39	118	39.7±1	—	G17q	C8	25	A B H M N	BD
57 A1/206	240, 250	750	39	118	39.7±1	—	G17q	C10	25	A B H M N	BD
58 A1/256	240	750	23	94	39.7±1	—	G17t	C10	50	A I H M Q	BD

CLASS A1 800, 1000 and 1200 WATT

Diag. Lamp No. Ref.	Volts	Watts	A	B	C	Nominal Lumens x1000	Base	Filament Formation	Average Life Hours	Special Features	Operating Position
			Maximum Bulb Diameter	Maximum Overall Length	Light Centre Length						
54 A1/245	240, 250	800	23	84	44.5±0.5	21.5	GY9.5	C8	75	IO	BD±90
55 A1/255	240, 250	800	23	87	44.5±0.5	—	GY9.5	C8	75	H I M Q	BD±90
48 A1/58	240, 250	1000	66	140	55.5±0.5	25	P28s	C10	25	A	BD
56 A1/59	115	1000	39	140	55.5±0.5	27	P28s	C8	25	A B	BD
56 A1/59	240, 250	1000	39	140	55.5±0.5	25	P28s	C10	25	A B	BD
56 A1/91	115	1000	39	135	59±0.5	27	BH P46s	C8	25	A B	BD
56 A1/91	240, 250	1000	39	135	59±0.5	25	BH P46s	C10	25	A B	BD
57 A1/207	115	1000	39	118	39.7±1	—	G17q	C8	25	A B H M N	BD
57 A1/207	240, 250	1000	39	118	39.7±1	—	G17q	C10	25	A B H M N	BD
58 A1/242	240, 250	1000	23	94	39.7±1	—	G17t	C10	50	A H I M Q	BD
57 A1/208	115	1200	39	118	39.7±1	—	G17q	C10	10	A B H M	BD

Lamp information on Red background indicates that the lamp operates on the Tungsten Halogen principle.

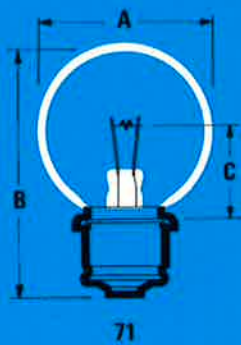
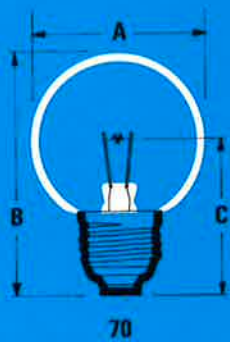
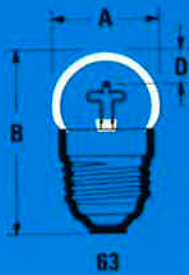
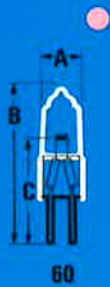
SPECIAL FEATURES

- A Obscured top
- B Forced cooling necessary. Maximum bulb wall temperature 500°C.
- C Offset filament
- D Solid source filament
- E Internal integral aluminised mirror
- F Internal integral dichroic mirror
- G Silvered bulb
- H Due to incorporated mirror nominal lumens not shown

- I Minimum bulb wall temperature 350°C
- J Pearl bulb
- K External integral aluminised mirror
- L External integral dichroic mirror.
- M Internal proximity reflector
- N Tungsten Halogen equivalent available see page 2
- O Linear overhead projector lamp
- P 3 or 4 amp H.B.C. fuse necessary
- Q 5 or 6 amp H.B.C. fuse necessary
- R 6 or 7 amp H.B.C. fuse necessary
- S 10 amp H.B.C. fuse necessary
- T Opalised bulb
- U Sain etched bulb

- V Reflector photoflood
 - W Reflector photospot
 - X Light output measured in centre beam candies
 - Y Class CP and T Halogen lamps require separate H.B.C. fuse in the circuit, see instruction leaflet in the carton for individual lamp requirements
 - Z Higher lumens apply to low voltage lamps
- Dual voltage lamps are indicated by oblique e.g. 240/250.
Lamp ratings stepped at 10 volt are indicated by a comma e.g. 240, 250.

All dimensions are shown in mm.



CLASS M CINE FILM EDITOR LAMPS

Diag. Lamp No. Ref.	Volts	Watts	A	B	C	Nominal Lumens x1000	Base	Filament Formation	Average Life Hours	Special Features	Operating Position
			Maximum Bulb Diameter	Maximum Overall Length	Light Centre Length						
60 M29	6	10	8.5	30	19.5 ± 0.25	0.2	G4	D	100	—	UNI
60 M30	6	20	8.5	30	19.5 ± 0.25	0.45	G4	D	100	—	UNI

CLASS F MICRO-PROJECTOR LAMPS

Diag. Lamp No. Ref.	Volts	Watts	A	B	C	D	Nominal Lumens x1000	Base	Average Life Hours	Special Features	Operating Position
			Maximum Diameter	Maximum Overall Length	Light Centre Length	Crown of bulb to Filament					
62 F/10	6	24	39	65	—	10 ± 2	0.41	S.E.S. E14s	100	—	BD ± 135
62 F/10	12	24	39	65	—	10 ± 2	0.44	S.E.S. E14s	100	—	BD ± 135
61 F/3	12	24	39	65	—	10 ± 2	0.44	S.B.S. BA15d	100	—	BD ± 135
63 F/25	6	30	39	69	—	10 ± 2	0.6	E.S. E27s	25	—	HOR ± 30
64 F/58	6	48	40	65	—	7 ± 2	0.675	S.E.S. E14s	200	D	BD ± 135
65 F/59	6	48	40	70	—	7 ± 2	0.675	E.S. E27s	200	D	BD ± 135
66 F/81	6	48	39	63	41 ± 0.5	—	0.675	P30s	200	D	BD ± 135
67 F/4	12	48	52	81	40 ± 3	—	0.95	S.E.S. E14s	100	—	BD ± 135
68 F/38	12	48	40	65	40 ± 3	—	0.85	S.B.C. BA15d	100	—	BD ± 135
69 F/77	12	50	40	70	48 ± 3	—	0.95	S.E.S. E14s	50	—	BD ± 135
70 F/14	12	100	62	91	55 ± 5	—	2.25	E.S. E27s	100	—	BD ± 135
71 F/63	12	100	62	98	37 ± 0.5	—	2.25	P28s	100	—	BD ± 135

