Mazda







Lamp catalogue

A.E.I. Lamp and Lighting Co Ltd

A.E.I. LAMP AND LIGHTING CO LTD

RUGBY, WARWICKSHIRE*

Incorporating the lamp and lighting business of The British Thomson-Houston Co., Ltd. The Edison Swan Electric Co., Ltd. Metropolitan-Vickers Electrical Co., Ltd.

Many of the lamps listed in this catalogue are also available in the Ediswan and Metrovick brands.

> *With effect from 1st Jan. 1958 this address will be Melton Road, Leicester.

Wherever British Standards exist, the lamps shown in this catalogue are made to comply fully with the provisions of such standards.

Prices in this catalogue apply only in the UnitedKingdom and The Company reserve the right to change, without notice, the design or specification of equipment shown in the catalogue or supplied by them. All equipment is offered subject to the Company's Standard Conditions of Sale.

This catalogue supersedes Lamp Catalogue AL 113 dated August 1956.

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General Lighting Service



Clear



Silverlight



Pearl



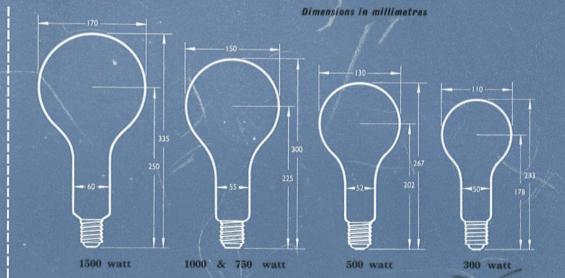
G.E.S

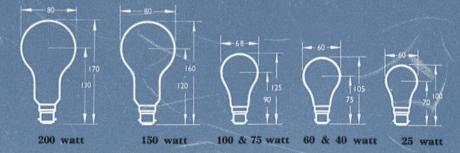


E.S.



B.C.





General Light	ing Servi	ce /	×		·	MACHEN THE STREET
			Coiled Coil		Single Coil	
Finish	Watts	Cap	14	Voltages and	List Prices*	
Fillish	Watts	Сар	200-260 in 10 volt steps s. d.	200-260 in 10 volt steps s. d.	100, 110, 120 and 130 s. d.	25, 35, 50, 55, 60, 65, 75 s. d.
Clear	15 25 40 60 75 100 150 200	B.C. or E.S. E.S. or B.C.	$egin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 0 3 0 3 0 3 0 4 0
	300 500 750 1000 1500	G.E.S.	=	7 6† 10 0† 14 6† 16 0† 22 6†	8 0† 10 6† 14 6† 16 0† 22 6†	- <u>-</u> <u>-</u> <u>-</u> <u>-</u>
Pearl	15 25 40 60 75 100 150 200	B.C. or E.S. E.S. or B.C.	- 1 9 1 9 2 1½ 2 1½ -	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 0 3 0 3 0 4 0
,	300 500	G.E.S.	= .	8 6† 11 0†	9 0† 11 6†	- =
Silverlight Patent 653,323	40 60 100 150 200	B.C. or E.S. E.S. or B.C.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	- - - 3 1 4 3	= = = = = = = = = = = = = = = = = = = =	- =
Pearl Pink	60 100 150	B.C.	=	$egin{array}{cccccccccccccccccccccccccccccccccccc$	=	=

^{*} Purchase Tax must be added to all prices shown in these columns except those marked thus † which are not subject. For the exact amount of tax to be added see TABLE A on the card insert.

Coiled Coil

These lamps give increased efficiency with the same lamp life. They provide up to 20% more light than equivalent Single Coil lamps; the extra light obtained is well worth the small extra cost.

Silverlight

These lamps are internally coated with Silica. The effect is to give greatly increased diffusion of light, so reducing ceiling shadows, etc. Silica coating slightly increases light absorption.

Pearl Pink

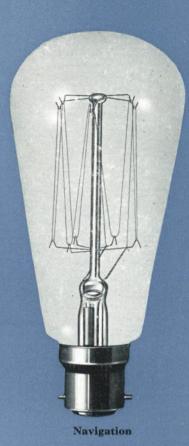
This new lamp gives a soft warm light; it softens shadows and flatters complexions and furnishings. It can be thoroughly recommended for use in some Shops and Stores, Hotels, Cocktail Bars, etc., or in the lounge or hall at home.





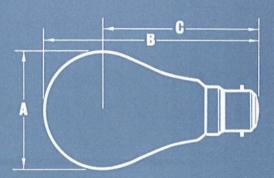








60w. Rough Service



	Dimensions in millimetres			
Watts	A	В	С	
40	60	110	80	
60	60 65	117.5	85	
100	68	125	90	

Rough Service

These lamps have spiralled filaments which are retained in position by a greater number of supports than are used in lamps for general lighting purposes.

They are designed to operate at a slightly lower efficiency in order to increase mechanical strength. They will withstand severe vibration or continual movement.

50 mm. Round Bulb

These lamps are most suitable for applications where there is limited space for the light source. They are used extensively in many contemporary lighting fittings.

Daylight Blue

Manufactured from natural coloured blue glass these lamps give an illumination approaching North Sky light. The excess red light of ordinary tungsten filament output is filtered by this glass and so provides light which is most useful where colour discrimination is required.

Navigation

These lamps are vacuum and have a filament of squirrel-cage construction. They are suitable for use in ship's side lanterns.

			Dime	nsions	
Watts	Voltages	Сар	Length mm.	Diam. mm.	List* Price s. d
40 60 100†	110, 120, 200/210, 220/230, 240, 250, 260	B.C. or E.S.	110 117·5 125	60 65 68	2 0 2 0 2 9

^{*} Purchase Tax must be added to the prices in this column. For the exact amount of purchase tax to be added see TABLE A on the card insert.

[†] Pearl only; gasfilled.

		*		List	Prices*
Watts	Voltages	Cap	Cle	ear	Pearl
			s.	d.	s. d.
25	200/210, 220/230, { 240, 250	B.C., S.B.C. or S.E.S.	$\left.\begin{array}{c} 2\\2\end{array}\right.$	0	2 0

Purchase Tax must be added to the prices of these lamps. For the exact amount of purchase tax to be added see TABLE A on the card insert.

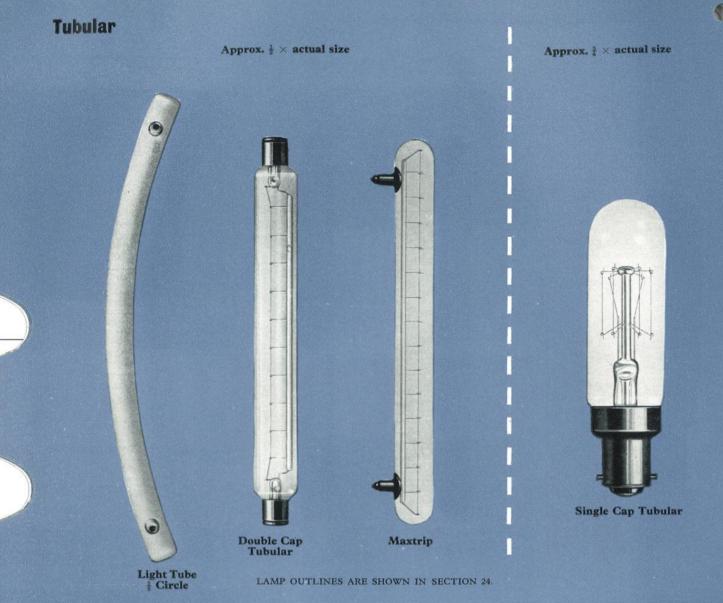
		Voltages ar	nd List Prices*
Watts	Сар	110, 120 s. d.	200/210, 220/230, 240, 250 s. d.
40 60 100	} B.C. {	4 0 4 0 5 6	4 0 4 0 5 6

^{*} Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see TABLE A on the card insert.

			Dime	nsions	
Watts	Voltages	Cap	Length mm.	Diam. mm.	List* Price s. d.
40 60	110, 120, 210, 220, 230	B.C. or { E.S. {	140 max. 150 max.	63 max. 70 max.	3 9

^{*} Purchase Tax must be added to the prices in this column. For the exact amount of purchase tax to be added see TABLE A on the card insert.







Architectural

These lamps provide a bright yet warm light and they are used extensively for decorative purposes in shops and stores-to add charm to bars, aquaria etc., or to provide that necessary extra light for wall mirrors or show cases.

Colour Sprayed Architectural

Lamps can be supplied in Red, Blue, Green, Yellow, Pink or Amber, 3/- per foot list extra. Maxtrip can be supplied sprayed in standard colours (Section 5) or Opalised, 6d. each List extra.

Tubular

Tubular lamps are useful for picture and showcase lighting where space is limited. They are generally used in conjunction with some suitable form of reflector in order to direct the light onto the object to be illuminated without the filament being visible. Double Cap Tubular lamps are available Frosted, Varnished or Sprayed in Standard Colours (Section 5) at 6d. each List extra.

			Dimer	sions	List Pr	ices*
Watts	Nominal Length in.	Distance between Round-peg Side Caps mm.	Length mm.	Diam, mm,	200/210, 220/230 240, 250 volts s. d.	110 & 120 volts s. d.
Straig	ht Lengtl	ns (White Opal)				
35 60 75 110 150	12 20 24 36 48	229 424 534 839 1144	305 500 610 915 1220	30 30 30 30 30 30	12 4 19 0 22 6 30 0 35 0	12 4 19 0 22 6
Curve	s ½, ¼ or ½	Circle (White Opa	1)		1	
60	20	$\left\{ \begin{array}{c} \frac{1}{8} \text{ Circle 416} \\ \frac{1}{4} \text{ Circle 393} \\ \frac{1}{2} \text{ Circle 309} \end{array} \right\}$	500§	30	30 0	30 0
Maxtr	ip					
30 60	} 10	200	252	25 {	Clear s. d. 5 9 6 6	Clear s. d. 5 9 6 6

[§] Centre-line of curve.

The state of the s	The second secon				-						
	1.2		Dimensions			Voltages and List Prices*					
Watts	Ca	p 1	mm. ± 3	Diam. mm. ± 1	200/ 220/ 240,	210, 230, 250 d.	110, s.	, 120 d.	25, s.	, 50 d.	
Single	Сар										
15	{ B.6 S.B	C. .C.	51 51	25	3	9	3	9	-	_	
25	8.6 S.B	C. .C.	86 92	> 25	3	9	3	9	4	9	
Double	Сар										
30	Cent	re [22]	l or 284	25	5	9	5	9	_	_	
60	Conta	ict 1	284 ± 1 mm.)	25	6	0	6	0	0_	_	

^{*} Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added, see TABLE A on the card insert.











^{*} Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added, see TABLE A on the card insert.

Candle Type









Plain Olive







Gothic

Dimensions in millimetres





 $\begin{array}{c} \text{B.C.}\\ \text{B22/21}\times 26\\ \text{(Round \& Extended Olive)} \end{array}$









S.B.C BA.15d/17 (Extended Olive)





Plain Olive Candle

There are many uses for these attractive lamps including supplementary lighting in foyers, bars and similar places where an intimate atmosphere is envisaged. They are also extensively used in candelabra and in shaded walllight fittings.

Twisted Olive Candle

These lamps have an apparent twist to the glass bulb and may of course be used in applications similar to those suggested for Plain Olives.

Extended Olive and Longlite

The extended olive has the majority of light emitted from the top but a small amount of light is emitted from the opalized stem. The Longlite emits light along its whole length.

Gothic

These lamps are only supplied sprayed in standard colours; they are suitable for similar applications as those given for Candle Lamps.

			Dimen	sions		Voltages and	List Prices
Wat	its	Cap	Length mm.	Diam.	Finish	200/210, 220/230, 240, 250 s. d.	110, 120 s. d.
Plair	n Olive	+				1	
25	{	B.C. S.B.C.	91±4 97±4	$35\pm 1 \\ 35\pm 1$	Clear Colour Sprayed Frosted	2 6 3 0 3 0	2 6 3 0 3 0
40 or 60	}.{	B.C. S.B.C.	131 max. 133 max.	45±1 45±1	Clear Colour Sprayed Frosted	3 0 3 6 3 6	3 0 3 6 3 6
Twis	sted Ol	ive†					
25	{	B.C. S.B.C.	99±5 105±5	$35\pm 1 \\ 35\pm 1$	Clear Colour Sprayed Frosted	3 0 3 6 3 6	3 0 3 6 3 6
40 or 60	}{	B.C. S.B.C.	148 max. 151 max.	55±1 55±1	Clear Colour Sprayed Frosted	3 6 4 0 4 0	3 6 4 0 4 0
New	Round	d Olive†					
40 or 60	}{	B.C. S.B.C.	100±3 103±3	55±1 55±1	Clear Colour Sprayed	3 0 3 6	3 0 3 6
Exte	ended (Olive				1	
25 40 60	{	B.C. S.B.C. B.C. S.B.C. B.C. S.B.C.	210±5 208±5 240±5 238±5 240±5 238±5	35 ± 2 35 ± 2 45 ± 2 45 ± 2 45 ± 2 45 ± 2	Clear with Stem Opalized	6 6 7 0 7 6	6 6 7 0 7 6
Lon	glite						
40 or 60	}{	B.C.	302±3 (12 in.)	38±1	Opalized	8 6	8 6
Got	hic†						
25 40 60	}{	B.C. S.B.C. S.E.S. E.S.	108±3 111±3 115±3 108±3	$54\pm 1 \\ 54\pm 1 \\ 54\pm 1 \\ 54\pm 1$	Colour Sprayed	3 6 4 0 4 0	3 6 4 0 4 0

^{*} Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see TABLE A on the card insert.

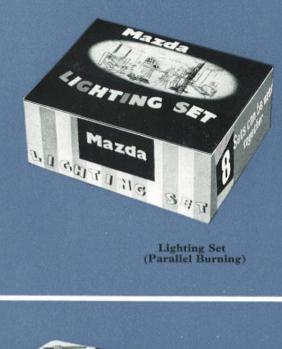


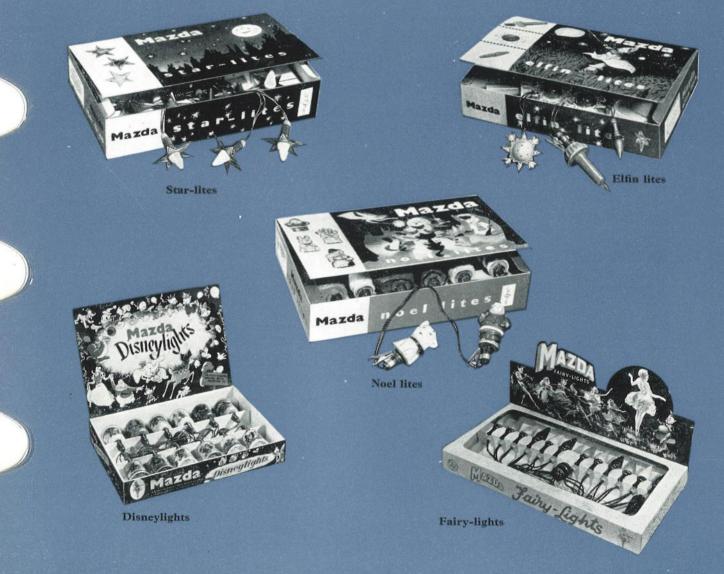




[†] Available colours are White, Red, Blue, Green, Yellow, Flame, Orange, Pink or Amber.







Decoration Sets

Each set comprises twelve lights ready wired on a flexible cord for immediate use on 200/260-volt supplies, and one spare lamp. A sliding berry-bead device on each lampholder provides a simple and convenient method of fixing to twigs and similar projections. Spare 20-volt Decoration Lamps (clear or coloured with M.E.S. cap) fit any 12-light set.

Disneylights

Gaily coloured lamps with wellknown Disney characters on the shades.

Fairy Lights

A string of brightly coloured lights, ideal for festooning public rooms and restaurants as well as private homes. Spare bulbs are available-Red, White, Blue, Amber, Green or Yellow.

Elfin Lites

A charming and colourful decoration set of stars, candles and fairy lights.

Star Lites

Brightly coloured plastic stars with conical, coloured lamps at their centre. Only when these lamps are alight can one appreciate their delightful effect.

Noel Lites

Small coloured figures of Father Christmas, Snow-men, Angels and animals internally illuminated.

Lighting Set

This set has been specially designed for use in bars, hotel foyers, and other applications of a similar nature. It comprises eight 15-watt 230/250-volt, 50mm. coloured, round bulbs. The bulbs are wired in parallel and up to eight sets can be connected across a common line with safety.

		Dimensions		19	Voltages and List Prices*						
Watts	Cap	Length mm.	Diam.	Finish		220/230 250, 260 d.	110, 12 s.	20, 130 d.	25, 5 s.	0, 60 d.	
15	B.C. E.S.† S.B.C. S.E.S.†	56 = 58 58 62 64	328	Clear Outside Sprayed Inside Sprayed Externally Glazed	1 2	10 2½	1 2	10 2½	3 (Outsi Spr'o	$egin{array}{c} oldsymbol{4}_{rac{1}{2}}^{1} \ ext{de} \ ext{l only} \end{array}$	
15	B.C. E.S.	90 92	}44	Inside Sprayed or Externally Glazed	2	$2\frac{1}{2}$	(110v. 2	only) $2_{\frac{1}{2}}^{1}$	-	_	

† An additional charge will be made for supplying Coloured lamps with these caps.