CLASS G EXCITER LAMPS

Diag. Lamp No. Ref.	Volts	Amps	A	B	C	Nominal Lumens	Base	Filament Formation	Average Life Hours	Special Features	Operating Position
			Maximum Diameter	Maximum Overall Length	Light Centre Length						
75 G/19	4	0.75	16.5	50	31.8 ± 0.8	30	SCC BA15s	D	50	—	UNI
74 G/27	4	0.75	16.5	50	28.5 ± 0.5	30	P30s	H	50	—	UNI
73 G/29	4	0.75	16.5	50	28.5 ± 0.5	30	P30s	D	50	—	UNI
72 G/31	4	0.75	25.5	51	28.5 ± 0.5	30	P30d	D	50	—	HOR ± 30
74 G/5	6	1	16.5	50	28.5 ± 0.5	80	P30s	H	100	—	BD ± 45
73 G/40	6	1	16.5	57	28.5 ± 0.5	80	P30s	D	100	—	BD ± 30
73 G/45	6	5	19	54	23 ± 0.5	450	P30s	D	100	—	BD ± 30
74 G/48	7	0.2	16.5	50	28.5 ± 0.25	13.10	P30s	H	50	—	UNI

Lamp information on Red background indicates that the lamp operates on the Tungsten Halogen principle.

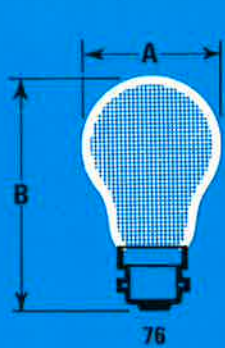
SPECIAL FEATURES

- A Obscured top
- B Forced cooling necessary. Maximum bulb wall temperature 500°C.
- C Offset filament
- D Solid source filament
- E Internal integral aluminised mirror
- F Internal integral dichroic mirror
- G Silvered bulb
- H Due to incorporated mirror nominal lumens not shown

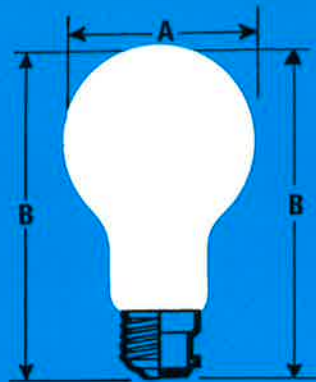
- I Minimum bulb wall temperature 350°C
- J Pearl bulb
- K External integral aluminised mirror
- L External integral dichroic mirror.
- M Internal proximity reflector
- N Tungsten Halogen equivalent available see page 2
- O Linear overhead projector lamp
- P 3 or 4 amp H.B.C. fuse necessary
- Q 5 or 6 amp H.B.C. fuse necessary
- R 6 or 7 amp H.B.C. fuse necessary
- S 10 amp H.B.C. fuse necessary
- T Opalised bulb
- U Satin etched bulb

- V Reflector photoflood
 - W Reflector photospot
 - X Light output measured in centre beam candles
 - Y Class CP and T Halogen lamps require separate H.B.C. fuse in the circuit, see instruction leaflet in the carton for individual lamp requirements
 - Z Higher lumens apply to low voltage lamps
- Dual voltage lamps are indicated by oblique e.g. 240/250.
Lamp ratings stepped at 10 volt are indicated by a comma e.g. 240, 250.

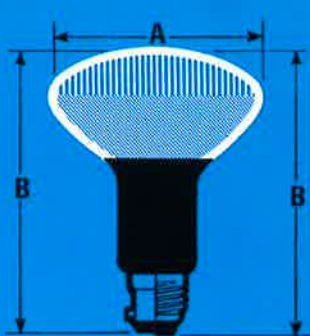
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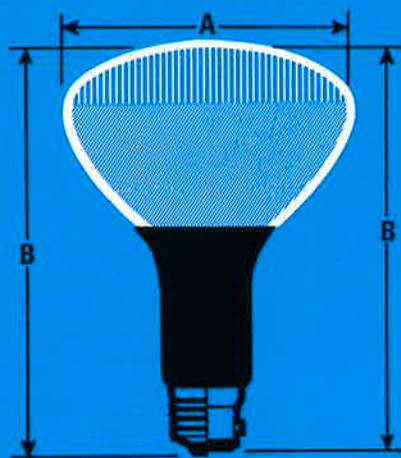
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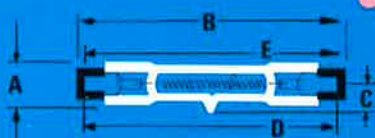
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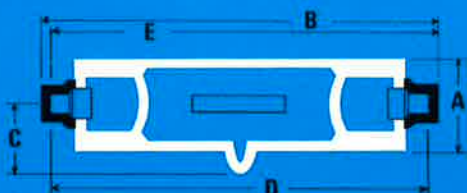
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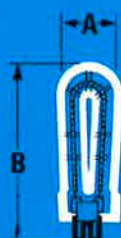
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84

CLASS P1 PHOTOGRAPHIC LAMPS FOR MONOCHROME AND COLOUR FILM BALANCED FOR 3400K

Diag. Lamp No.	Ref.	Volts	Watt	A		B		C		D		E		Average Life Hours	Special Features	Operating Position
				Maximum Diameter	Maximum Bulb Diameter	Maximum Overall Length	Max. pip protuberance from bulb axis.	Nominal Contact Length	Maximum Clearance Length	Nominal Lumens ×1000	Base					
81	P1/8	30	250	12	80	10.2	—	—	—	74.9±1.6	78.3	8	R7s	12	—	UNI
76	P1/1	240, 250	275	61	108.5	—	—	—	—	—	—	8.3	BC B22d	3	J	UNI
76	P1/1	240, 250	275	61	110	—	—	—	—	—	—	8.3	ES E27s	3	J	UNI
78	P1/6	240, 250	375	97	133.5	—	—	—	—	—	—	13	BC B22d	4	UVX	UNI
78	P1/6	240, 250	375	97	135	—	—	—	—	—	—	13	ES E27s	4	UVX	UNI
77	P1/2	240, 250	500	82	164.5	—	—	—	—	—	—	15	BC B22d	6	—	UNI
77	P1/2	240, 250	500	82	166	—	—	—	—	—	—	15	ES E27s	6	—	UNI
81	P1/9	120	650	15	80	11.4	—	—	—	74.9±1.6	78.3	21	R7s	12	—	UNI
84	P1/13	240, 250	650	28	65	—	—	—	—	—	—	20	Cer G6.35	15	P	BD±90
81	P1/11	240, 250	800	15	80	11.4	—	—	—	74.9±1.6	78.3	24.5	R7s	12	Q	UNI
82	P1/12	240, 250	1000	12	127	10.2	—	—	—	121.7±1.6	125.1	33	R7s	15	Q	HOR±4
84	P1/15	240, 250	1000	28	65	—	—	—	—	—	—	32	Cer G6.35	12	Q	BD±90
82	P1/18	240, 250	1250	12	127	10.2	—	—	—	121.7±1.6	125.1	39	R7s	15	R	HOR±4
84	P1/19	240, 250	1250	28	75	—	—	—	—	—	—	40	Cer G6.35	15	R	BD±90

CLASS P2 PHOTOGRAPHIC LAMPS FOR USE WITH COLOUR FILM BALANCED FOR 3200K AND FOR ALL MONOCHROME FILM STOCK

Diag. Lamp No.	Ref.	Volts	Watt	A		B		C		D		E		Average Life Hours	Special Features	Operating Position
				Maximum Diameter	Maximum Bulb Diameter	Maximum Overall Length	Max. pip protuberance from bulb axis.	Nominal Contact Length	Maximum Clearance Length	Nominal Lumens ×1000	Base					
77	P2/1	115	500	89	183.5	—	—	—	—	—	—	12.5	E.S. E27s	100	J	UNI
77	P2/1	240, 250	500	89	183.5	—	—	—	—	—	—	11	E.S. E27s	100	J	UNI
79	P2/4	115	500	127.5	182	—	—	—	—	—	—	7.2	E.S. E27s	20	UVX	UNI
79	P2/4	240, 250	500	127.5	182	—	—	—	—	—	—	7.2	E.S. E27s	12	UVX	UNI
79	P2/5	115	500	127.5	182	—	—	—	—	—	—	12	E.S. E27s	20	UWX	UNI
79	P2/5	240, 250	500	127.5	182	—	—	—	—	—	—	12	E.S. E27s	12	UWX	UNI
80	P2/10	240, 250	625	12	190	10.2	—	—	—	185.7±1.6	189.1	15.5	R7s	200	P	HOR±4
82	P2/15	240	625	12	119.5	10.2	—	—	—	114.2±1.6	117.6	16.25	R7s	75	P	UNI
81	P2/6	120	650	15	80	11.4	—	—	—	74.9±1.6	78.3	17	R7s	100	—	UNI
84	P2/16	240, 250	650	28	75	—	—	—	—	—	—	17.5	Cer G6.35	50	P	BD±90
82	P2/11	240	800	12	119.5	10.2	—	—	—	114.2±1.6	117.6	21	R7s	150	Q	UNI
81	P2/13	240	800	15	80	11.4	—	—	—	74.9±1.6	78.3	20	R7s	75	Q	UNI
82	P2/14	240	800	15	93.5	12	—	—	—	88.4±1.6	91.8	20	R7s	50	Q	UNI
84	P2/25	115	850	28	75	—	—	—	—	—	—	23	Cer G6.35	50	—	BD±90
80	P2/7	240, 250	1000	12	190	10.2	—	—	—	185.7±1.6	189.1	26	R7s	200	Q	HOR±4
84	P2/17	240, 250	1000	28	75	—	—	—	—	—	—	28	Cer G6.35	50	Q	BD±90
80	P2/12	240, 250	1250	12	190	10.2	—	—	—	185.7±1.6	189.1	33.5	R7s	200	R	HOR±4
84	P2/26	240, 250	1250	28	75	—	—	—	—	—	—	35	Cer G6.35	50	R	BD±90
83	P2/27	240, 250	2000	30	143	25	—	—	—	138.45±1.6	141.3	50	RX7s	300	S	HOR±4

CLASS P3 HIGH INTENSITY PHOTOGRAPHIC ENLARGER LAMPS

Diag. Lamp No.	Ref.	Volts	Watt	A		B		Base	Average Life Hours	Special Features	Operating Position
				Maximum Diameter	Maximum Overall Length	Maximum Overall Length	Maximum Overall Length				
77	P3/3	240, 250	75	61	108.5	—	—	B.C. B22d	100	J	UNI
77	P3/3	240, 250	75	61	110	—	—	E.S. E27s	100	J	UNI
77	P3/4	240, 250	150	61	108.5	—	—	B.C. B22d	100	J	UNI
77	P3/4	240, 250	150	61	110	—	—	E.S. E27s	100	J	UNI

Lamp information on Red background indicates that the lamp operates on the Tungsten Halogen principle.