-		V	Voltages and List Prices*				
Watts Cap		Finish	200, 210, 220, 230, 240, 250, 260 s. d.	110, 120, 130 s. d.			
15 25	B.C. or E.S.	Outside Sprayed, Inside Sprayed or Externally Glazed	1 11	1 11			
40 60 75 100†	B.C.	Outside Sprayed {	1 9 1 9 2 3 2 3	1 11 1 11 2 5 2 5			

Outside Sprayed in Standard Colours (wholly or partially): White, Red, Blue, Green, Yellow, Flame, Orange, Pink or Amber. : White, Red, Blue, Green, Yellow, Inside Sprayed (wholly only) Orange. Externally Glazed (wholly only) White, Red, Blue, Green, Yellow, Orange.

† Higher wattages are also available.

Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see TABLE A on the card insert.

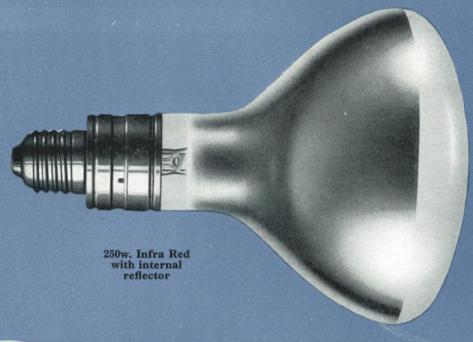
Description			Volts	Number	List l	Price	Purchase Tax Extra	
Descript			, 51.5	Lamps	£s	d.	s.	d.
Disneylights)	۲	1 :	5 0	2	7
Fairy Lights					10	3 4	1	8
Elfin Lites			200/260	12	1 10	9	3	2
Star Lites			11		1 :	5 0	2	7
Noel Lites	١]]		1 1	7 4	3	10
Spare Lamp (Clea	r or Col	oured	-					
3w. M.E.S.)			20	1	19	0		$2\frac{1}{2}$

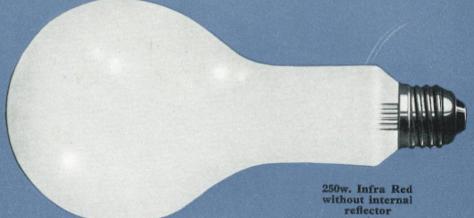
Lighting Set							
Description	Volts	Number of Lamps	Lis £	t Pr	ice d.	Purcha Ex s.	se Tax tra d.
Lighting Set	230/250	8	2	0	0	4	0
S.E.S. 50 mm.)	230/250	1	W.	2	4		6













Infra Red

For many years this form of heating has held its own for industrial stove enamelling or baking of all kinds. A large proportion of manufacturers believe that only by the thorough internal heating that these lamps give, can a first class enamel 'skin' of very good quality be obtained.

The farmer too, has found that Infra Red lamps provide light and adequate warmth to protect the health of his livestock. They are safe to use and require no attention or maintenance.

Radiant heat

This 60-watt lamp is specially designed to use in clinical apparatus employed for heat therapy in hospitals and clinics. (Not illustrated.)

Radiator

These lamps are tubular in shape and they are sprayed a warm flame colour. They are suitable for airing cupboards or similar places where both light and heat are required.

Reflector Lamps

These lamps with the 'built-in' reflector have become a necessity in modern shop and shop window lighting, not only because of their usefulness for emphasizing items for display but also because they blend so well with fluorescent or other forms of general lighting. They are also widely used in workshops and display boards and the 75-watt lamp with B.C. cap has many applications in the home.

			Dimens	sions		
Watts	Voltages	Cap	Length mm.	Diameter mm.	Lis Pri	
Infra Re	ed Lamps with Inter	rnal Reflector Parabol	ic Bulb			
150 250	\begin{cases} 100/130 \\ 200/250 \end{cases}	E.S. Cementless	178 ±4	126±1·5	} 12	6
Infra Re	d Lamps without I	nternal Reflector Rou	nd Bulb			
250	$\left. \left\{ \begin{array}{c} 100/130 \\ 200/250 \end{array} \right. \right\}$	E.S.	178±5·5	90±1	7	9
Infra Re	ed Tubular. Quartz	Bulb				
1000	230/250	Special	350±5	10±1	84	0
Radiant	Heat Round Bulb			9		
60	110, 120, 200/260	B.C. or E.S.	117·5±3·5	65±1	2	3
Radiato	r Tubular Bulb. Sp	rayed Flame. Carbon	Filament			
250	110, 120, 200/220, 230/250	B.C.	290 max.	64±1	20	0

^{*} Purchase Tax must be added to the prices in these columns unless exemption has been obtained. For the exact amount of purchase tax to be added see TABLE A on the card insert.
† Price is for Clear Bulb. Pearl Bulb—8s. 3d. List.

			Dimer	nsions		- A
Watts	Voltages	Сар	Length mm.	Diameter mm.	Lis Pri s.	
Spotlight	(Concentrated Bear	m)				
75 {	110, 200, 210, 220, 230, 240, 250 }	E.S. or B.C.	129±3	95±1	7	0
100 {	200, 210, 220, 230, 240, 250	E.S. or B.C.	129±3	95±1	7	0
150 {	110, 200, 210, 220, 230, 240, 250	E.S.	178±4	126±1·5	10	6
150	24	E.S.	178±4	126±1·5	18	6
Floodlight	(Dispersed Beam)					
75 {	110, 200, 210, 220, 230, 240, 250 }	E.S. or B.C.	129±3	95±1	7	0
100 {	200, 210, 220, 230, 240, 250	E.S. or B.C.	129±3	95±1	7	0
150 {	110, 200, 210, 220, 230, 240, 250	E.S.	178±4	126±1·5	10	6
150	24	E.S.	178±4	126±1·5	18	6
500 {	200, 210, 220, 230, 240, 250	G.E.S.	312±6	165±2	42	0

Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added, see



TABLE A on the card insert. ‡ Not subject to Purchase Tax.

Fluorescent & Electric Discharge

The Hot Cathode Tubular Fluorescent Lamp

THE TUBULAR fluorescent lamp consists of a cylindrical glass tube coated on the inside with fluorescent materials (phosphors). An electrode is sealed into each end of the tube and the connections to each electrode are brought out to the lamp cap. The electrode is made of a coil of tungsten wire, coated with a mixture of alkaline earth oxides which freely emits electrons when heated; this coil acts as the cathode. Two small fins are placed on each side of the cathode to act as the anode during the appropriate half cycle. After the tube has been evacuated a drop of mercury is introduced into the tube, also a small quantity of argon gas to help to initiate the arc between the cathodes.

Two methods of starting are in common use, switch start and instant start, both involve the heating of the cathodes.

The operation of starting consists in forcing electrons to pass along the tube from end to end, thereby forming the conducting passage or 'arc' between the cathode and anode.

In the case of switch start circuits, it is necessary to pass a current through the electrodes to heat them and to apply a voltage sufficiently high to cause the arc to strike.

When using the instant start method, however, a special instant start transformer is employed both to heat the electrodes and ensure the correct starting and running conditions for the lamp. It is important that for instant start, conditions for the movement of electrons along the tube are just right. An electrical charge on the lamp may be sufficient to repel electrons and thus prevent starting and it is for this reason that the lamp is either externally 'siliconed' or a metallic stripe is affixed to lamps intended for instant start circuits.

To cater for the various requirements of specific installations there are at present six standard white colours of fluorescent lamps, viz., Daylight, Natural, Warm White, De Luxe Warm White, Colour Matching, and 3500°K. Confusion often arises between colour appearance of light sources and the colour rendering of objects seen under them, and it must be remembered when looking at a lamp that the eye can easily be deceived and apparently similar light sources may give different colour rendering and vice versa. We recommend obtaining the advice of our illuminating engineers as to best colour of lamp to suit individual lighting problems.

Hot and Cold Cathode lamps are essentially the same except that cold cathode lamps are provided with a large unheated cathode, not coated with any emissive material, and starting is effected by the application of a high voltage across the lamp. There is a considerable voltage drop at the cathodes which results in a reduced overall efficiency, compared with the equivalent hot cathode lamp.

Marca lamps stay brighter longer

FLUORESCENT ELECTRIC DISCHARGE

Sections 7-10





15w. 1½ ft.



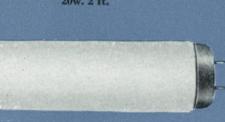
20w. 2 ft.



For dimensions, see Section 8

4w. 6 in.

6w. 9 in.



40w. 2 ft.



30w. 3 ft.



40w. 4 ft.



80w. 5 ft.



125w. 8 ft.

Standard Straight Fluorescent Tubes

Our extensive range of fluorescent tubes includes sizes to suit the majority of fluorescent fittings in use today. The choice of colours allows for the correct lamp for the desired application whether it be in industry, in offices, shops etc. or in the home.

Recent additions to the range are the reflector type tubes which have internal coating to give a high percentage of downward illumination and the 50w. 5 ft. tube which is only 1" in diameter, the latter is designed for use with showcase fittings, where a limited depth is available.

Fluorescent lamps are designed to operate on standard supply voltages, using appropriate lamp auxiliary gear.

Cold Cathode Tubes

Space does not permit the complete listing of the extensive range of Cold Cathode Tubes but you may be sure that no matter what particular application you have in mind, your usual supplier will be pleased to help you.

These highly efficient and economical lamps are available in standard straight lengths up to 8' 6" lit length and in standard curves, but our lighting engineers should be consulted if there is any doubt as to the practicability of certain sizes or colours to suit any proposed scheme.

Listed below are a few of the large range of colours from which to choose.

Ruby Red
Cerise
Light Green
Light Blue
Dark Green
Dark Blue
Sky Blue

						List P	rices'		and the same of th	NEW YORK AND ADDRESS OF	diament di
No	atts ind minal ngth	Colours Available	MCI Ordin Swin	nary	MCFE/U (Silicone) Instant Start	MCFA Strip Insta Star	nt nt	MCFO Strip Insta Star	nt l	MCF Reflect Switt Sta	ctor
			s.	d.	s. d.	s.	d.	s.	d.	s.	d.
4	6"	Warm White, Daylight, \\Natural, Colour Match'g	15	0	_	_		_		_	-
6	9" .	or Deluxe Warm White	11	6	_	_		_	.	_	-
15	18"	Warm White	9	9	10 3	10	9	٠	.	4	2
20	2 ft.	Daylight Natural	10	6	11 0	11	6	_		_	-
30	3 ft.	Colour Matching Deluxe Warm White	11	0	11 6	12	0	-		_	
40	2 ft.	3500°K White	11	0	11 6	12	0	_		_	-
40	4 ft.		11	9	12 3	12	9	_		_	-
80	5 ft.	J	13	0	13 6	14	0	_	.	_	-
80	5 ft.	{ Red, Blue, Green or Yellow }	17	6	18 0	18	6	_		,	-
40	4 ft.	Daylight	-	-	_	_		-	.	13	9
80	5 ft.	{Warm White, Daylight, } or Deluxe Warm White}	_	-	_		•	-		14	9
50	5 ft.	Natural	17	3	17 9	18	3	_	.	-	-
25	8 ft.	Warm White, Natural, or 3500°K White	_	-	1—1	_		25	P0	· .	

^{*} Purchase Tax must be added to all lamps listed above except the 125w. 8 ft. lamp marked thus ¶. For the exact amount of purchase tax to be added see TABLE A on the card insert. Note: The price of the 125w. lamp includes for either Switch or Instant Start as the control gear governs the starting characteristics.

NOTE: The lamp coding letters indicate the following:-

MCF/U = Standard tube requiring separate starter switch.

MCFE/U = Instant Start with external water repellant Silicone coating and not requiring separate starter switch.

MCFA/U = Instant start with external stripe connected to both caps, at fitting potential.

MCFC/U = Stripe as MCFA/U but not connected to caps; not at earth or fitting potential.

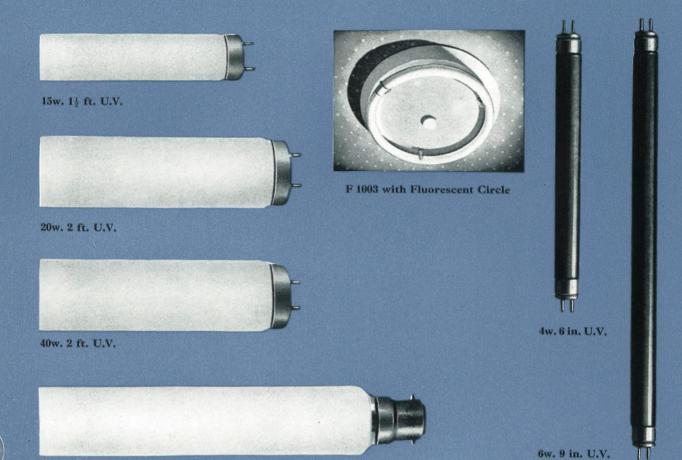
MCFR/U = Standard starter switch type tube but containing a highly reflecting powder coating between the fluorescent powder and the glass tube. The coating is applied to 60% of the circumference of the tube.

> For appropriate control gear for use with fluorescent tubes see sections 26 and 27.









80w. 5 ft. U.V.

Caps and dimensions of Fluorescent and Fluorescent/U.V. Tubes

				Dime	nsions		
Watts	Nominal Length	Cap		Maximum Overall Length		neter	
			in.	mm.	in.	mm.	+13+ (
4	6 in.	Miniature Bi-pin 13	$5\frac{29}{32}$	150	$\frac{1}{2}$	14	Medium Bi-pin 35
6	9 in.	,, ,, ,,	$8\frac{29}{32}$	226	$\frac{1}{2}$	14	* 13 +
15	$1\frac{1}{2}$ ft.	Medium Bi-pin 23	$17\frac{25}{32}$	452	1	26	
20	2 ft.	" " 35	$23\frac{25}{32}$	604	$1\frac{1}{2}$	38	-23
30	3 ft.	,, ,, 23	$35\frac{25}{32}$	909	1	26	Medium Bi-pin 23
40	2 ft.	" " 35	$23\frac{25}{32}$	604	$1\frac{1}{2}$	38	- > 5 -
40	4 ft.	" " 35	$47\frac{25}{32}$	1214	$1\frac{1}{2}$	38	
50	5 ft.	" " 23	59 5	1514	1	26	-13+
80	5 ft.	B.C. (B22/25 \times 26)	601/4	1530	$1\frac{1}{2}$	38	Miniature Bi-pin 13
125	8 ft.	» » »	961	2445	$1\frac{1}{2}$	38	

Fluorescent Circle

The illustration shows the 40w. fluorescent circle mounted in the popular Mazda Circular fitting F 1003/1/40. The fitting is of spun sheet steel 'bonderized' and finished white stoved enamel.

It costs £8:1s.:0d. complete with gear but less lamp.

Ultra Violet Tubes

These tubes emit a large proportion of energy as invisible U.V. radiation in the 3650A band. They can be used for the excitation of fluorescent materials and paints thus having various applications such as the examination of documents, laundry marks, stains and many laboratory uses. They can be used for advertising purposes or instrument panel excitation as is used in some aircraft today.

The MCFW/U lamps are black in appearance because they have a 'Wood's Glass' envelope which absorbs most of the visible light.

In the case of the MCF/U-Ultra-Violet tubes, they are white in appearance because no filter is incorporated in the glass envelope; an external 'Wood's Glass' must be used if visible light is not required.

Tungsten Ballast Lamps

(Not illustrated)

For use with 40w. 4-ft. Fluorescent Lamps Type MCFA/U (Sec. 7).

Experience has revealed a need, in certain instances, for mixed fluorescent and tungsten lighting. One way of meeting this demand is to utilize a fluorescent lamp circuit in which the conventional choke is replaced by a special tungsten ballast lamp which not only serves to regulate the current but also emits useful light.

Fluoresce	ent Gircle S	ilicone-coated		
		Dimensio	ns in mm.	List Price*
Lamp Watts	Colour	Outside Diameter of Circle	Outside Diameter of Tube	(Lamp only)
40	Deluxe Warm White	403±8	32±2	45 0

^{*} Purchase Tax must be added to the price of this lamp. For the exact amount of purchase tax to be added see TABLE A on the card insert.

Ultra V	iolet Tube	S							
						List Pri	ces*		
Watts	Nominal Length	Туре		MCF/U-U (Non-filte	Jlti r ei	nvelope)	(Black	CFW c env	V/U velope) d.
4	6 in.)	ſ	-	_		1	18	0
6	9 in.			10-	-		2	10	0
15	$1\frac{1}{2}$ ft.	1111 2650 \$		1	5	9		_	
40	2 ft.	U.V. 3650Å		1	7	0		_	
40	4 ft.			1	7	9		_	
80	5 ft.	J		1	9	0		_	
all .	1								

^{*} Purchase Tax see note below.

MCF/U— Ultra-Violet tubes are made with a non-filter glass envelope and emit a certain amount of visible light: this can be absorbed by the use of an external 'Wood's Glass' filter.

MCFW/U are made with a 'Wood's Glass' envelope which filters out practically all the visible light,

310 V	Lamp	Lamp Rating		nsions		
Mains Volts	Volts	Watts	Length mm.	Diam. mm.	Cap	List* Price s. d.
200/210 220/230 240 250	115 140 151 162	50 60 65 70	117.5	65	3-pin B.C.	2 6

^{*} Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see

For appropriate control gear for use with fluorescent tubes see Sections 26 and 27.