SPECIAL FEATURES

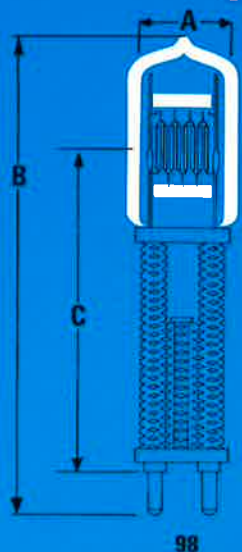
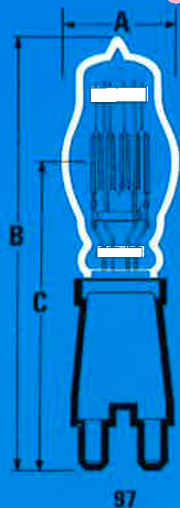
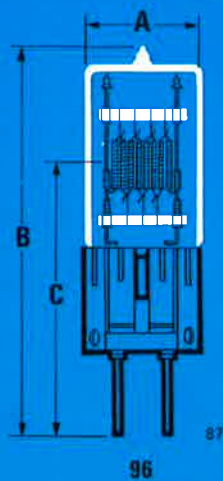
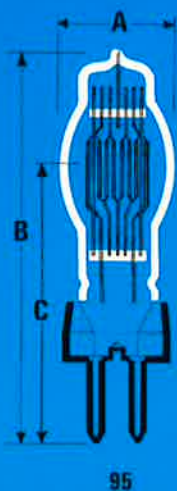
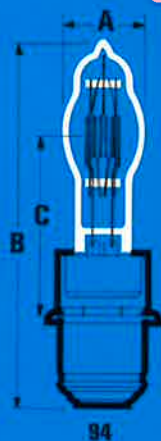
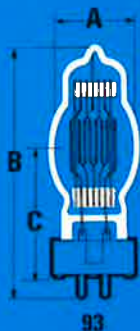
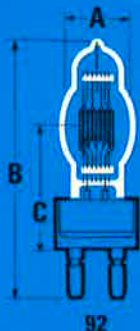
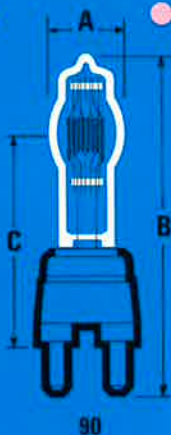
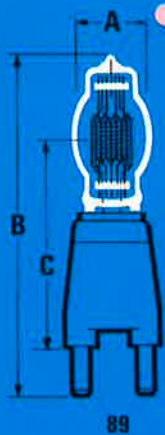
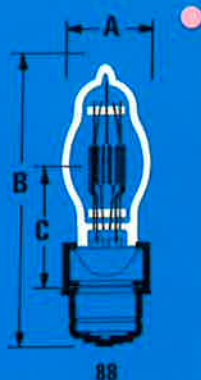
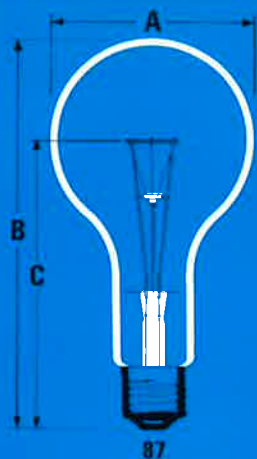
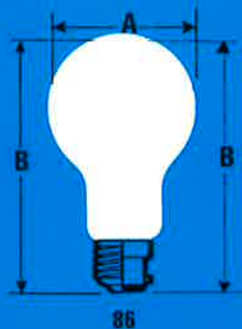
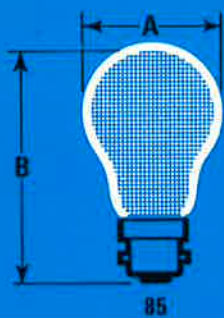
- A Obscured top
- B Forced cooling necessary. Maximum bulb wall temperature 500°C.
- C Off-set filament
- D Solid source filament
- E Internal integral aluminised mirror
- F Internal integral dichroic mirror
- G Silvered bulb
- H Due to incorporated mirror nominal lumens not shown

- I Minimum bulb wall temperature 350°C
- J Pearl bulb
- K External integral aluminised mirror
- L External integral dichroic mirror
- M Internal proximity reflector
- N Tungsten Halogen equivalent available see page 2
- O Linear overhead projector lamp
- P 3 or 4 amp H.B.C. fuse necessary
- Q 5 or 6 amp H.B.C. fuse necessary
- R 6 or 7 amp H.B.C. fuse necessary
- S 10 amp H.B.C. fuse necessary
- T Opalised bulb
- U Satin etched bulb

- V Reflector photoflood
 - W Reflector photospot
 - X Light output measured in centre beam candles
 - Y Class CP and T Halogen lamps require separate H.B.C. fuse in the circuit, see instruction leaflet in the carton for individual lamp requirements
 - Z Higher lumens apply to low voltage lamps
- Dual voltage lamps are indicated by oblique e.g. 240/250.
Lamp ratings stepped at 10 volt are indicated by a comma e.g. 240, 250.

In the interest of safety tungsten-halogen lamps above 130V rating should have a separate high breaking capacity fuse in the circuit. See special features column for individual lamp requirements.

All dimensions are shown in mm.



CLASS CP LAMPS FOR USE WITH COLOUR FILM BALANCED FOR 3200 K AND ALL MONOCHROME FILM STOCK

Diag. Lamp No.	Ref.	Volts	Watt	A B C			Nominal Lumens x1000	Average Life Hours	Cap	Special Features	Operating Position
				Maximum Diameter	Maximum Overall Length	Light Centre Length					
85	CP/1	115 240	275 275	61 61	110 110	— —	7.5	8 5	BC or ES	J	UNI
86	CP/2	115 240	500 500	82 82	166 166	— —	14 13.75	20 15	BC or ES	J Z	UNI
93	CP/23	115/120, 220, 240	650	35	110	55 ± 2	17/16.8	100	GX9.5	Y Z	BD ± 45
92	CP/39	115/120, 220, 240	650	35	140	63.5 ± 0.5	17/16.8	100	G22	Y Z	BD ± 45
88	CP/51	115/120, 220, 240	650	35	130	55.5 ± 0.5	17/16.8	100	P28s	Y Z	BD ± 90
87	CP/3	115 240	1000 1000	153 153	309 309	— —	30 28	30 25	GES E40s	J Z	UNI
93	CP/24	115/120, 220, 240	1000	35	110	55 ± 2	27/26	200	GX9.5	Y Z	BD ± 45
92	CP/40	115/120, 220, 240	1000	35	140	63.5 ± 0.5	27/26	200	G22	Y Z	BD ± 45
88	CP/52	115/120, 220, 240	1000	35	130	55.5 ± 0.5	27/26	200	P28s	Y Z	BD ± 45
95	CP/30	115/120, 220, 240	1250/1250 1250/1250	60 60	220 220	143 ± 2 143 ± 2	28/59 25/53	250 250	GX38q GX38q	Y Z	BD ± 45
95	CP/58	220, 240	1250/2500 3750	70	220	143 ± 2	27/59 91	300	GX38q	Y	BD ± 45
89	CP/41	115/120, 220, 240	2000	40	210	127 ± 2	56/54	400	G38	Y Z	BD ± 90
91	CP/43	115/120, 220, 240	2000	40	145	70 ± 2	56/54	400	GY16	Y Z	BD ± 90
94	CP/53	115/120, 220, 240	2000	40	200	87 ± 0.5	56/54	400	P40s	Y Z	BD ± 90
92	CP/55	115/120, 220, 240	2000	40	160	75 ± 0.5	56/54	400	G22	Y Z	BD ± 90
90	CP/56	115/120, 220, 240	2000	40	210	127 ± 2	56/54	400	G38	Y Z	BD ± 30
96	CP/32	220, 240	2500/2500	70	220	143 ± 2	55/117	250	GX38q	Y	BD ± 45
97	CP/29	115/120	5000	75	265	165 ± 2	145	400	G38	Y	BD ± 45
97	CP/29	220, 240	5000	75	265	165 ± 2	135	500	G38	Y	BD ± 45
98	CP/54	220, 240	10000	70	380	254 ± 2	280	400	G38	Y	BD ± 45

Lamp information on Red background indicates that the lamp operates on the Tungsten Halogen principle.

SPECIAL FEATURES

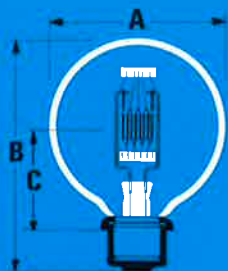
- A Obscured top
- B Forced cooling necessary. Maximum bulb wall temperature 500°C.
- C Offset filament
- D Solid source filament
- E Internal integral aluminised mirror
- F Internal integral dichroic mirror
- G Silvered bulb
- H Dual ion incorporated mirror nominal lumens not shown

- I Minimum bulb wall temperature 350°C
- J Pearl bulb
- K External integral aluminised mirror
- L External integral dichroic mirror
- M Internal proximity reflector
- N Tungsten Halogen equivalent available see page 2
- O Linear overhead projector lamp
- P 3 or 4 amp H. B. C. fuse necessary
- Q 5 or 6 amp H. B. C. fuse necessary
- R 6 or 7 amp H. B. C. fuse necessary
- S 10 amp H. B. C. fuse necessary
- T Opalised bulb
- U Satin etched bulb

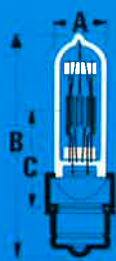
- V Reflector photoflood
- W Reflector photospot
- X Light output measured in centre beam candles
- Y Class CP and T Halogen lamps require separate H. B. C. fuse in the circuit, see instruction leaflet in the carton for individual lamp requirements
- Z Higher lumens apply to low voltage lamps

Dual voltage lamps are indicated by oblique e.g. 240/250.
Lamp ratings stepped at 10 volt are indicated by a comma e.g. 240, 250.

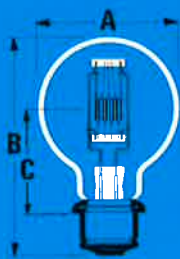
All dimensions are shown in mm.