140w. Sodium Vapour SO/H



1000w. Mercury Vapour MA/H



400w. Mercury Vapour MA/V, MA/U or MA/H



80w. Mercury Vapour MB/U



125w. Mercury Vapour MBW/U

Sodium Vapour

These lamps have been highly praised for streetlighting and certain industrial applications both for their high light output and economy. To ensure complete protection and steady ambient temperature of the inner sodium tube, the latest improvements to the clear glass vacuum jacket include a protective metal cap covering the glass tip, a firm centring device and many other modifications. Our technicians are constantly seeking new ways to improve lamp life and efficiency.

Mercury Vapour

For streetlighting and many kinds of industrial lighting, the high lumen/watt ratio of these lamps has made them a necessity where economical operation and high light output are the most important considerations.

The MA type have refinements of construction which put them in a class alone. They have Double Helix Electrodes where each electrode is designed to protect its emissive pellet; the mercury filling is micrometer controlled to ensure life and light output and the recent introduction of a new arc tube mount obviates point suspension and gives greatly increased resistance to external vibration.

Black Glass-Type MBW/U

The special glass of this Ultra Violet Filter lamp absorbs practically all visible light but allows free passage to U.V. radiation at the 3650Å wavelength. The lamp can be used for excitation of fluorescent materials and has many applications in various scientific and industrial processes.

				Dimension	s	List	Price†
Watts	A.C. Voltages	Cap B.C. Ceramic	Length	Diam,	L.C.L.	Inner Only	Complete with clear outer jacke
			mm.	mm.	mm.	s. d.	s. d.
45)	B22	238	50	140	40 0	61 9
60	100/250	Small)	300	50	170	45 0	69 6
85	100/250]] _{P22}	415	50	230	60 0	89 3
140		B22 (Medium)	518	65	280	65 0	98 0

⁺ Purchase Tax not chargeable.

			1	Dimensions		Lis	
Watts	A.C. Voltages	Сар	Length mm.	Diam, mm.	L.C.L. mm.	Pri	d.
MA/V	(Tubular Bulb, Burnin	g position Vertical unless	arc contro	olled)			
250	100, 110, 120, 130,	G.E.S. (E40/45)	290	51 max.	170	54	0
400	} 200/220, 230/240, 250	(E40/45)	330	51 max.	190	59	0
MA/U	(Tubular Bulb)						
250 400	} 200/220, 230/240, 250	G.E.S. (E40/45) {	290 330	51 max. 51 max.	170 190	57 62	6
MA/H	(Tubular Bulb)						
250 400 1000	200/220, 230/240, 250	G.E.S. (E40/45) { S22/19 at one end	290 330	51 max. 51 max.	170 190	64 71	6
1000)	S22s/21 with locating ring at the other	476±3	40 max.		110	0
MB/U	(Round Bulb, Pearl fin	ish)					
80 125	} 200/220, 230/240, 250	$\begin{array}{c} \text{3-pin B.C.} \\ \text{(B22/31} \times 30) \text{ or} \\ \text{(B22/25} \times 26) \end{array} \Big\{$	160 178	80 90	113 128	39 45	6
MBW	/U (Round Bulb, Ultra	Violet Filter—Black Glas	ss)				
125 {	200/220,	3-pin B.C. (B22/31 × 30) or }	178	90	128	63	0

[†] Purchase Tax not chargeable.

NOTE: The lamp coding letters indicate the following:

M = Main Voltage Mercury Discharge.
 A = Glass Envelope loaded above 10 watts/cm.

of arc length.

= Quartz Envelope loaded below 100 watts/cm.

E = Quartz Envelope loaded above 100 watts/cm.

= Internal Fluorescent Coating.

W = Black Glass-Visible Light absorbing, and cuts off short wave U/V radiation.

Electric Discharge Lamps are designed to operate on standard supply voltages using appropriate lamp auxiliary gear. See sections 26 and 27.





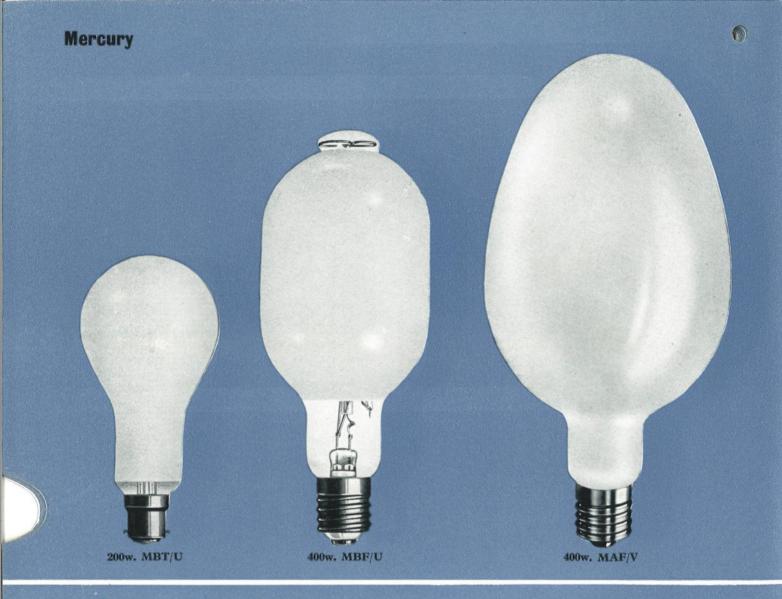




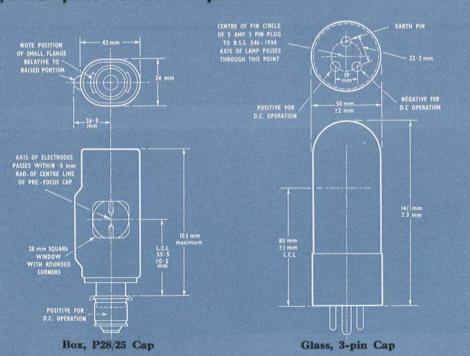
/H = Horizontal Burning. U = Any Position.V = Vertical Cap up.

/D = Vertical Cap down.

[§] These prices are for soft glass envelopes. Hard glass envelopes are also available and the lamp list prices are 250w. 69/- and 400w. 75/-.



ME/D Compact Source Lamps





Mercury Vapour/Fluorescent

The light from the ordinary mercury discharge lamp, because of the small emission of red light, has a distorting effect upon certain colours. It is impossible for instance, to distinguish between reds and various shades of brown. The mercury vapour lamp with fluorescent bulb has been developed to meet requirements where a good degree of colour rendering is important, and further lamp development by our engineers has brought about even better colour rendering.

Mercury Vapour/Tungsten

By using the tungsten filament to limit the current as well as to emit light, a lamp has been developed to provide high output and good colour rendering properties without need for additional lamp auxiliary gear.

Mercury Vapour Compact Source)

These lamps are used extensively in projection microscopes, film printers, gear profile projectors and similar instruments. They have a very bright, steady and concentrated source of light and they are superior to any other form of lighting for many kinds of projection work.

				Dimensions		List	
Watts	A.C. Voltages	Cap	Length mm.	Diam. mm.	Neck Diam. mm.	Pri	
MAF/	V Iso-thermal Bulb						
400	200/220, 230/240, 250	G.E.S. (E40/45)	335	165	52 max	81	6
MBF/	U (Round Bulb)					- 1	
80	[]	3-pin B.C. (B22/31 × 30) or B22/25 × 26)	} 160	80	39	48	6
125	200/220, 230/240, { 250	G.E.S. (E40/45) or 3-pin B.C.(B22/31 × 30)	190 178	90 90	39 39 }	59	0
250‡ 400‡		} G.E.S.(E40/45) {	$220\pm 7 \ 280\pm 6$	89±1·5 115±2	51 max 51 max		0

† Purchase Tax not chargeable. † Tubular Bulb see illustration.

			1	Dimensions		Lis	++
Watts	A.C. Voltages	Cap	Length mm.	Diam. mm.	L.C.L. mm.	Pri	
MBT/U	‡ (Pearl Round Bulb,	Combined Tungsten ar	d Mercury	Vapour)			
200 {	200, 210, 220, 230, 240, 250	E.S.(E27/25) or B.C.(B22/25 \times 26)	} 178	90 {	D125 F133	}50	(
MAT/V	(Tubular Bulb, Com	bined Tungsten and Me	rcury Vapou	ır)			
300	200, 210, 220, 230, 240, 250	G.E.S. (E40/45)	{ 285±15	D50±1 F85±1 D60+1	max. D160 F255 D202	60	0
500	250, 240, 250	(E40/45)	355±20	F100±1	F325	70	0

Purchase Tax not chargeable. Inside Silica-coated Lamps are also available, 9d. List Extra. —Discharge Portion, F—Filament Portion.

	1 80 1 8			Dimensions			List†
Watts	A.C. or D.C. Voltages	Description	Cap	Length mm.	Diameter mm.	L.C.L. mm.	Price s. d.
ME/I 250	O (Concentrate	Glass Envelope	Mercury 3-pin	Vapour)	50±2	85±1	310 (
250 250	200/250	Box Type Box Type	3-pin P28/25 3-pin	103 max.c 130+3a	43×34b 64×55	55.5×0.5 80+1	430 430

† Purchase Tax not chargeable.
(a) Excluding Pins. (b) With a 5.0 mm. projection on the major axis opposite the L.C.L.
(c) From cap flange to end of 'case'.

NOTE: The lamp coding letters indicate the following:

M = Mains Voltage Mercury Discharge.

A = Glass Envelope loaded above 10 watts/cm.

of arc length.

= Quartz Envelope loaded below 100 watts/cm.

D = Vertical cap down. of arc length. = Quartz Envelope loaded above 100 watts/cm. of arc length.

= Internal Fluorescent Coating.

W = Black Glass-Visible Light absorbing, and cuts off short wave U/V radiation.

Electric Discharge Lamps are designed to operate on standard supply voltages using appropriate lamp auxiliary gear. This does not apply to MBT/U or MAT/V lamps. See Sections 26 and 27.







/H = Horizontal Burning.

U = Any Position.

V = Vertical cap up.

Projector & Photographic

To produce flawless definition on the screen, the modern cine projector requires a first class, precision-built lamp. The slightest inaccuracy of filament construction or assembly will result in distortions which cannot be corrected.

This organization has had many years' experience of the manufacture of projector lamps and are able to ensure that only tried and tested methods and materials are used in their production. Our lamps conform in every way to the high standards associated with all our products; with our lamp in your projector you may be sure of the best possible results since the lamp has been built and prefocused to the most exacting standards.

The lamps on the following pages are for use not only with cine projectors but many kinds of lighting apparatus where the light source is either reflected in a beam or through lenses.

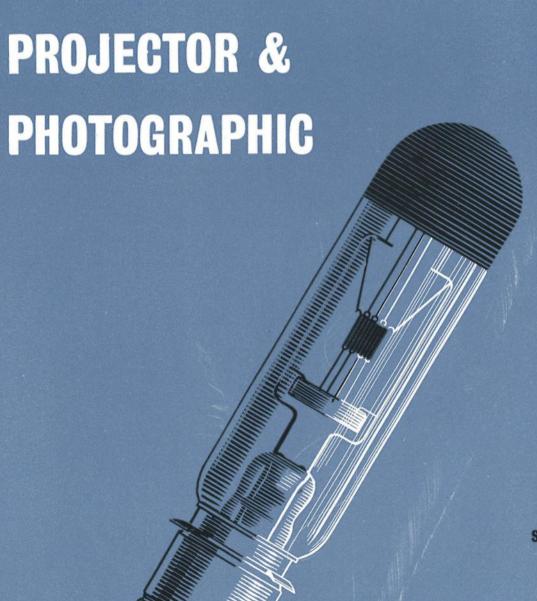
- Class A. Lamps used for 'still' projectors or cine, visual aid etc.
- Class B. These are used in floodlights for stage lighting and similar applications.
- Class E. For use in episcopes or epidiascopes for which they have been especially designed.
- Class F. Low wattage lamps specially designed for micro-projection purposes.
- Class G. Low voltage lamps designed for sound reproduction.

Photographic

Filament Lamps. In section 14 are listed lamps for every need whether it be for enlarger flood photography or for studio work.

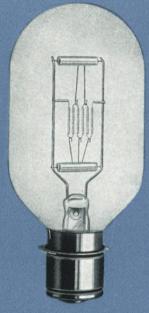
Xenon Electronic Flash Tubes. These tubes belong to the field of electronic flash photography. Each tube has a life of several thousand flashes fired from a power-pack and each flash lasts for about 1/5000th of a second.

Marca lamps stay brighter longer



Sections 11-16





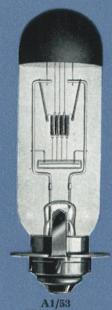
A1/8 500w, 110v. (64 mm. dia. bulb)



A1/127 200w. 115v. (25 mm. dia. bulb)



A1/7 500w. 115v. (32 mm. dia. bulb)

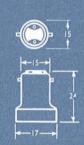


A1/53 750w, 110v, (38 mm, dia, bulb)

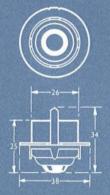
Dimensions in millimetres



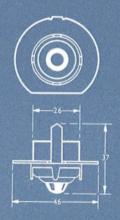
S.C.C. BA.15s/21



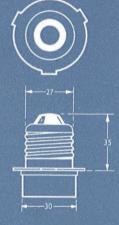
S.B.C. B15d/24 × 17



B & H S26s/25 BH38



B & H S26s/25 BH46



3-fin ring



Pathe 'T' piece



Prefocus P28/25





Prefocus P15/19



Med. Bi-post



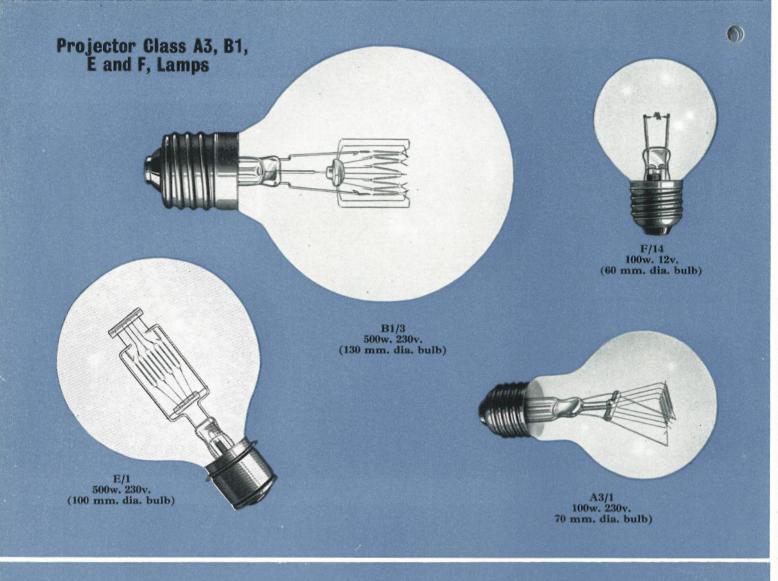
Bi-post

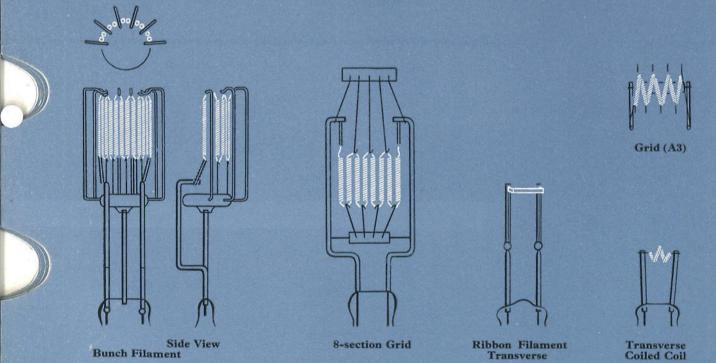
T	1 -	1 Burning position, c	Objec-				I	Dimensio	ons	enconses en	Lis
Lamp Ref. No.	Watts	Voltages	tive Life Hrs.	Сар	Cooling	Finish	Length mm.	Diam. mm.	L.C.L. mm.	Special Features	Pri t £ s.
1/ 72		20	100	Pathe	Natural	Clear	57上3	15±1	25 ±0·5	_	5
$\frac{1}{131}$		20 19	100	M.E.S. M.E.S.	"	55	57±3 57±3	15±1 15±1	36 approx. 35.5 ± 2	Ē	5 5 5 8 8
1/ 1	25	50	50 50	S.C.C.	33	Black Top	57 ± 3	16±1	29 ±2 34·5±2	_	5
1/ 2 1/ 19	50 50	100, 115 100, 110, 115	50	S.C.C. S.B.C.	33	33	76±3 76±3	25 ± 1 25 ± 1	34.5 ± 2	=	8
1/132		30	50	E.S.	,,	"	76±5	25±1	34·5±2	-	16
1/ 4	100	{ 12, 100, 110, 115, 210, 220, 230, 240, 250 }	50	Prefocus	23	>>	133±7	25±1	55·5±0·5	_	15
/135	100	24	100	S.B.C.	. ,,	Clear	75±3	25±1	55 ±2 55·5±0·5		16
1/ 3	100	30 ∫ 100, 115, 210, \	50	Prefocus	**	Black Top	133 ± 7	25±1	55·5 ± 0·5	Offset Filament	15
1/121	100	230, 240, 250	50	S.B.C.	>>	,,	76±3	25±1	34·5±2	() 2-3)	16
1/ 23	100	{ 12, 100, 110, 115, 200, } { 210, 220, 230, 240, 250 }	50	E.S.	,,	1)	128 ± 7	25±1	75 ±5	<u></u>	14
1/136	108	6	50	E.S.	23	Clear	128 ± 7	32±1	75 ±5	Offset Filament	1 19
1/167	150	∫ 115, 210, }	50	S.C.C.	Forced	Black Top	87±5	25 ± 1	34·5 ± 0·5	_	1 1
	20000000		23638501	20002000000	rorcca	Diack Top	OVER YOUR DAGES	2707277-1-176	DOVICED STORY	920-322	10000 100
1/168	150	230, 240, 250	50	S.B.C.	,,,	,,	87±5	25±1	34·5±0·5	14 113	1 1
1/175	150	\[\begin{cases} 115, 210, 220, \\ 230, 240, 250 \end{cases} \]	50	Prefocus	Natural	,,	133 ± 7	25±1	55·5±0·5		1 2
1/107	150	20	25	S.C.C.	Forced	Clear	87±5	25±1	34·5±2		1 6
1/104	150	12	50	Prefocus	Natural	Black Top	133±7	25 ± 1	55·5±0·5	Solid Source	1 0
1/151	200 200	50 50	50 50	S.C.C. E.S.	33	>>	$87 \pm 5 \\ 128 \pm 7$	$\begin{array}{c} 25\pm 1 \\ 32\pm 2 \end{array}$	34·5±2 75 ±5		1 7
1/ 13	200	50, 110	50	Prefocus	33	33	133 ± 7	32 ± 2	55·5 ± 0·5	-	1 9
1/113	200	50	50	Prefocus	,,	33	133 ± 7	32±2	55·5±0·5	Offset Filament	1 9
1/80	200	100	25	3-pin B.C.	Forced	Clear	82 ± 3	32±2	51 ±0.5	Cap-up Burning	1 11
1/ 25	200	{ 100, 115, 210, }	25	S.B.C.	Forced	Black Top	87±5	25±1	34·5±2		1 2
	900	230, 240, 250 { 100, 115, 210, {	25	800	1000		200	1,122,00	F-100000	Olembri .	1 2
l/ 26 l/ 27	200	230, 240, 250	25 25	S.C.C. Pref. S.C.C.	,,,	33	87±5	25 ± 1 25 ± 1	34·5±2 31·5±0·5	000000	1 3
1/127	200	100, 115 100, 115	25	Pref. S.B.C.	33	33	87 ± 5 87 ± 5	25±1 25±1	31.5 ± 0.5	=	1 3
1/ 83	200	100, 115	50	S.B.C.	Natural	>>	87±5	32±1	34·5 ± 0·5	O.T Fil	1 3 1 2 1 3
l/ 81 l/ 85	200 250	110 50	50 50	Pathe Small Bell & Howell	Forced	>>	133 ± 7 128 ± 7	32±1 32±2	58 ±0·5 59 ±0·5	Offset Filament	1 3
1/ 14	250	50, 100, 110	50	E.S.	Natural "	»»	128±7	32±2	75 ±5	=	1 7
1/ 15	250	50	50	Prefocus	>>	>>	133±7	32±2	55·5±0·5	_	1 9
1/ 5	250	$\left\{\begin{array}{c} 50, 55, 100, \\ 110, 115, 200, 210, \\ 220, 230, 240, 250 \end{array}\right\}$	50	Prefocus	,,	,,	133±7	32±2	55·5±0·5	_	1 7
1/106	250	220, 230, 240, 250 12, 24	50	Prefocus		>>	133±7	32±1	55·5±0·5	Solid Source	1 13
1/ 38	300	100, 115	25	Pref. S.C.C.	Forced	33	100±5	25 ± 1	31·5±0·5	_	1 14
1/ 36	300	100, 115	25	Pref. S.B.C.	23	,,	100 ± 5	25±1	31·5±0·5		1 14
1/ 37	300	{ 100, 115, 210, 230, 240, 250 }	25	S.C.C.	>>	33	100±5	25±1	34·5±2	_	1 13
1/ 33	300	100, 115	25	S.B.C.	23	33	100±5	25±1	34·5±2	_	1 13 1 14
1/ 6 1/154	300	100, 110, 115 210-30-40-250	25 50	Prefocus Prefocus	>> >>	»	133±7 133±7	32±2 32±2	55·5±0·5 55·5±0·5	=	1 14
1/86	300	100, 110, 115	25	Large Bell & Howell	>>	>>	128 ± 7	32±2	59 ±0.5	Bi-plane Filament	1 14
1/ 39 1/ 87	400 400	110, 115 110, 115	25	Prefocus	>>	>>	133±7	32±2	55.5 ± 0.5	Bi-plane Filament Bi-plane Filament	2 2 2 2 2 2
1/159	400	110, 115	25 25	Small Bell & Howell Large Bell & Howell	"	"	$128\pm 7 \\ 128\pm 7$	32±2 32+2	59 ±0·5 59 ±0·5	Bi-plane Filament	2 2 2 2 2 2
1/109	400	24	50	Prefocus	Natural	Clear	133 ± 7	32±2 64±2	55·5 ± 0·5	Solid Source	2 9 2 13
1/ 88	450	15 100, 110, 115, 200, \	100	Special 2-prong	>>	,,,	195	79 & 30	7.55 TOVA	Cap-up Burning	1 12
1/42	500	210, 220, 230, 240, 250	50	E.S.	,,	33	128±7	64±2	75 ±5	_	A 1/2
1/ 8	500	f 100, 110, 115, 200, \	50	Prefocus	,,	22	133±7	64±2	55·5±0·5	_	1 13
	Date:	110, 220, 230, 240, 250	1596500	2 -1- P.C	10000	8000	The second	100000000000000000000000000000000000000	SEE STREET !	∫ Offset, Bi-plane \	9 4
1/46	500	110	25	3-pin B.C.	Forced	>>	142 max.	38 max.	95		2 4
1/47	500	\[\begin{cases} 110, 115, 200, 210, \\ 220, 230, 240, 250 \end{cases} \end{cases} \]	25	Small Bell & Howell	Forced	Black Top	128±7	32±2	59 ±0·5	Bi-plane Filament	2 4
1/160	500	∫ 110, 115, 200, 210, \	25	Large Bell & Howell			128±7	32±2	59 ±0·5	Bi-plane Filament	2 4
		220, 230, 240, 250 110, 115, 200, 210, {	100,000		23	>>					Carried Access
1/ 7	500	220, 230, 240, 250	25	Prefocus	>>	"	133±7	32±2	55·5±0·5	Bi-plane Filament	2 4
1/153		110, 115 100, 110, 115, 200,	25	3-fin Ring	,,	Clear	223	38 max.	3656	Bi-plane Filament	2 5
1/ 43	500	210, 220, 230, 240, 250	50	G.E.S.	Natural	>>	135 ± 10		90 ±5	Cap-up Burning	1 12
1/ 52	750	110	25	3-fin Ring	Forced	>>	145±8	38 max.	81	Offset Bi-plane Fil. Cap-up Burning	2 12
1/ 53	750	{ 110, 115, 200, 210, }	25	Large Bell & Howell	,,	Black Top	128±7	38±2	59 ±0·5	Bi-plane Filament	2 11
	1100000	220, 230, 240, 250 110, 115, 200, 210, {	(10,500)				27.85 Sec. 200.00 a. 7.			LIFERY A CONTROL TO MAKE THE CONTROL	Section 200
1/ 9	750	220, 230, 240, 250	25	Prefocus	>>	,,	133±7	38±2	55·5±0·5	Bi-plane Filament	2 11
1/111	900	24, 30	50	G.E.S.	Natural	Clear	230 ± 10	64±2	120 ±5	=	2 6 2 9
1/ 10		30	50 25	Mogul Prefocus	,, Forced	Black Top	235 ± 10		84 ±0.5	Bi-plane Filament	2 19
1/ 92		100 100, 110, 115, 200,		Large Bell & Howell			175±5	38±2	78 ±0.5	Di-plane Phament	2 2
1/ 11		210, 220, 230, 240, 250	50	Mogul Prefocus	Natural	Clear	235±10	64±2	84 ±0.5		SOM SH
1/57	1000	{ 100, 110, 115, 200, 210, 220, 230, 240, 250 }	50	G.E.S.	,,	,,	230 ± 10	64±2	120±5	_	1 19
1/ 59	1000	f 110, 115, 200, 210, \	25	Prefocus	Forced	Black Top	133±7	38±2	55·5±0·5	Bi-plane Filament	2 19
		220, 230, 240, 250 { 100, 115, 210, }	3343945	\$2500 STROMAN AND AND AND AND AND AND AND AND AND A			The second contracts				Contract Contract
1/91	1000	220, 230, 240, 250	25	Large Bell & Howell	,,	>>	128±7	38±2	59 ±0.5	Bi-plane Filament	2 19
		f 110, 115, 200,		The Assertance of the Control of the		0.0000000000000000000000000000000000000	ETPERSONAL CONTROLS		I personal con community		2 19

[†] Purchase Tax not chargeable. NOTE: When ordering by Lamp Reference Number be sure to state voltage required.



Mazda lamps stay brighter longer





Class A 3

These lamps are used extensively for various stage lighting purposes in theatres and cinemas, and have also a wide application in photographic and film studios. They have many uses where a medium lamp life and light output is required. They are intended for burning in a horizontal position, but slight variations of burning angle will not affect the life.

Class B 1

These lamps are particularly suitable for use with parabolic mirrors and they are employed generally for stage and theatre lighting and the floodlighting of tall buildings or hoardings, etc. They have concentrated bunch filaments of small area and a comparatively long life.

Class B 2

For similar applications applying to B 1 lamps, B 2 have a longer L.C.L. and can be burned in any position.

Class E, Epidiascope

Episcope and epidiascope apparatus for the projection and magnification of small objects, lantern slides etc., all use this type of lamp. They are also suitable for spotlight and shop window projectors which have to be rotated through wide angles.

Class F, Micro-projection

Class F lamps have been specially designed to the requirements of micro-projection. Being of low voltage, they can be conveniently operated from batteries or from the mains through a suitable resistance or transformer. Microscope illumination, small home cine projectors, sound recording are but a few of the many purposes for which these lamps may be used.

Lamp					Dimensions		Objec-	Li	
Ref. No.	Watts	Voltages	Cap	Length mm.	Diam. mm.	L.C.L. mm.	tive Life Hours	Pri	d.
A3 (1	Burning p	oosition, Horizontal)							
A3/1	100	110, 200, 210, { 220, 230, 240, {	E.S.	115±10	70±2	95±5	300	14	3*
A3/2	250	250	E.S.	160±10	$90\!\pm\!2$	120±5	300	26	6*
B1 (1	Burning p	oosition any, except w	ithin 45° of	cap up)					
B1/1	100	115,	E.S.	115 ± 10	80±2	75±5	800	12	0*
B1/2	250	200, 210, 220,	E.S.	$ 125 \pm 10 $	95 ± 2	75±5	800	23	3*
B1/3	500	230, 240, 250	G.E.S.	$ 180 \pm 10 $	130 ± 5	115 ± 5	800	30	6
B1/4	1000	250, 240, 250	G.E.S.	$ 180 \pm 10 $	130 ± 5	115±5	800	39	9
B2 (1	Burning p	oosition—any)							
B2/1	500 {	115, 200, 210 220, 230, 240, 250	G.E.S.	267±8	130±5	202±7	800	30	6
B2/2	1000 {	115, 200, 210, 220, 230, 240	G.E.S.	300±9	150±5	225±8	800	39	9
E (B	urning po	osition any, within 45°	of cap dov	vn)					
E /1	500 {	115, 200, 210, 220, 230, 240, 250	Prefocus	135±10	100±5	60±0·5	100	37	6
E/3	500 {	110, 200, 210, 220, 230, 240, 250	} E.S.	135±10	$100\!\pm\!5$	85±5	100	36	6

^{*}Purchase Tax must be added to the prices of these lamps only. For the exact amount of purchase tax to be added see TABLE A on the card insert.

Gla	ss F									
Lamp			Objec-			Dimension	s	Special	Lis	
Ref. No.	Watts	Voltages	tive Life Hours	Cap	Length mm.	Diam. mm.	L.C.L. mm.	Features	Pri s.	d.
F/30	8	4	100	S.E.S.	62±5	35±2	52±5	_	6 3	0
F/ 5	9	18	100	M.E.S.	36 ± 3	18 ± 1	25±2	_	3	6
F/ 8	12	12	100	S.B.C.	57±5	37 max.	40±3		5	0
F/29	18	6	100§		46 ± 2.5	25 ± 1	28.5 ± 1.5	_	8	0
F/24	24	6	100	E.S.	57 ± 5	38±2	47±5	_	5 5 5	0
F/10	24	6 or 12	100	S.E.S.	60±5	38±2	50±5 44+5		5	0
F/ 3	24	12	100	S.B.C.	60±5	38±2		85.00	5	0
F/11	24	12	100	S.E.S.	60±5	38±2	41 ± 3	_	8	Č
F/25	30	6	25	E.S.	63 ± 5	35 ± 2	53±5 47+5		8	Ö
F/ 1	30	. 6	25	S.E.S.	57 ± 5	35 ± 2	47±5 40±5		8	ò
F/41	30	6	25	S.B.C.	58±5	35 ± 2	53±5	Solid Source	8	ò
F/54	30	6	100	S.C.C.	60±5	$\frac{38\pm 2}{38+2}$	53±5 53±5	Solid Source	8	Č
F/55	30	6	100	S.E.S.	60±5	38±2	56±5	Solid Source	8	ò
F/56	30 48	6	100	E.S.	65 ± 5	35 ± 2	40+3	Solid Source	10	ì
F/ 2	48	6	100	S.B.C.	60 ± 5	35 ± 2 $35+2$	49+2		10	ì
F/52 F/7	48	6 8	100	S.E.S. S.E.S.	62 ± 3	40+3	$\frac{49\pm 2}{41+3}$		10	i
	48	12	100		60±5	50±3	40±3	-10	7	
F/ 4	48	12	100	S.E.S. E.S.	$70\pm 5 \\ 70\pm 5$	50±2 50+2	38±5	_	7	:
F/13 F/42	48	12	100 100	Prefocus	70 ± 5 75 ± 5	50±2 50+2	18·5+0·5		7	:
F/38	48	12	100	S.B.C.	60+5	38±2	40+3		7	3
F/57	48	6	100	S.C.C.	60 ± 5	38±2	53+5	Solid Source	10	ì
F/58	48	6	100	S.E.S.	60±5	38±2	53±5	Solid Source	10	(
F/59	48	6	100	E.S.	60±5	38+2	53+5	Solid Source	10	(
F/ 9	48	8	100	S.E.S.	64+4	39.5+2	45±2	—	10	(
F/27	72	6	50	E.S.	128 ± 7	32 ± 1	75±3		14	:
F/14	100	12	100	E.S.	85±7	60+2	55±5		16	(
F/15	108	6	50	Prefocus	139 ± 7	32+2	65+0.5	Ribbon Fil. Ax.	41	(
F/16	108	6	50	E.S.	135 ± 1	32 + 2	86+3	Ribbon Fil. Ax.	40	(
F/46	108	6	50	Prefocus	139 ± 7	32 + 2	65±0·5	Ribbon Fil. Hor.	41	(
F/47	108	6	50	E.S.	135±4	32 ± 2	86±3	Ribbon Fil. Hor.	40	(

NOTE: If ordering by Lamp Reference Number please be sure to state voltage required.

§ At 6.5 volts.







^{*} Purchase Tax must be added to the prices of these lamps. For the exact amount of purchase tax to be added see TABLE A on the card insert.

Projector Class G and High Wattage Lamps





1000w. 230v. Theatre Spotlight

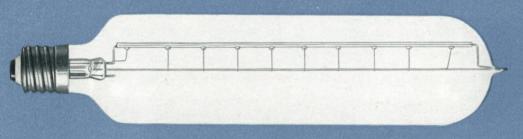


100/150w. 12/250v. Hospital Operating Theatre



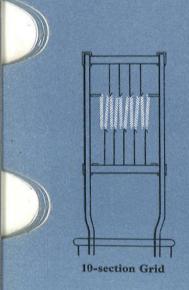
Class G Exciter 0.75 amp. 4v. G/29

Transverse Coil

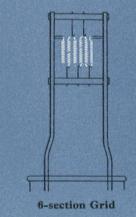


500w. 250v.

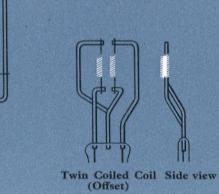
Tubular Floodlight



Axial Coil









Class G, Exciter

For reproduction in sound film apparatus a low voltage lamp of high efficiency and robust construction is necessary. The Class G lamps listed here are ideal for this class of work and are manufactured with extreme accuracy and careful attention to such details as the centring of the filament and its luminous intensity so as to comply with the rigid requirements of sound film projection.

Theatre Spotlight

These lamps have a Grid filament of staggered construction. They are used particularly for spotlights in theatres or cinemas but they can be used for similar applications where a suitable reflector and housing will make full use of the compact, bright light source.

Tubular Floodlight

There are many instances where a wide-angle flood beam is required, such as in film studios where the Tubular Floodlight is used in conjunction with a trough reflector to give a fan shaped beam.

Hospital Operating Theatre

This double filament lamp has been designed for use in the operating theatre where mains supply faults must not interfere with the surgeon's work; the auxiliary filament gives 100-watt output on a 12-volt emergency supply.