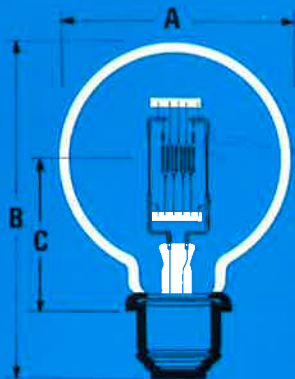
99



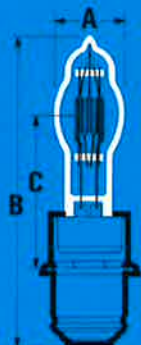
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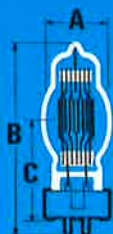
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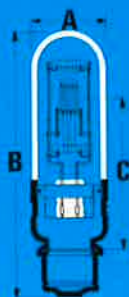
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103



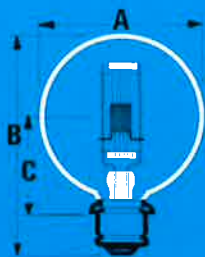
104



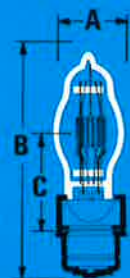
105



106



107



108

CLASS T THEATRE SPOTLIGHT LAMPS

Diag. Lamp No.	Ref.	A		B	C	Nominal Lumens x1000	Base	Average Life Hours	Special Features	Operating Position		
		Volts	Watts	Maximum Diameter	Maximum Overall Length						Light Centre Length	
101	T/3	240,250	250	78	124	55.5±0.5	4.25	P28s	200	—	BD±90	
99	T/1	240,250	500	100	140	55.5±0.5	9.5	P28s	200	N	BD±90	
100	T/17	115/120	220,240	500	27	130	55.5±0.5	9.5	P28s	750	—	BD±90
104	T/12	115/120	220,240	650	35	110	55±2	13.5	GX9.5	750	—	BD±90
108	T/13	115/120	220,240	650	35	130	55.5±0.5	13.5	P28s	750	—	BD±90
102	T/2		240,250	1000	132	200	87±0.5	20	P40s	200	N	BD±90
105	T/4		240,250	1000	39	155	89±0.5	20	P28s	200	N	BU±15
107	T/6		240,250	1000	102	140	55.5±0.5	20	P28s	200	N	BD±75
104	T/11	115/120	220,240	1000	35	110	55±2	23	GX9.5	750	—	BD±90
108	T/14	115/120	220,240	1000	35	130	55.5±0.5	23	P28s	750	—	BD±90
106	T/15	115/120	220,240	1000	35	160	89±0.5	23	P28s	750	—	U NI
103	T/16	115/120	220,240	1000	35	180	87±0.5	23	P40s	750	—	BD±90

Lamp information on Red background indicates that the lamp operates on the Tungsten Halogen principle.

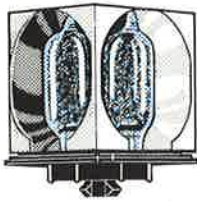
SPECIAL FEATURES

- A Obscured top
 B Forced cooling necessary. Maximum bulb wall temperature 500°C.
 C Offset filament
 D Solid source filament
 E Internal integral aluminised mirror
 F Internal integral dichroic mirror
 G Silvered bulb
 H Due to incorporated mirror nominal lumens not shown
 I Minimum bulb wall temperature 350°C
 J Pearl bulb
 K External integral aluminised mirror
 L External integral dichroic mirror.
 M Internal proximity reflector
 N Tungsten Halogen equivalent available see page 2
 O Linear overhead projector lamp
 P 3 or 4 amp H.B.C. fuse necessary
 Q 5 or 6 amp H.B.C. fuse necessary
 R 6 or 7 amp H.B.C. fuse necessary
 S 10 amp H.B.C. fuse necessary
 T Opalised bulb
 U Satin etched bulb

- V Reflector photoflood
 W Reflector photospot
 X Light output measured in centre beam candles
 Y Class CP and T Halogen lamps require separate H.B.C. fuse in the circuit, see instruction leaflet in the carton for individual lamp requirements
 Z Higher lumens apply to low voltage lamps
 Dual voltage lamps are indicated by oblique e.g. 240/250.
 Lamp ratings stepped at 10 volt are indicated by a comma e.g. 240,250.

All dimensions are shown in mm.

Flashcube



Four miniature blue bulbs, smaller in size than an AG3B, are enclosed in a plastic cube complete with a precision reflector for each individual bulb.

Flashcubes are simple to fit on the camera and simple to remove, either manually or by automatic ejection. They are only just warm to the touch after four bulbs have been fired.

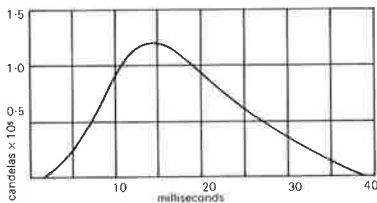
The precision-made base ensures correct location on the camera, enabling positive contact and automatic rotation of the Flashcube.

Flashcubes may be used with suitably designed cameras and adaptors, with X synchronization at shutter speeds up to 1/60 second and at all shutter speeds with M synchronization.

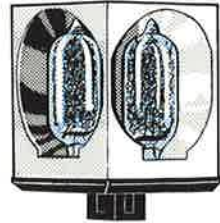
Full Exposure Data is printed on every carton

Specification

Class	MF
Colour of bulb	Blue
Total light output (beam candle power sec)	2000
Peak light output (beam candle power)	130000
Time to peak (milliseconds)	13
Duration above half peak (milliseconds)	15
Voltage range	3-45
Width (mm)	28.5
Overall length (mm)	35.5
Cubes per pack	3
Cubes per outer pack	60



Magicube X



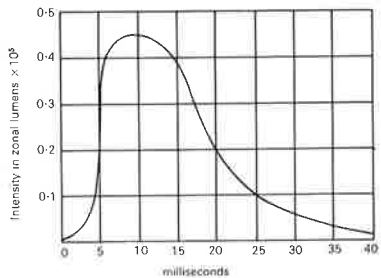
Magicube X is a major advance towards 100% photoflash reliability. It is mechanically activated, thus eliminating the need for batteries and consequent failures due to poor electrical contact or corrosion.

Magicube X can be used only with cameras designed with the special Magicube firing system.