Lamp	82 00	754 Feb 75			Dimensio	ns	Objective	List
Ref. No.	Amps.	Voltages	Cap	Length mm.	Diam. mm.	L.C.L. mm.	Life Hours	Price † s. d
G/18 G/31 G/27 G/19 G/29 G/ 5 G/16 G/37 G/ 6 G/37 G/ 7 G/36 G/11 G/12 G/22 G/23 G/13 G/13 G/23 G/13 G/23 G/23 G/23 G/23 G/23 G/23 G/23 G/2	0·2 0·75 0·75 0·75 0·75 1·0 1·0 2·0 2·0 4·0 5·0 5·0 6·0 6·5 7·5 7·5 7·5	7 4 (Axial Fil.) 4 (Trans. Fil.) 6 (EL No. 9) 6 8) 8 (EL No. 3) 8 6 10 (EL No. 4) 10 10 (EL No. 5) 4 10 (EL No. 6) 10 (EL No. 7)	Prefocus S.C.C. Prefocus S.B.C. Prefocus S.C.C. Prefocus S.C.C. S.C.C. Prefocus S.C.C. S.C.C. S.C.C. Prefocus S.C.C. S.C.C. Prefocus S.C.C. S.C.C. Prefocus S.C.C. S.C.C. Prefocus S.C.C. S.C.C. Pathe Collar S.C.C. Pathe Collar S.C.C. Prefocus S.C.C. S.C.C. S.C.C. Prefocus S.C.C. S.C.C. Prefocus S.C.C. S.C.C. Prefocus S.C.C. Prefocus S.C.C. S.C.C. Prefocus S.C.C. S.C.C. Prefocus S.C.C.	57±3 48±3 57±3 48±3 57±3 40±3 75±3 75±3 75±3 75±3 75±3 75±3 75±3 75	$\begin{array}{c} 16\pm 1\\ 25\pm 1\\ 16\pm 1\\ 15\pm 1\\ 15\pm 1\\ 15\pm 1\\ 18\pm 1\\ 18\pm 1\\ 25\pm 1\\ 25\pm 1\\ 25\pm 1\\ 18\pm 1\\ 25\pm 1\\ 18\pm 1\\ 25\pm 1$	28·5±0·5 28·5±0·5 28·5±0·5 28·5±0·5 21·5±0·75 28·5±0·5 21·5±0·5 41±1 37·3±0·5 44±1 37·3±0·5 44±1 37·3±0·5 44±1 37·3±0·5 44±1 30±0·5 31·5±1 41±0·5 41±1 37·3±0·5 44±1 37·3±0·5 44±1 37·3±0·5 44±1 37·3±0·5 44±1 37·3±0·5 44±1 37·3±0·5 44±1 37·3±0·5	100 50 50 50 50 50 100 100 100 100 100 1	7 8 7 7 8 7 7 11 7 8 7 8 7 8 10 9 11 9 11 9 11 9 11 9 11 9 11 9 11

[†] Purchase Tax not chargeable.

r					Dimension	s		
Lamp Ref. No.	Watts	Voltages	Cap	Length mm.	Diameter mm.	L.C.L. mm.	Objective Life Hours	Prices.
T/3	250	210, 230, 240, 250	Prefocus	119±5	76±2	55·5±0·5	200	24
T/1	500	$\left\{\begin{array}{c} 115, 120, \\ 230, 240, 250 \end{array}\right\}$	Prefocus	130 ± 10	95±5	55.5 ± 0.5	200	33
T/2	1000	210, 230, 240, 250	Mogul Prefocus	190±10	130±5	84±0·5	200	42

[†] Purchase Tax not chargeable.

Lamp	Watts	Voltages		Dime	nsions	Objective	List† Price s. d.	
Ref. No.			Cap	Length mm.	Diameter mm.	Life Hours		
FL/1 FL/2	500 {	115 200-10-20-30-40-250	G.E.S. {	355±10 390±10	90±2 90±2	1000 1000	46 3 59 6	

[†] Purchase Tax not chargeable.

			E		Dimensions	Objective	List*		
Filament	Watts	Voltages	Cap	Length mm.	Diameter mm.	L.C.L.	Life Hours	Price s. d	
Emergency Mains	100 150	12 210-30-40-250	Special Screw Contact	215	121 {	135 160	100 1000	34	3

^{*} Purchase Tax is chargeable on the price of the Hospital Operating Theatre lamp. For the exact amount of purchase tax to be added, see TABLE A on the card insert.







2000w.

10,000w.



Flood and Enlarger

Photoflood and Photographic Pearl lamps illuminate the subject with evenly distributed brilliance; the 275w. B.C. lamp is fitted with fuses for use in ordinary household sockets. The 500w. Photographic Pearl lamp is available with the ever popular round bulb.

The range of enlarger lamps include the Inside Silica Coated lamps which give a bright well-diffused light. The high wattage, spot-frosted has a clear bulb with the filament obscured by a small circle of frosting.

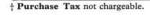
Studio

All studio lamps supplied by this company fully meet the exacting requirements of film production whether sound or silent, in black and white, or in colour. They are silent in operation. Their light is definite and constant in colour, bringing out the full possibilities of the various film emulsions. They have concentrated light sources of high intrinsic brilliancy, giving the powerful light concentration so necessary for efficient spotlight work, and their absolute reliability has resulted in their adoption almost exclusively by the British film industry.

Lamp				Dimen	Objec-	Li		
Ref. No.	Watts	Voltages	Cap	Length mm.	Diam. mm,	tive Life Hours	Pri	d.
Photo	o-flood (Pearl)						
PP/1	275	\[\begin{cases} 100/110, 200/210, \\ 220/230, 240/250 \end{cases} \end{cases} \]	B.C. or E.S.	105±3·5	60±1	2	2	6
PP/2	500	$\left\{\begin{array}{c} 100/110, 200/210, \\ 220/230, 240/250 \end{array}\right\}$	B.C. or E.S.	160	80	10	6	6
Photo	graphic	Pearl						
_	500	110, 210, 230, 250	E.S.	175	100	100	22	0
Photo	ographic	Enlarger (Pearl)						
_	100	24	E.S.	125±3·5	70±1	100	13	9
Photo	ographic	Enlarger (Inside Silica	a-coated)					
-	150	110, 210, 230, 240, 250	B.C. or E.S.	125±3·5	68±1	100	3	9
Photo	graphic	Enlarger (2 in. Spot I	rosted)					
_	400	110, 210, 230, 250	E.S.	253	110	100	27	6

^{*} Purchase Tax must be added to the prices of these lamps. For the exact amount of purchase tax to be added, see TABLE A on the card insert.

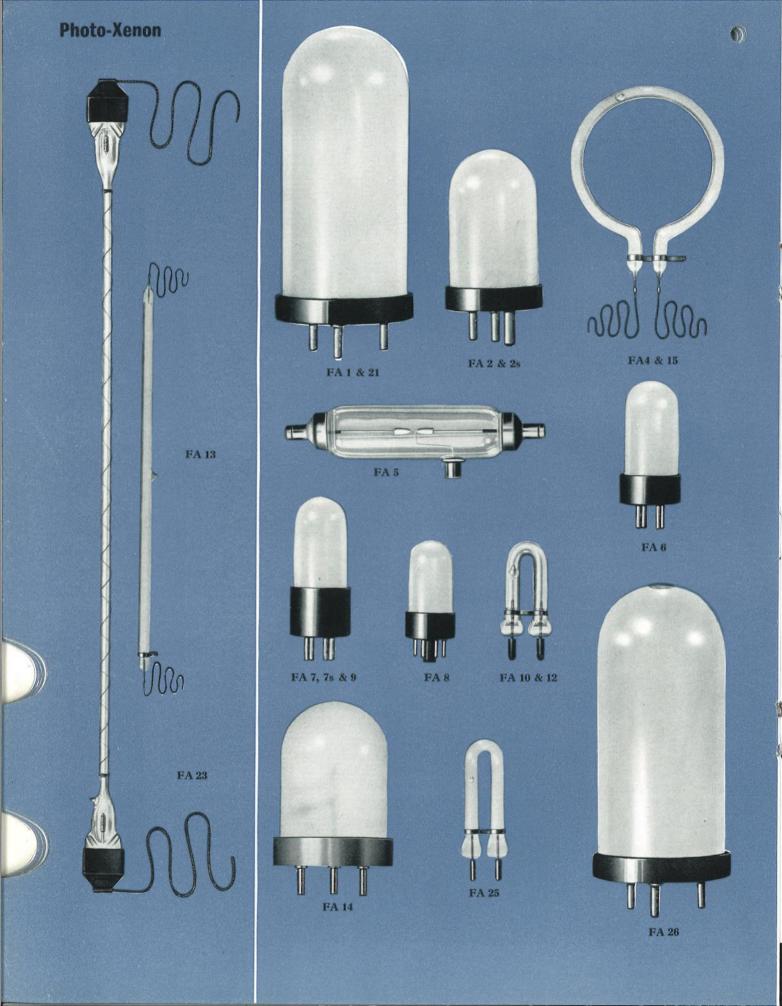
						Dimensions	Average I	List†			
Lamp Ref. No.	Watts C		p	Finish	Length mm.	Diameter mm.	L.C.L. mm.	at 115 volts	at 230, 240, 250 volts	Pric £ s.	
Class C	P for Col	our Phot	ography	For us	e with colou	r film at 320	00°K.	Voltages	115, 230, 2	240, 250)
CP/ 1 CP/ 2 CP/ 8 CP/11 CP/ 3 CP/ 4 CP/12 CP/13 CP/14 CP/15	275 500 500 750 1000 1500 2000 5000 10,000 20,000	B.C. o B.C. o Prefe Prefe G.E G.E Bi-r Bi-r Spe	r E.S. ocus ocus ocus o.S. ost oost	Pearl Pearl Clear Clear Pearl Pearl Clear Clear Clear Clear	$\begin{array}{c} 105 \pm 3.5 \\ 160 \pm 4.5 \\ 133 \pm 7 \\ 133 \pm 7 \\ 300 \pm 9 \\ 335 \pm 9 \\ 232 \pm 6 \\ 335 \pm 6 \\ 490 \text{ max.} \\ 693 \pm 10 \\ \end{array}$	$\begin{array}{c} 60\pm 1 \\ 80\pm 1 \\ 64\pm 2 \\ 64\pm 2 \\ 150\pm 1\cdot 5 \\ 170\pm 1\cdot 5 \\ 152\pm 2 \\ 203\pm 2 \\ 300\pm 2 \\ 380\pm 5 \end{array}$	$\begin{array}{c} 80 \pm 3 \\ 120 \pm 3 \cdot 5 \\ 55 \cdot 5 \pm 0 \cdot 5 \\ 55 \cdot 5 \pm 0 \cdot 5 \\ 225 \pm 8 \\ 250 \pm 8 \\ 127 \pm 2 \\ 165 \pm 2 \\ 254 \pm 2 \\ 420 \pm 10 \\ \end{array}$	5 to 8 25 30 30 30 50 50 75 100	5 to 8 15 15 20 20 25 50 75 100 100	1 13 2 14 1 15 5 12 18 0 33 0 80 0	6 6 8 0 1 0 7 6 6 0 2 6 0 0
Lamp Ref. Wa		Vatts	Cap		Length mm.	Dimensions Diameter L.C.L. mm.		Objective Life Hours		List† Price £ s. d.	
Class S,	suitable fe	or 'Black	and Wh	ite' repro		1		Voltage	es 115, 230, 2	27. 77.92	100000
S/4 S/1 S/2	2	1000 2000 5000	Bi-p Bi-p Bi-p	ost	$232\pm 6 \\ 232\pm 6 \\ 335\pm 6$	$\begin{array}{c c} 152.5 \pm 2 \\ 152.5 \pm 2 \\ 203 \pm 2 \end{array}$	127 ± 2 127 ± 2 165 ± 2		100 100 100	4 6 5 12 18 0	0 6 0













Xenon Flash Tubes, Electronic Flash has been for a long time, the most suitable and efficient form of flashlight photography for the professional and scientific photographer. Now, with easily portable and comparatively inexpensive equipment, not only has its use become more widespread, but the amateur finds it within his capabilities.

FA 1. A high-power flash tube for studio use. Provision is made to incorporate a modelling lamp within the arc tube jacket.

FA 2. A flash tube of high output, used and specially suitable for studio and professional units.

FA 2S. Designed specially for stroboscopic applications giving very stable operation with high efficiency over a wide range of frequency.

FA 4. A circular type flash tube suitable for mounting round the camera lens or objective. For specialized photography such as in photographing deep cavities, etc.

FA 5. A compact source flash tube which may also be operated to give a steady source of light to enable an optical system to be adjusted. The tube will operate from a condenser discharge or alternatively it may be pulsed direct from the supply mains. It has many scientific applications.

FA 6. One of the most popular flash tubes, it is widely used in many of the portable flash units today, and is suitable for the amateur.

FA 7. This tube gives efficient light output over the range of 100-200 watt seconds.

FA 7S. A lamp for stroboscopic applications.

FA 8. A miniature flash tube designed for low-voltage operation.

FA 9. A tube suitable for the larger portable flash units. It has a high efficiency when operated at 100-200 wattseconds.

FA 10 and FA 12. Designed especially for the amateur, these tubes have low operating voltage.

FA 13. A tube for scientific use and for photographic printing and similar

FA 14. Suitable for studio use, this tube has provision for a modelling light.

FA 15. Similar in design and application as FA 4 this tube has an operating voltage of 1000.

FA 21. Similar to FA 1 and also having provision for a modelling lamp, this tube has an operating voltage of 1000.

FA 23. A bare quartz lamp suitable for use with photo-chemical processes.

FA 25. A tube for low voltage amateur work and professional portable equipment. It has integral pin construction.

FA 26. A high power studio lamp with a quartz spiral dissipating 4000 joules and having provision for a modelling lamp.

X	enon	Elect	ronic	Flash	Bu	lbs								
	Dimen	s. mm.	Max. Rating	Approx. Minimum		ating tage	*Rate of	Dur	ash ation o-sec.)	Capacitance			List	
No.	Length Excl'ng Pins	Diam, of Glass	watts × secs.	Trigger Voltage kV	Max.	Min.	Flash at Maximum Dissipation	Above	Above ½ peak	in µf at normal operating volts	Base	(N	Pric o P. s.	.7
FA 1	150±7	66±4	1000	8	2700	2000	1 in 10 sec.	1250	600	320	3-pin Special	10	0	
FA 2	90±5	46±2	500	8	2700	2000	1 in 10 sec.	870	300	160	3-pin 5-amp.	5	0	
FA 2s	90±5	46±2	-	8	2500	1500	300 per sec.	_	_	1	3-pin 5-amp.	5	0	
FA 4	70 mm. dia. of	inside circle	300	3	2700	2000	1 in 10 sec.	440	180	96	Flexible Leads	3	18	-
FA 5	148±4 (overall)	32 max.	150	10	2000	1000	1 in 10 sec.	250	65	П	0·359″ Ferrules	10	10	
FA 6	70±2	31±2	100	3	1100	500	1 in 10 sec.	410†	180†	200	UX 4-pin	4	10	
FA 7	80±2	31±2	100-200	3 .	2700	2000	1 in 10 sec.	800	290	64	UX 4-pin	5	0	
FA 7s	80±2	31±2	-	3	2500	1500	300 per sec.	_	-	- ,	UX 4-pin	5	0	
FA 8	55±2	25±1	75	4.5	500	250	1 in 10 sec.	800†	270†	600	Internat. Octal	4	0	
FA 9	80±2	31±2	200	3.5	1100	500	1 in 10 sec.	2000†	770†	400	UX 4-pin	5	0	
FA 10	50±2 (overall)	_	100	3.5	270	200	1 in 10 sec.	2620†	865†	2750	2-pin 2-amp.	2	10	
FA 12	50±2 (overall)	_	50	3.5	200	145	1 in 10 sec.	3200†	1200†	3100	2-pin 2-amp.	2	10	
FA 13	290±3	_	300	3.5	2700	2000	1 in 10 sec.	440	180	96	Flexible Leads	4	0	
FA 14	92±5	66±4	200	3.5	1100	500	1 in 10 sec.	2000†	770†	400	3-pin Special	5	10	
FA 15	70 mm. diame circ	ter of	400	3.5	1100	500	1 in 10 sec.	2600†	790†	800	Flexible Leads	3	18	
FA 21	150±7	66±4	1600	8	1100	800	1 in 10 sec.	8000†	2400†	3200	3-pin Special	12	0	
FA 23	550 r Light I 46	ength	2500	8	2700	2000	1 in 10 sec.	1	_	800	Flexible Leads	18	0	
FA 25	62±2	-	100	3.5	1100	800	1 in 10 sec.	410†	180†	200	2-pin 2-amp.	4	10	
FA 26	150±7	66±4	4000	8	2700	2000	1 in 10 sec.	_	_	1280	3-pin Special	20	0	

^{*} Tested to 5000 flashes for single flash operation; stroboscopic tubes have been tested to 100 hours.

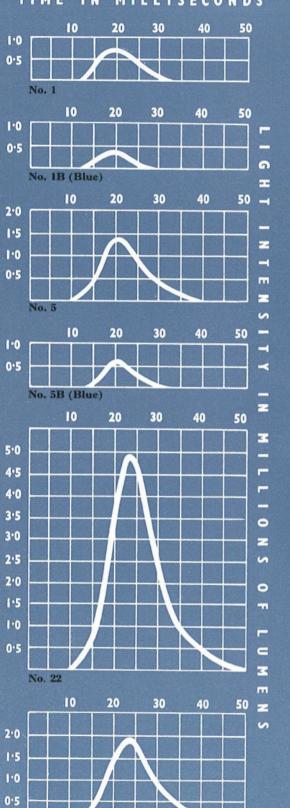






[†] With electrolytic capacitors.

TIME IN MILLISECONDS



No. 22B (Blue)





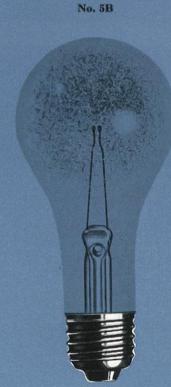


No. 1B









No. 22

No. 22B



Adaptor-ejector

Mazda capless photoflash bulbs (No. 1 and No. 5), dispense with the usual metal cap and are designed to fit into flash guns to take the capless bulbs or into the Mazda adaptor/ejector for those that have flash guns with the A.S.C.C. holders.

The Mazda adaptor-ejector can be purchased from photographic dealers-price 1s. 6d.; it can be used time and again and can be left permanently in the flash gun.

Capless photoflash bulbs are made in Germany.

Open Flash Technique

Existing domestic lighting should not interfere with exposure providing it is not too bright. Arrange your subject at the required distance and set the aperture in accordance with guide numbers shown in the table or on the carton.

- 1. Insert photoflash bulb into holder.
- 2. Focus camera.
- 3. Set camera shutter to 'Time' (T) or 'Bulb' (B).
- 4. Open shutter and immediately fire flash-gun.
- 5. Close shutter as soon as flash has occurred.

Synchronized Flash

Synchronized Flash differs from open flash in that the entire process is automatic. Only one operation is required to open the shutter, fire the photoflash bulb and close the shutter again. However, you should ascertain the type of synchronization with which your camera is equipped, and use only the photoflash bulbs recommended.

- 1. Connect the flash-gun to the camera.
- 2. Insert photoflash bulb into holder.
- 3. Set shutter speed.
- 4. Set aperture.
- 5. Focus camera.
- 6. If necessary, cock shutter.
- 7. Trip shutter to fire photoflash bulb.
- 8. Wind on film and re-set for next picture.

Note: With a synchronized flashgun you do not need to reduce the room lighting, as the shutter is not open long enough for it to affect the film.

	No. 1	No. 1B	No. 5	No. 5B	No. 22	No. 22F
Peak Lumens, Million Lumens	0.6	0.3	1.4	0.7	5.0	2.0
Time to peak, Milliseconds	18	18	20	20	23	23
Time to half peak, Milliseconds	13	13	12	12	17	17
Duration at half peak, Milliseconds	10	10	12	12	14	14
Light Output, Lumen Seconds	6500	3500	18,000	9000	75,000	30,000
Colour Temperature, °K	4000	6000	4000	6000	3800	6000
Operating Voltage	3-42	3-42	3-42	3-42	3-42	3-42
Length of Lamp, mm	51	51	62	62	116	116
Diameter of Lamp, mm	23	23	31	31	60	60
Speed Class	M	M	M	M	M	M
Cap	Capless	Capless	Capless	Capless	E.S.	E.S.
List Price each	8d.	9d.	1s. 0d.	1s. 1d.	1s. 8d.	1s. 10d

Exposure Guide Numbers

In the table below will be found the guide number to suit a given film speed using any particular Mazda clear photoflash bulb. The guide number is the f. number or 'stop' multiplied by the distance in feet between photoflash bulb and subject. These guide numbers hold good providing-

- 1. A 6" diameter reflector is used.
- 2. Exposure is made in a fairly large room or hall with medium coloured walls and

- furnishings giving a moderate degree of reflected light.
- 3. The subject is of medium tone or colour.
- 4. Frontal-lighting conditions exist, with the photoflash bulb in proximity to the camera/subject axis.

Note: For pictures taken in a small room with light coloured walls, reduce the lens aperture by one stop. For large and dark interiors or out of doors, use one stop larger.

			Tung	gsten Film S	Speed	
Photoflash Bulb	Shutter Speed	BS 22-24°	BS 25-27°	BS 28-30°	BS 31-33°	BS 34-36
	1/25 th Second	60	80	120	160	240
888	1/50 th 55	40	60	80	120	160
No. 1	1/100th ,,	40	60	80	120	160
	1/250th ,,	30	45	60	90	125
İ	1/500th ,,	27	35	50	70	100
	1/25 th Second	100	140	200	280	400
	1/50 th ,,	70	100	140	200	280
No. 5	1/100th ,,	70	100	140	200	280
	1/250th ,,	50	70	100	140	200
	1/500th "	35	50	70	100	140
	1/25 th Second	170	240	340	480	680
	1/50 th ,,	145	210	300	410	600
No. 22	1/100th ,,	130	180	260	370	520
	1/250th ,,	75	105	150	210	295
1	1/500th ,,	50	70	100	145	200

	2439		Film	Speed	
Photoflash Bulb	Shutter Speed	BS 21°	BS 23°	BS 25°	BS 27°
No. 1B	1/25th Sec.	30 45 85	35 55	45 70	60







Mazda Car Bulbs

For Motor Cars, Motor Cycles & Commercial Vehicles

NUMERICAL INDEX

Ref. No.	Volts	Watts	Descr	iption	List* Price s. d.	F
1	12	24	Ordinary Head	S.C.C	2 6	3
2	12	36	,,,	S.C.C	2 6	3
4	12	24	33	S.B.C	2 7	
5	12	36	55	S.B.C	2 7	
23	12	48	>>	S.C.C	4 0	
26	12	60	55	S.B.C	5 7	3
27 57	12 12	48 36	,,,	S.B.C	4 1	3
75	6	36	>>	S.C.C	2 6 2 9	3
87	12	60	33	Bosch	5 9	3
90	12	60	55 55	S.C.C.	5 6	3
96	12-	48	"	Bosch	4 3	1 2
106	6	24	,,,	S.C.C	2 6	4
108	6	36	,,,	S.C.C	2 9	
109	6	24	,,,	S.B.C	2 7	
111	6	36	***	S.B.C	2 10	
123	24	36	>>	S.B.C	2 7	1 6
124	24	60	"	s.c.c	5 6	
127	24	60	23	B.C	5 7	6
128	24	60	33	S.B.C	5 7	6
130	6 24	36	23	Bosch	3 0	
131 140	24	60 48	>>	CDC	5 9 4 1	6
149	24	6	Side	000	1 4	6
150	24	6	10000000	CDC	1 5	1 6
162	12	36	Prefocus Head	P22s/21	3 9	1 6
166	6	24 & 24	39	P22d/21	4 9	1 6
168	6	24 & 24	Ordinary Head	S.B.C	3 6	1 6
169	6	30 & 30	,,	S.B.C	3 6	6
170	6	36 & 36	33	S.B.C	3 6	6
171	12	36 & 36	**	S.B.C	3 6	6
172	6	36	Prefocus Head	S.B.C	3 9	6
173	6	36	**	P22s/21	3 9	6
180	6	18 & 18	Ordinary Head	P22s/21	4 6	6
182	12	36 & 36	,,	Bosch	3 9	6
183	6 12	24 & 24	,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,	Bosch	3 9	6
185 190	6	48 3 & 18	Prefocus Head	P22s/21 BA15d/19	4 6 3 6	6
194	24	36 & 36	Stop Ordinary Head		3 6 4 3	6
200	6	3	Side	S.B.C	1 4	6
204	6	3	,,	S.B.C.	1 5	6
205	6	6	,,	S.C.C	1 6	6
206	6	6	"	S.B.C	1 7	6
207	12	6	,,	S.C.C	1 4	6
209	12	6	,,,	S.B.C	1 5	6
222	12	4	,,,	M.C.C.	1 5	6
225	12	6	,,	S.B.C.	2 0	6
253	6	6	Festoon	S8·5/8	2 7	6
254	12	6	27	S8·5/8	2 7	6
255	6	3	>>	S7/8	2 3	6
256	12	3	**	S7/8	2 3	6
260 280	24 12	6 1·5	>> Tdi	S8·5/8	2 7	6
302	12	48 & 48	Indicator Prefocus Head	E5/8 P22d/21	1 9 6 9	6
311	6	18 & 18		7000 1/04	5 3	6
312	6	30 & 24	. 33	P22d/21 P22d/21	5 0	6
317	6	18	Stop	BA15s/19	3 9	6
319	6	18	,,	BA15d/19	3 9	9
323	12	48	Prefocus Head	P22s/21	4 6	9
325	12	38	33	P22s/21	3 9	9
326	12	38	,,	P22d/21	3 9	9
330	24	44	,	P22d/21	4 6	9
331	24	44	>>	P22d/21	4 6	9
332	24	44 & 38	,,,	P22d/21	5 7	
333	24	24	Stop	BA15d/19	3 10	9
334	24	6 & 24	**	S.B.C. Index	3 9	9
335	12	21	>>	BA15d/19	3 0	9
339	24	24	>>	BA15s/19	3 10	9
352 354	6 12	3 & 18	Drofoms Hood	S.B.C. Index	3 9	9
355	12	42 & 36 42 & 36	Prefocus Head	P22d/21 P22d/21	4 6 5 0	9
356	6.4	45 & 35	55	Dog Har	5 0 5 9	9
	W .	00	>>	P22d/21	0 0	9

L IN	NDEX				
Ref. No.	Volts	Watts	Descri	iption	List* Price s. d.
359	24	44 & 38	Prefocus Head	P22d/21	5 7
373 374	6 6	30 & 24 36	,, Ordinary Head	P22d/21	5 6 4 0
375	12	36		8.C.C	3 9
376 380	12 12	36 & 36 6 & 21	Stop	S.B.C S.B.C. Index	4 9 3 6
381	12	6 & 21	33	BA15d/19	3 6
382 383	12 6	21 6 & 18	» »	BA15s/19 BA15d/19	3 0 3 6
384	6	6 & 18	,,,	S.B.C. Index	3 6
386 404	6 12	15 & 15 60 & 36	Ordinary Head Prefocus Head	Special P22d/21	5 3 7 6
408	12	21 & 38	33	P22d/21	6 3
600	12 24	48 44	27	P22s/21 P22d/21	5 9 5 9
602	6	30 & 24	33	P22d/21	6 3
603 604	12 12	42 & 36 42 & 36	» »	P22d/21 P22d/21	5 9 6 3
605	6	24	Ordinary Head	3-pin B.C	2 9
606 607	24 6	44 36	Prefocus Head Ordinary Head	P22s/21	4 6 3 0
608	6	36	»	S.C.C.	3 0
612 615	12 12	36 36	33	3-pin B.C S.C.C	2 9 3 0
616	12	48	"	3-pin B.C	4 3
618 619	12 12	60 60	55	3-pin B.C American Pref.	5 9 6 0
621	24	36	22	S.C.C	2 6
622 623	24 24	36 48	33	B.C	2 7 4 0
624	24	48	33	B.C	4 0 4 1
628	6	30 & 30	**	3-pin B.C	3 9
629 630	6 12	30 & 30 36 & 36	"	American Pref. 3-pin B.C	4 0 3 9
632	12	36 & 36	,,	American Pref.	4 0
633 638	12 24	36 & 36 6	Side	A.S.B.C B.C	3 6 1 5
641	6	3	Indicator	M.C.C. 11 mm.	1 2
642 643	6 12	3 2·2	,,	M.C.C. 15 mm. M.C.C. 11 mm.	1 6 1 2
645	12	2.2	,,	M.C.C. 15 mm.	1 2
647 651	16 24	3 2·8	,,	M.C.C. 15 mm. M.C.C. 15 mm.	2 6 1 5
653	24	6	Festoon	S8·5/8	2 6
654 667	24 6	6 36	Ordinary Head	S8·5/8 American Pref.	3 10 3 6
668	12	36	,,	,,	3. 6
669 670	6 12	36 36	>>	23	3 6 3
671	24	44 & 38	Ordinary Head	S.B.C	5 4
675 676	6	48 48		3-pin B.C	4 3 5 6
683	12	48	22	3-pin B.C	5 6
684 685	24 12	48 48	,, Prefocus Head	3-pin B.C	4 3 5 9
686	24	48	Ordinary Head	3-pin B.C	5 6
692 950	24 6	6 & 24 6	Stop Indicator	BA15d/19 M.E.S. 15 mm.	3 9 1 3
951	6	6	Side	M.C.C.	1 7
970 972	2·5 2·5	0.2 amp. 0.3 amp.	Flashlight	M.E.S M.E.S	4† 4†
974	3.5	0·15 amp.	», »	M.E.S	4†
977	3.5	0·3 amp.	,,	M.E.S	4†
981	6	3	Indicator	M.E.S. 15 mm.	1 3
985 986	16 12	3 2·2	,,	M.E.S. 15 mm. M.E.S. 15 mm.	2 3
987	12	2.2	,,	M.E.S. 11 mm.	1 1
988 989	6 12	3 6	Side	M.C.C M.C.C	1 5 1 5
990	6	3	Indicator	M.E.S. 11 mm.	1 1
993	24	2.8	33	M.E.S. 15 mm.	1 4

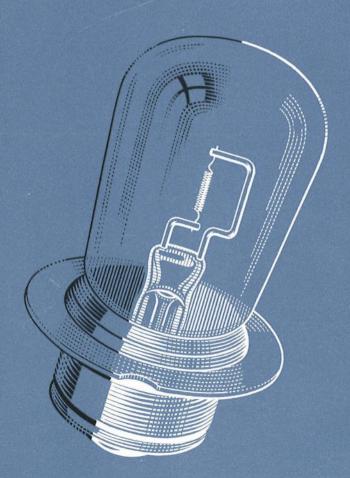
^{*} Purchase Tax must be added to these prices. For the exact amount of purchase tax to be added see TABLE B on the card insert, with the exception of lamps marked† where the tax addition is 1d.

Cadmium Yellow Bulbs-

0

Marke a lamps stay brighter longer

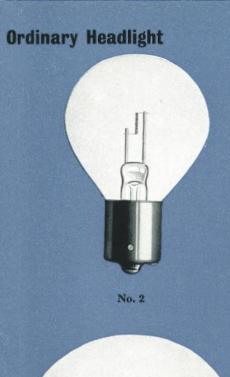
CAR BULBS · FLASHLIGHT CYCLE DYNAMO



Sections 17-20

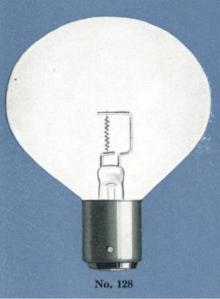
















Dimensions in millimetres



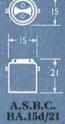












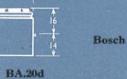
3-pin B.C. BA.21s

BA.21d

S.B.C. BA.15d/17













Ordinary Headlight Bulbs

The range of lamps listed here meets the requirements of all motorists not equipped with prefocus type headlights. There are lamps suitable for Private Cars, Motor Cycles and Commercial Vehicles of many kinds.

There are many '12-volt system' cars which use lamps such as No. 96 12v. 48w. Bosch Cap or No. 57 12v. 36w. S.C.C. Cap which are among the more popular, but 6-volt systems on some low horsepower cars and 24-volt systems found on Bus and large vehicles are all adequately covered.

			List*			Dime	nsions
Lamp No.	Volts	Watts	Price s. d.	Filament	Cap	Length mm.	Diam mm.
605	6	24	2 9	Axial	3-pin B.C.(BA.21s)	61 max.	38
106	6	24	2 6	Axial	S.C.C.	56	38
109	6	24	2 7	Axial	S.B.C.	56	38
108	6	36	2 9	Axial	S.C.C.	56	38
3741	6	36	4 0	Axial	S.C.C.	56	38
607	6	36	3 0	Axial	3-pin B.C.(BA.21s)	61 max.	38
130	6	36	3 0	Axial	Bosch (BA.20s)	65	38
75	6	36	2 9	Transverse	S.C.C.	56	38
111	6	36	2 10	Axial	S.B.C	56	38
608§	6	36	3 0	Transverse	S.C.C. 3-pin B.C.(BA.21s) 3-pin B.C.(BA.21s)	56	38
675	6	48	4 3	Axial	3-pin B.C.(BA.21s)	61 max.	38
676‡	6	48	5 6	Axial	3-pin B.C.(BA,21s)	61 max.	38
1	12	24	2 6	Axial	S.C.C.	56	38
4	12	24	2 7	Axial	S.B.C.	56	38
2	12	36	2 6	Axial	S.C.C.	56	38
612	12	36	2 9	Axial	3-pin B.C.(BA.21s)	61 max.	38
57	12	36	2 6	Transverse	S.C.C.	56	38
375‡	12	36	3 9	Axial	S.C.C.	56	38
5	12	36	2 7	Axial	S.B.C.	56	38
615§	12	36	3 0	Transverse	S.C.C.	56	38
616	12	48	4 3	Axial	3-pin B.C.(BA.21s)	61 max.	38
6831	12	48	5 6	Axial	3-pin B.C.(BA.21s) 3-pin B.C BA.21s)	61 max.	38
23	12	48	4 0	Axial	S.C.C.	56	38
27	12	48	4 1	Axial	S.B.C.	56	38
96	12	48	4 3	Axial	Bosch (BA.20s)	65	38
618	12	60	5 9	Axial	3-pin B.C.(BA.21s)	72 max.	50
90	12	60	5 6	Axial	S.C.C.	63	50
26	12	60	5 7	Axial	S.B.C.	63	50
. 87	12	60	5 9	Axial	Bosch (BA.20s)	74	50
621	24	36	2 6	Axial(a)	S.C.C.	56	38
123	24	36	2 7	Axial(a)	S.B.C.	56	38
622	24	36	2 7	Axial(a)	B.C.	56	38
623	24	48	4 0	Axial(a)	S.C.C.	56	38
140	24	48	4 1	Axial(a)	S.B.C.	56	38
624	24	48	4 1	Axial(a)	B.C.	56	38
684	24	48	4 3	Axial	3-pin B.C. (BA.21s)	61 max.	38
686‡	24	48	5 6	Axial	3-pin B.C. (BA.21s)	61 max.	38
124	24	60	5 6	Axial(a)	S.C.C.	63	50
128	24	60	5 7	Axial(a)	S.B.C.	63	50
127	24	60	96790009903667696970360139679677011366779 222243322234522222323454445555522244444555555	Axial(a)	B.C.	63	50
131	24	60	5 9	Axial(a)	Bosch (BA.20d)	74	50

Purchase Tax see note below. § Special Light Centre length. ‡ Cadmium Yellow Bulb. (a) Coiled Coil.