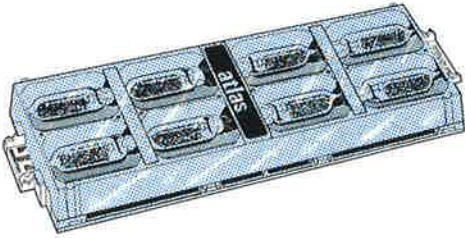
Full Exposure Data is printed on every carton

Specification

Colour of bulb	Blue
Total light output (zonal lumens/sec)	460
Peak intensity (zonal lumens)	44000
Time to peak (milliseconds)	7
Duration above half peak (milliseconds)	13
Maximum width (mm)	30.5
Maximum overall height (mm)	41
Cubes per pack	3
Cubes per outer	60



FlipFlash

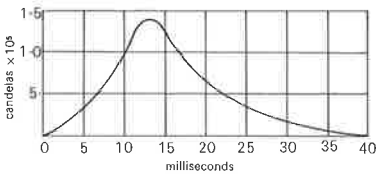


FlipFlash is an expendable flash array consisting of eight flashbulbs mounted on a specially designed circuit board and totally enclosed in a plastic unit. It is used specifically on the new range of piezo electric cameras marketed by some ten manufacturers including Kodak and Agfa. As each bulb is fired by the piezo electric-ceramic system in the camera, a heat activated switch automatically connects the next bulb. When the top four bulbs have been fired, the unit is flipped over in readiness for the next four flashes.

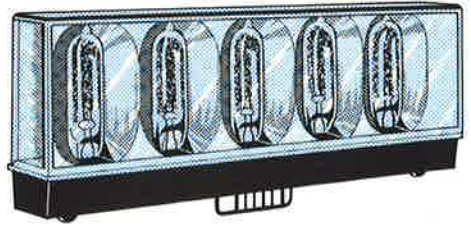
FlipFlash acts as its own extender, thus minimising the red eye effect.

Specification

Class	MF
Colour of lamp	Clear
Nominal total light output (candle power seconds)	1800
Nominal peak light output (beam candle power)	140000
Nominal time to peak (milli seconds)	13
Nominal duration above half-peak (milli seconds)	10
Min. volts	1800
Width (mm)	44.5
Height (mm)	140
Units per pack	1
Units per inner carton	12
Units per outer carton	144



Flashbar 10

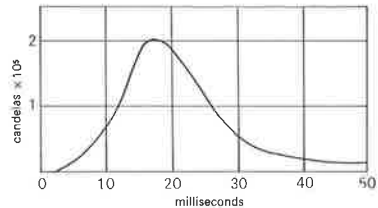


Flashbar 10 is a unit containing ten miniature clear bulbs mounted inside a lightly tinted blue cover in two rows of five, incorporating a computer designed reflector for each lamp. The use of hafnium foil and borosilicate glass sets new standards for light output per unit volume and safety.

Flashbar 10 is designed for use with the instant picture cameras marketed by Polaroid (SX series) and Keystone (FX series). The bulbs are electrically fired sequentially by the battery included in the film pack. When the first side is used the bar must be unplugged and reversed. The second side is then ready for use.

Specification

Class	M
Colour of lamp	Clear
Nominal total light output (Zonal lumen seconds)	820
Nominal peak light output (Zonal lumens)	80000
Nominal time to peak (milli seconds)	16
Nominal duration above half peak (milli seconds)	25
Voltage range	3-22½
Width (mm) nominal	15
Length (mm) nominal	108
Height (mm) nominal	45
Units per pack	1
Units per inner carton	12
Units per outer carton	144



Photoflash bulbs

Outstanding features of these photoflashbulbs are:

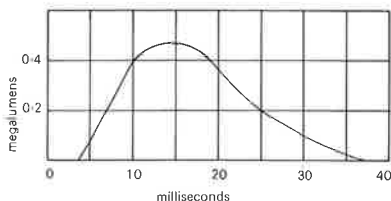
Zirconium filling: The use of zirconium foil enables more light to be packed into less space, thus giving greater economy, greater efficiency and flexibility.

Precision manufacture: Dependability is of prime importance in flash photography. These bulbs are of consistent high quality, thanks to precision manufacture and rigorous test standards.

Tru-Flash Type 1B

Specification

Class	MF
Colour of bulb	Blue
Total light output (lumens secs)	7500
Peak light output (megalumens)	0.45
Time to peak (milliseconds)	13
Duration above half peak (milliseconds)	15
Voltage range	3-45
Maximum bulb diameter (mm)	11.9
Maximum overall length (mm)	40.5
Bulbs per pack	10
Bulbs per outer container	200
Colour code	Blue



Mini-Flash Super AG3B

Specification

Class	MF
Colour of bulb	Blue
Total light output (lumen secs)	7500
Peak light output (megalumens)	0.45
Time to peak (milliseconds)	13
Duration above half peak (milliseconds)	15
Voltage range	3-45
Maximum bulb diameter (mm)	11.9
Maximum overall length (mm)	33.3
Bulbs per pack	10
Bulbs per outer container	200
Colour code	Blue

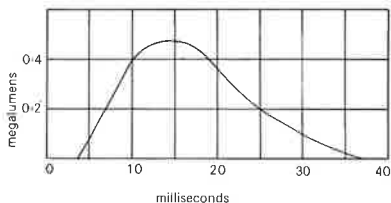
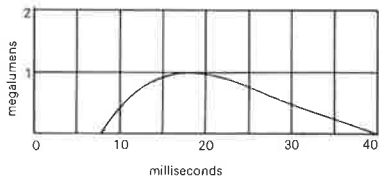
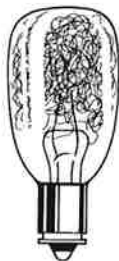