			List*	Filament		Dime	nsions
Lamp No.	Volts	Watts	Price s. d.	(main on the axis)	Cap	Length mm.	Diam.
386	6	15 & 15	5 3	Axial and Transverse	S.B.C. Unequal pins	49 max.	25
180	6	18 & 18	4 6	Inverted Vee	S.B.C.	56	38
168	6	24 & 24	3 6	Inverted Vee	S.B.C.	56	38
183	6	24 & 24	3 9	Inverted Vee	Bosch (BA.20d)	65	38
169	6	30 & 30	3 6	Inverted Vee	S.B.C.	56	38
628	6	30 & 30	3 9	Inverted Vee	3-pin B.C.(BA.21d)	61 max.	38
170	6	36 & 36	3 6	Inverted Vee	S.B.C.	56	38
171	12	36 & 36	3 6	Inverted Vee	S.B.C.	56	38
630	12	36 & 36	3 9	Inverted Vee	3-pin B.C.(BA.21d)	61 max.	38
376t	12	36 & 36	4 9	Inverted Vee	S.B.C.	56	38
633	12	36 & 36	4 6 6 9 6 6 9 9 6 6 9 9 6 9 9 6 9 9 6 9	Inverted Vee	A.S.B.C.	59	38
182	12	36 & 36	3 9	Inverted Vee	Bosch (BA.20d)	65	38
194	12 12 12 12 24	36 & 36		Transverse(a)	S.B.C.	56	38 38 38 38 38 38 38 38 38 38
671	24	44 & 38	4 3 5 4	Transverse	S.B.C.	56	38

^{*} Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see TABLE B on the card insert.





[‡] Cadmium Yellow Bulb. (a) Coiled Coil. || or Single Coil Double Transverse.

Prefocus Headlight





No. 162



No. 323



No. 172



No. 354

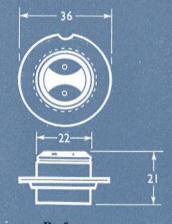


No. 359



No. 632

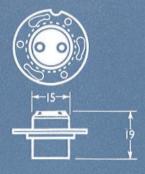
Prefocus Caps



Prefocus P22d/21



Prefocus P22s/21



American Type Prefocus P15d/19



Prefocus Headlight Bulbs

The extensive use of prefocus type car bulbs is an indication of the advantages of a fixed filament position. However, these advantages can only be enjoyed if the bulb is of first class quality and workmanship and is reliable.

Our prefocus headlight bulbs are made to stay in focus; everything is done to ensure that the lamp gives every satisfaction.

Prefo	cus Si	ngle F	ilan	nent				
Caps:-	Single C	ontact Pa	22s/2	1, D	ouble Contact P22d/21			
Lamp	Volts	Watts		ist*	Filament	Contact	Dime	nsions
No.	Voits	watts	s.	d.	Fnament	Contact	Length mm.	Diam. mm.
172 173	6 6	36 36	3	9	Axial Single Coil Trans. Single Coil	Single Single]	
162	12	36	3	9	Axial Single or Coiled Coil	Single		
325† 326†	12 12	38 38	3	9	Trans. Single Coil Trans. Single Coil	Single Double		
323	12	48	4	6	Trans. Single or Coiled Coil	Single		
600‡	12	48	5	9	Trans. Single or Coiled Coil	Single	64 max.	$^{28}_{\pm 1}$
185	12	48	4	6	Axial Single or Coiled Coil	Single		
685‡ 331† 606†	12 24 24	48 44 44	5 4 4	9 6 6	Axial Single Coil Axial Coiled Coil Trans. Coiled Coil	Single Double Single		
330 † 601†‡	24 24	44 44	4 5	6 9	Trans. Coiled Coil Trans. Coiled Coil	Double Double		

^{*} Purchase Tax see note below. † For Commercial Vehicles only. ‡ Cadmium Yellow Bulb.

Junension	s:—Leng	tact P22d/ th 64 mm.	max. Di	ameter 28 ± 1 mm.	S S	i	
Lamp	Volts	Watts	List* Price	Filament (Main on the axis)	Contact	Dipping Ar	rangements
No.			s. d.	(Main on the axis)		Dip	Drive
311	6	18 & 18	5 3	Single Coil	Double	Vertical	Either
166	6	24 & 24	4 9	Single Coil	Double	Vertical	Either
312	6	30 & 24	5 0	Single Coil	Double	Vertical	Either
373	6	30 & 24	5 6	Single Coil	Double	Left	R/Han
602±	6	30 & 24	6 3	Single Coil	Double	Vertical	Either
356	6.4	45 & 35	5 9	Single Coil	Double	Left	R/Han
408(f)	12	21 & 38	6 3	Single Coil	Double	_	
354	12	42 & 36	4 6	Single Coil	Double	Left	R/Han
355	12	42 & 36	5 0	Single Coil	Double	Right	L/Han
603±	12	42 & 36	5 9	Single Coil	Double	Left	R/Han
604±	12	42 & 36	6 3	Single Coil	Double	Right	L/Han
358÷	12	44 & 38	5 4	Single Coil	Double	Left	R/Han
302¶	12	48 & 48	6 9	Single or Coiled Coil	Double	Left	R/Han
4048	12	60 & 36	7 6	Single Coil	Double	Left	R/Han
359†	24	44 & 38	5 7	Coiled Coil	Double	Left	R/Han
332†	24	44 & 38	5 7	Coiled Coil	Double	Right	L/Han

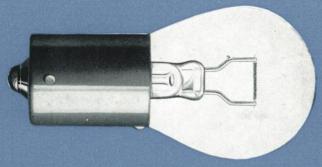
^{*} Purchase Tax see note below. † For Commercial Vehicles only. ‡ Cadmium Yellow Bulb. ¶ Both filaments are offset, § 38 mm. dial bulb (f) Fog Lamp and Turn Signal Indicator.

			Li	st*			Dime	ensions
No.	Volts	Watts		d.	Filament	Cap	Length mm,	Diameter mm.
669	6	36	3	6	Axial	P15s/19	58	38
667	6	36	3	6	Transverse	P15s/19	58 58 58	38
670	12	36	3	3	Axial	P15s/19	58	38
668	12	36	3	6	Transverse	P15s/19	58	38
619	12	60	6	0	Transverse	P15s/19	65	50
629	6	30 & 30	4	0	Inverted Vee	P15d/19	65 58	38
632	12	36 & 36	4	0	Inverted Vee	P15d/19	58	38

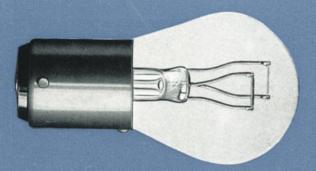
^{*}Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see TABLE B on the card insert. || or Single Coil Transverse.



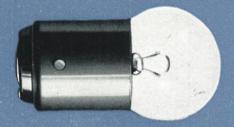




No. 382 Stop



No. 381 Stop



No. 204 Side & Tail



No. 993 Indicator



No. 987 Indicator



No. 280 Indicator



No. 642 Indicator



No. 256 Festoon

Dimensions in millimetres



M.E.S. E10/13





M.C.C. BA.9s/14





S.C.C. BA.15s/17





S.B.C. BA.15d/17





BA.15d/19



S.B.C. Index BA.15d/19



Few doubt that the modern style of direction indication by flashing lamps is the most sure and the most efficient, but the reliability of the system is dependent largely on the quality of the lamps. Our Stop and Tail lamps are world-famous for their efficiency and reliability. The same high standard of workmanship has gone into the construction of certain Stop Lamps for Flashing Indication applications.

The lamps recommended are for 12-volt systems. They are lamps Nos. 380 and 381 which have two independent filaments, also the single filament lamps Nos. 335 and 382.

The double filament lamps may be used for both flashing indicator and 'stop' indication. By suitable circuit arrangement, the filament can be used for flashing or for a steady light as required.

All car bulbs are designed to withstand vibrations of much greater magnitude than occurs in normal service, to ensure that they retain their efficiency even under severe operating conditions.

Festoon lamps are suitable for many old and new makes of car for roof lights or trafficator.

No. of the last of				st*	_	Dime	nsions
Lamp No.	Volts	Watts	s.	ice d.	Cap	Length mm.	Diameter mm.
317	6(s)	18	3	9	BA15s/19	47	25
319	6(s)(f)	18	3	9	BA15d/19	47	25
190	6(d)	3 & 18	3	6	BA15d/19	47	25
352	6(d)	3 & 18	3 3 3	9 6 6	S.B.C. Index	47	25
383	6(d)	6 & 18	3	6	BA15d/19	47	25
384	6(d)	6 & 18	3		S.B.C. Index	47	25
335	12(s)	21	3	0	BA15d/19	47	25 25
382	12(s)(f)	21	3 3 3	0	BA15s/19	47	25
380	12(d)(f)	6 & 21	3	6	S.B.C. Index	47	25
381	12(d)(f)	6 & 21	3	6	BA15d/19	47	25
334	24(d)	6 & 24	3 3 3	6 9 9	S.B.C. Index	47	25
692	24(d)	6 & 24	3	9	BA15d/19	47	25
333	24(s)	24	3	10	BA15d/19	47	25
339	24(s)	24	3	10	BA15s/19	47	25

* Purchase Tax see note below. (d) Double Filament. (f) Flashing Indicator also. (s) Single Filament.

				st*		Dime	ensions
Lamp No.	Volts	Watts	Pr s.	d.	Cap	Length mm.	Diameter mm.
200	6	3	1	4	S.C.C.	32.5	18
204	6	3	1	5	S.B.C.	32.5	18
988	6	3	1	5	M.C.C.	28	15
951	6	6	1	7	M.C.C.	28	15
205	6	6	1	6	S.C.C.	32.5	18
206	6	6	1	7	S.B.C.	32.5	18
207	12	6	1	4	S.C.C.	32.5	18
209	12	6	1	5	S.B.C.	32.5	18
225§	12	6	2	0	S.B.C.	32.5	18
222	12	4	1	5	M.C.C.	28	15
989	12	6	1	5	M.C.C.	28	15
149 ¶	24	4 6 6	1	4(c)	S.C.C.	32.5	18
-150¶	24	6	1	5 (c)	S.B.C.	32.5	18
638¶	24	6	1	5 (c)	B.C.	37	18

*Purchase Tax see note below. (c) Vee Filament no extra. ¶ With Supported Filament. § "Rough Service" type,

			Li	st*		Dimensions		
Lamp No.	Volts	Watts	Pr s.	ice d.	Cap	Length mm,	Diameter mm.	
990	6	3	1	1	M.E.S.	23	11	
641	6	3	1	2	M.C.C.	23.5	11	
981	6	3 3 3 6	1	3	M.E.S.	27.5	15	
642	6	3	1	6 3 9	M.C.C.	28	15	
950	6	6	1	3	M.E.S.	27.5	15	
280	12	1.5	1	9	E5/8	15	6.75	
987	12	2.2	1	1	M.E.S.	23	11	
643	12	2.2	1	2	M.C.C.	23.5	11	
986	12	2.2	1	1	M.E.S.	27.5	15	
645	12	2.2	1	2 3	M.C.C.	28	15	
985 ¶	16	3	2 2	3	M.E.S.	27.5	15	
647 ¶	16	3	2	6	M.C.C.	28	15	
993¶	24	2.8	1	4	M.E.S.	27.5	15	
651¶	24	2.8	1	5	M.C.C.	28	15	

^{*} Purchase Tax see note below. ¶ With Supported Filament.

Festoon							
			List	*	NAME OF STREET OF STREET	Dime	ensions
Lamp No.	Volts	Watts	Pric	d.	Cap	Length mm.	Diameter mm.
255	6	3	2	3	S7/8	35.5	7.5
253	6	6 .	2	7	S8·5/8	38	11
255 253 256	12	3	2	3	S7/8	38 35∙5	7.5
254	12	6	2	7	S8·5/8	38	11
653	24	6	2	6	S8·5/8	38	11
654¶	24	6	3	10	S8·5/8	38	11
260 "	24	6	2	7	S8·5/8	44	11

Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see TABLE B on the card insert.

¶ With Supported Filament.





Mazda lamps stay brighter longer

Cycle Dynamo & Flashlight









3.5v. 0.15 amp. Cycle Tail







Prefocus Flashlight



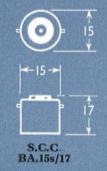
6v. 0·04 amp. Cycle Tail



6.5v. 0.3 amp. Speedometer

NOTE: THE LAMPS ON THIS PAGE ARE SHOWN LARGER THAN ACTUAL SIZE

Dimensions in millimetres









Cycle Dynamo

Among the lamps listed on this page will be found one to suit any type of cycle lighting equipment in use today. A combination of correctly rated lamps front and rear will give a well balanced and reliable lighting system.

A recent improvement in design has been effected with the 6v. 0.04 amp. Tail Lamp (illustrated). By firm anchoring of the filament the new design offers much improved resistance to service shock and improved beam candle-power in the horizontal plane; the filament position with respect to the axis of the lamp lens is rigidly controlled.

Motor Cycle Speedometer

This lamp is used mostly in speedometers for motor cycles or autocycles, etc., but many manufacturers have included the illuminated type of speed indicator for bicycles. The lamp gives sufficient output without glare.

Flashlight Lamps

Listed here are lamps to suit all sizes and makes of torch and cycle lamp. The lens-end lamp is designed to provide the fountain pen type of small torch with a concentrated 'circle' of light, making full use of the small amount of current available.

Volts	Amps.	List i	Price* d.	Finish		Cap	Diameter mm.
6	0.2	1	8	Clear	1		(15
6	0.2		8	Granulated	11		15
6	0.3		8	Clear	11		15
6	0.3		8 8 8 8	Granulated	11	M.E.S.	15
6	0.45		8	Clear	٦١	M.E.S.	15
6	0.45		8	Granulated	11		15
6	0.5		8	Clear	11		15 15 15 15
6	0.5		8	Granulated			15
6	0.3	1	4	Clear	11	000	ſ 18
6 6 6 6 6	0.5	1	4	Clear	1	S.C.C.	[18
6	1.0	1	4	Clear		M.E.S.	15
6	1.0	1	6	Clear	1	S.C.C.	18

^{*} Purchase Tax see note below. Granulated bulbs give better light diffusion.

s. d. mi 1.5 0.15 8	s. d. mm. 0.15 8	Volts	Amps.	List Price*	Finish	Cap	Diameter
3.5 0.15 9 MCC 11 a	0·15 8 Clear M.C.C. 11 or 15	VOIIS		s. d.	Fillish	Сар	mm.
3.5 0.15 9 MCC 11 o		1.5	0.15	8	1	M.E.S.	15
55 0.19 6 Class M.C.C. 11 0	0.04 8 Clear 5 M.E.S. 11 or 15	3.5	0.15	8	Class II	M.C.C.	11 or 15

^{*} Purchase Tax see note below.

Speed	ometer				
Volts	Amps.	List Price*	Finish	Cap	Diameter mm.
6.5	0.3	7	Clear	M.C.C.	11

^{*} Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see TABLE B on the card insert.

Volts	Amps.	List Price s. d.	P.T. Extra s. d.	Finish	Сар	Diameter mm.
Ordina	ry Flashlig	ht				
1.5	0.11	8	11/2)		15
1.5	0.2	8 4 4 4 4 4 4 8	$1 \\ 1\frac{1}{2}$	1	1 (1	15 11 15 11 11 11 11 15
2.0	0.6	8	$1\frac{1}{2}$		1 11	15
2.5	0.2	4	1	1	1 [1	11
2.5	0.3	4	1	Clear	M.E.S.	11
3.5	0.15	4	1	Cicar]	11
3.5	0.3	4	1	1	1	11
4.0	0.3	4	1 1			11
4.5	0.3	4	1	1	1 (1	15
5.0	0.15	8	1 ½	J		15
Lens E	nd Flashlig	ht				
2.2	0.25	7	11/2	Clear	M.E.S.	9.5 max
Prefoc	ıs Flashligl	nt			'	
2.5	0.2	1 0	21)		11 max.
2.5	0.3	î ŏ	$2\frac{1}{2}$ $2\frac{1}{2}$ $2\frac{1}{2}$	Clear	Special Prefocus	11 max.
3.5	0.3	1 0	$\frac{-\frac{2}{3}}{2\frac{1}{3}}$	1		11 max.