Photo-Flash M3

Specification

Class	M
Colour of bulb	Clear
Total light output (lumens secs)	16000
Peak light output (megalumens)	1
Time to peak (milliseconds)	17
Duration above half peak (milliseconds)	15
Voltage range	3-45
Maximum bulb diameter (mm)	22
Maximum overall length (mm)	45
Bulbs per pack	6
Bulbs per outer container	180
Colour code	Red



Full Exposure Data is printed on every carton

INTERNATIONAL PROJECTOR LAMP SUBSTITUTION GUIDE

ANSI Ref:	ANSI Volts	A1 Ref:	A1 Volts
BEH	120	A1/182	*
BEL	220	A1/183	220
BRJ	15	A1/234	15
BRL	12	A1/220	12
BXT	12	A1/186	12
CAL	120/125	A1/201	*
BCK	120	A1/241	*
CDS	115	A1/21	115
CEW	120	A1/167	*
CFC	120	A1/167	*
CGT	120	A1/26	115
CGW	120	A1/26	115
CLG	115	A1/37	115
CLS	120	A1/37	115
CNP	230	A1/37	230
CMT	120	A1/37	115
CMV	120	A1/37	115
CSF	240	A1/178	240
CTD	230	A1/182	230
CTS	120	A1/207	115
CTT	115	A1/207	115
CWA	120	A1/206	115
CWD	120	A1/178	*
CXH	230	A1/201	230
CXK	120	A1/6	115
CXL	8	A1/202	8
CXR	8	A1/17	8
CXR	8	A1/263	8
CYC	120/125	A1/183	*
CYN	24	A1/212	24
CYS	120	A1/206	115
CZA	120/125	A1/205	*
CZB	120	A1/205	*
CZG	230	A1/205	230
CZX	120	A1/7	115
DAB	120	A1/7	115
DAK	120	A1/180	*
DBH	120	A1/208	115
DBS	230	A1/180	230
DBT	230	A1/7	230
DCA	21-5	A1/184	21-5
DCR	21-5	A1/210	21-5
ddb	120	A1/9	115
DEF	21-5	A1/211	21-5
DEJ	120	A1/53	115
DFC	120	A1/24	125
DFD	120	A1/59	115
DFN	125	A1/24	125
DFT	120	A1/59	115
DFY	120	A1/91	115
DKK	230	A1/9	230
DLG	21-5	A1/194	21-5
DMX	120	A1/8	115
DNR	115	A1/8	115
DPT	120	A1/57	115
DPW	120	A1/188	*
DRS	120	A1/58	*
DYR	230	A1/233	230
DYS	120	A1/264	120
EFM	8	A1/229	8
EFN	12	A1/230	12
EFF	12	A1/231	12
EFR	15	A1/232	15
EHE	12	A1/45	12
EHJ	24	A1/223	24
EJL	24	A1/252	24
EGH	120	A1/241	*
ELC	24	A1/259	24
EMM	24	A1/258	24
ETA	12	A1/45	12
FAL	120	A1/227	120
FCB	120	A1/228	120
FCR	12	A1/215	12
FCS	24	A1/216	24
FDX	12	A1/209	12
FEA	230	A1/228	230
FEB	220	A1/228	220

ANSI Ref	ANSI Volts	ANSI Amps	G. Class Ref	G. Class Volts	G. Class Amps
BGB	4	0-75	G 31	4	0-75
BRD	4	0-75	G 19	4	0-75
BRK	4	0-75	G 27	4	0-75
BRS	4	0-75	G 29	4	0-75
BSB	6	1-0	G 5	6	1-0
BSK	6	1-0	G 40	6	1-0
BSS	6	1-0	G 5	6	1-0
BSW	7	0-2	G 48	7	0-2
ESA	6	10W	M 29	6	10W
ESB	6	20W	M 30	6	20W

PHOTOGRAPHIC AND STUDIO LAMP SUBSTITUTION GUIDE

ANSI Ref:	ANSI Volts	CP and P class Ref:	CP and P Class Volts
BVM	220/230	P1/13	220/230
DWY	120	P1/9	120
DXV	240	P1/11	240/250
DYC	240/250	P1/12	240/250
EBV	115/120	P1/2	**
FGD	220/230	P1/12	220/230
DXX	240	P2/13	240/250
EAL	115	P2/4	115
ECT	115	P2/1	115
EKM	240	P2/7	240/250
FAD	120	P2/6	120
FEX	240	P2/27	240
FEY	120	P2/27	120
BFK	120	CP52	115/120
BTP	120	CP52	115/120
BTR	120	CP52	115/120
CYX	120	CP41/CP56	115/120
DDY	120	CP52	115/120
DPJ	120	CP52	115/120
DPX	120	CP29	115/120
DPY	120	CP29	115/120
DRB	120	CP52	115/120
DRC	120	CP52	115/120
DVF	120	CP41/CP56	115/120
DVH	120	CP40	115/120
DWK	230	CP52	240
ECG	120	CP41/CP56	115/120
ECN	120	CP29	115/120
ECP	120	CP54	115/120
EDC	120	CP39	115/120
EDG	120	CP39	115/120
EER	120	CP41/CP56	115/120
EGR	120	CP40	115/120
EGT	120	CP40	115/120
750 T12/9	120	T15	115/120
BFE	120	T14	115/120
BTL	120	T17	115/120
BTN	120	T14	115/120
DGH	120	T14	115/120
DWB	120	T17	115/120

*Manufactured as stock items in 220v, 230v, 240v, 250v ratings only.

**Manufactured as stock items in 220v, 240v ratings only. Enquiries for low volt ratings for these types should be made at Thorn Lighting Offices.

In some instances the rated life of substitute lamps may differ.

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