Aircraft and Transport

The LAMPS shown in the following section are types which have been developed to meet the requirements of the special services for which they are specifically designed, Careful and prolonged study of the conditions of operation which each type has to withstand satisfactorily, the carrying out of extensive field trials coupled with the accumulated experience of more than half a century of lamp manufacture has resulted in the production of lamps particularly suitable for each individual service.

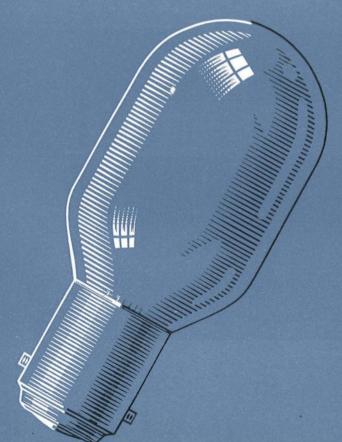
The following types are made to comply strictly with the provisions of the relevant British Standard Specification.

Bus Lamps	 • •		B.S. 555
Traction Lamps	 		B.S. 867
Traffic Control Lamps	 	• •	B.S. 505
Miners' Lamp Bulbs	 		B.S. 535
Telephone Indicator Lamps	 		B.S. 1050

The service of our Lamp Engineers is always available to recommend the most suitable lamp for any particular application.

Marca lamps stay brighter longer

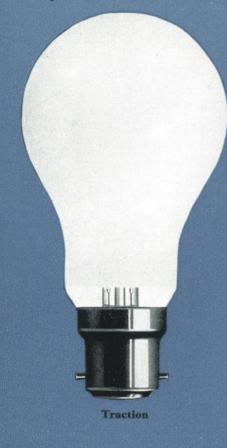
TRANSPORT AIRCRAFT · MINERS' VISUAL INDICATOR

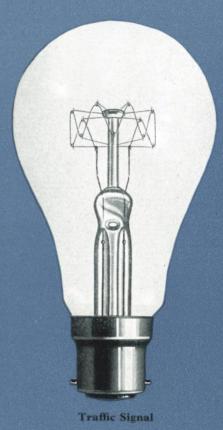


Sections 21-28



Transport, etc.





0



Bus & Trolley Bus









B.C. B22/21×26





S.B.C. BA.15d/17

Traffic Signal





B.C. B22/25×26





Bus Interior

Pearled to counter glare to passengers, bus interior lamps are available in standard voltages with two varieties of cap.

Trolley Bus

These lamps have been designed mainly for use in trolley buses but they are used extensively on other low voltage systems where small diameter bulbs are required.

Traction

Produced for operation in series in tube-trains, tramcars and other public service transport, traction lamps have an accurately rated amperage to ensure uniform performance.

Traffic Signal

Suitable for red, amber and green signals these lamps are available in two types with different Light Centre Lengths to nt standard types of traffic control equipment.

tandard Caps:-	-B.C. (B22/21 \times 20	6) or S.B.C. (BA.15d/)	17) Filaments:—	Vee or Bow	, -
		Dimens	sions	Li	e#II
Watts	Volts	Length mm.	Diameter mm,	Pr s.	
12	12	53 (B.C.)	38	2	0:
12	24	→ 36 (S.B.C.)	38	} 2	1:
20	24	or 68	or 50	2	4

a Available inside silica-coated in 50 mm. dia. only 4d. extra.

tandard	Caps: B.C. (B22/21 ×	26) or S.B.C. (BA	.15d/17)		enabli setile	
Watts	Description	Bulb	Cap	Diameter mm.	Li Pr s.	st∥ lice d
6	Instrument Lamp	Clear	S.B.C.	22	2	6
6 15	Side Lamp	Clear or Pearl	B.C.†	38	2	6
15	Interior Lamp	Clear or Pearl	B.C.	38 or 50	2	9
20	Interior Lamp	Clear or Pearl	B.C.	38 38	2	
36	Headlamp	Clear	S.B.C.	38	4	0

^{||} Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see TABLE B on the card insert. † B.C. (B22/22)

				Dime	ensions	List*	
Nominal Rated Amps.		Volts	Сар	Length mm.	Diameter mm.	Price Clear Pear s.	or
40	0.35	100, 110,	B.C.(B22/25 × 26) {	110	60	} 1	
60	0.52	100, 110, 120, 130	or E.S.(E27/25)	117.5	65	} 1	9)

^{*} Purchase Tax see note below. † With fusible cut-out E.S. cap 40 volt and 50 volt only. 2s. 5d. each.

Standar	d Caps:—B.C. (B22/2	25×26) or E.S. (E2	27/27)				
			D	imensions		т.	st*
Watts	atts Volts	Description	Length mm.	Diameter mm.	L.C.L. mm.	Pr s.	ice d
60	110, 120, 210, 220, 230, 240, 250	Spiral Filament Bulbs marked 'TC'	108 (E.S.)	65	62	2	(

^{*} Purchase Tax must be added to the prices in these columns. For the exact amount of purchase tax to be added see TABLE A on the card insert.







28v. 1·1w. Aircraft Instrument



3·75v. 1·0 and 1·0 amp. Miner's Cap



28v. 7w. Aircraft General Service



4v. 0·8 amp. Miner's Cap

Miners' Lamps

Lamp Code	Rating		Diameter	Length			ist
Number	Volts .	Amps.	mm.	mm.	Сар	Each s. d	
Argon—Do	uble Filam	ent Cap Lamp ((Clear Bulb)				
13B	4.0	0.55 & 0.55	25	49	BA.15d/21	2	9
Krypton—S	Single Filan	nent Cap Lamp	(Clear Bulb)				
13A 15A —	3·6 4·0 4·0	1·0 0·8 1·0	18 18 18	31 31 31	E10 E10 E10	2 2 3	6
Krypton—I	Double Fila	ment Cap Lam	p (Clear Bulb))	<u>'</u>	Sa.	
14A	3.75	1.0 & 1.0	18	40	BA.15d/17	3	6
Krypton—S	ingle Filan	nent Handlamp	(Pearl Bulb)†				
11B 12B 11A 12A 14B 15B 16A	2·5 2·5 2·5 2·5 4·0 4·0	1.5 1.75 1.75 1.75 0.75 0.75	18 18 18 18 18 18	43·5 45·5 43·5 45·5 45·5 47a 45·5	953 E14 953 E14 E14 Peg E14	3 3 3 3 3 3 3	0 0 0 0 0

† Supplied with fuse in the cap. (a) With Pip. $E14 = E14/23 \times 15 = S.E.S.$ E10 = E10/13 = M.E.S. 953 = Special S.C.C. BA.15d/17 or BA.15d/21 = S.B.C. All the Miners' Lamps listed above are approved by the Mines Department and are exempt from Purchase Tax.



Aircraft

The lamps listed are of robust construction and designed to meet the special requirements of this service. The adoption of 28 volt supply on modern Civil Aircraft has necessitated the production of a complete range of 28 volt lamps, some of which are designed to withstand the known vibration conditions prevalent in jet aircraft.

In this range there is a lamp suitable for every purpose.

Miners'

The provision of safe and adequate lighting at the coal-face is essential for both the visual comfort of the miner and for efficient coal production.

The problem of the manufacture of bulbs for this purpose has engaged the attention of our lamp engineers for many years and in consequence the efficiency of the miners' lamp has increased considerably since its conception. The use of the gas Krypton with which many of these lamps are filled, enables the highest possible light output to be obtained from the limited battery power available. The bulbs listed comprise types and ratings suitable for use in all makes of Miners' Cap and Hand lamps.

Joint					Dime	nsions		st*
Service Number	Volts	Watts	Cap	Finish	Length mm.	Diam. mm.		d.
General Se	rvice		#s 12					
995-3282	28	7	S.B.C., S.C.C.	Clear	32.5	18	3	10
-	28	6	Festoon	33	38	11	6	6
	28	12	S.B.C. or	33	46	25	8	8
	28	24	S.C.C.	>>	56	38	5	8
005.0040	28	36		>>	56	38	6	1
995-2248	12	6	S.B.C.	,,	32.5	18	1	5
995-2254	24	6	S.B.C.	33	32.5	18	1	6
Instrument	and Ind	licator			;			
995-9118	28	1.1	Midget Flange	Clear	14.5	6	4	2
	28	3	Side Clips	. 33	44.5	6.5	3	4
995-1284	28	3.5	M.E.S.	33	28.5	10	2	9
995-1271	28	3.5	M.C.C.	,,,	29	10	2	9
995-9112	12	1.2	Side Clips	33	38	6.5	2 2	2
995-9211	24	2.4	33 33	33	38	6.5	2	2
995-1254	12	6	Festoon	,,,	38	11	2	7
995-1256	24	6		33	38	11	2	6
995-1225	6.5	2.36	M.E.S.	33	23	11		7
995-3247	12	2.2	33	33	23	11	1	1
995-1230	24	2.8	>>	,,,	27.5	15	1	6
995-1220	12	2.2	33	\ Varnished	27.5	15	1	3
995-1231	24	2.8	233	Red	27.5	15	1	8
995-2261	12	7	S.B.C.	Clear	32.5	18	3	0
995-1109 995-1110	3 6	0·24 0·24	M.E.S.	>> >>	23 23	11 11	1	0
Navigation	6						l	
_	28	12) SRC	Clear	40	20	8	5
995-2431	28	24	S.B.C. or	33	56	35	5	8
995-2445	28	40	S.C.C.	,,,	56	35	7	6
995-2272	12	10	1)	33	46	25	3	6
995-2276	24	10		. ,,,	46	25	4	6
995-3217	12	20	S.B.C.	,,,	57 max.	38 max.	4	0
995-2431	28	24	0.5.0.	_ ,,	57 max.	38 max.	4	6
995-2401	12	30		Pearl	58	27	5	0
995-2604	24	80	J	>>	58	38	7	6
Faxying								
995-2511	24	60	S.B.C.	Clear	56	38	6	0
Landing								
995-4717	26	240	Med. Pref.	Clear	95	60	29	0.
995-9705	26	350	Large Pref.	33	118	75	33	0

^{*} Purchase Tax must be added to the prices of all lamps in this column except the 350-watt and 420-watt Landing Lamps. The exact amount of purchase tax to be added to the list prices with suffixes 'A' and 'B' will be found in TABLES A and B respectively on the card insert. Purchase Tax at 22% must be added to list prices with the suffix 'C'.

Miners' see facing page



Switchboard Indicator



Tubular Radio Panel



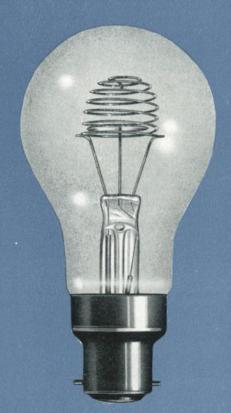
Round Radio Panel



Telewriter



Telephone Visual



Neon Nightlight



Neon Indicator Type T



Neon Cruciform



Switchboard Indicator

These lamps are used on electric control panels and similar installations where visible light output has to be greater than that given by a neon indicator.

Telephone Visuals

It should be noted that these lamps have special caps as will be seen by the illustration. They are made to the exacting requirements of the British Post Office and comply with BS. 1050. They are used extensively in telephone switchboards.

Telewriter Lamps

These lamps are used for general 'indication' purposes particularly for mimic diagrams on indicator boards as used by British Railways for tracing paths of trains.

Radio Panel

The extensive range of Radio Panel Lamps has been developed to provide the radio mechanic with the correct replacement lamp for almost any type of receiver.

Neon

These lamps are used where light output is of secondary importance but where a steady bright glow and low power consumption are required.

The night light type is most suitable for sick rooms and children's nurseries; it is quite safe and gives just the required amount of light without being distracting.

The indicator type of neon lamp is for use on domestic appliances such as cookers or refrigerators. It clearly indicates whether a circuit is open or closed.

Volts Amps. Cap Filament Length Diameter mm.	List Price
	s. d
Switchboard Indicator	

^{*} Purchase Tax must be added to list prices of Switchboard lamps. For the exact amount to be added see TABLE A on the card insert.

[‡] One lamp only is available in each of these voltage ranges, and will be marked 100/130 or 200/260 volts respectively. Lamps are marked 'Switchboard Indicator' and no wattage specified. NOTE: Switchboard lamps are available sprayed in standard colours (Sec. 5) at 2s. 10 d. list.

Teleph	one Visu	uals					
6 12 17 24 50	0·04 0·10 0·045 0·10 0·10	Side Contact Plates and End Piece	No. 2 Metal No. 2 Carbon No. 2 Metal No. 2 Metal No. 2 Carbon	} 44	6.5	2	2¶
12 36 40 50	0·117 0·075 0·068 0·107	Side Contact Plates and End Piece	No. 2 Carbon	44	6.5	2	9¶
Telewi	riter				Sure and		
24 24 50 50	0·05 0·10 0·05 0·10	M.E.S. or M.C.C.	Metal	33	11 max.	3	1¶
¶ Purchase	Tax at 22	% must be added to prices	marked thus ¶.	1	t t		

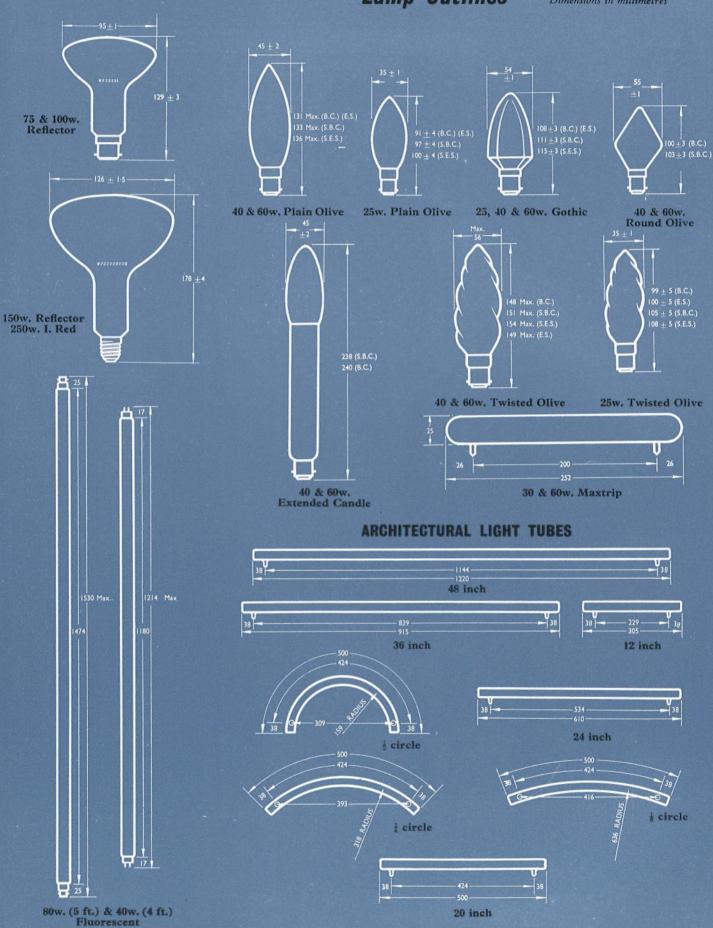
Radio	Panel					
6 6 6·2 6·3 6·5 6·2 6·3 6·5	0·04 0·06 0·30 0·11 0·30 0·30 0·15	Round Bulb M.E.S. Cap Tubular Bulb M.E.S. Cap	Bow	24 24 29 24 24 or 29 30 30 30	11 11 15 11 11 or 15 10 10	1 0 + 1 0 + 7 + 7 + 7 + 7 + 7 + 7 +

^{††} Purchase Tax must be added to these prices. For the exact amount to be added see TABLE B on the card

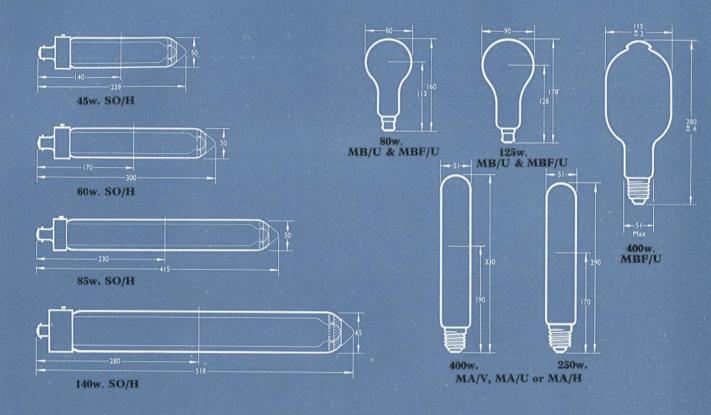
Neon

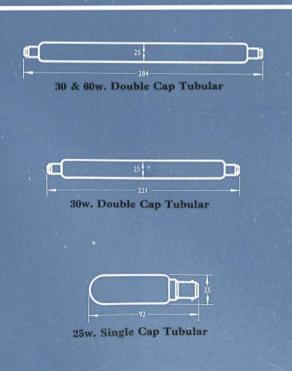
Nightlig	ht type 'N'						
200/220 230/240 250/260	Watts 5	B.C.	_	125 max.	61 max.	4	6 §
Crucifor	m. Contai	ning Cruciform, Le	etters, Numb	ers etc.			
200/220 230/240 250/260	5	B.C. or E.S.	_	106±3	30±1	7	6 §
Indicato	r Type 'I'	•					
200/260	0.5	B.C. S.B.C.	_	56 54	28 18	} 4	0 §

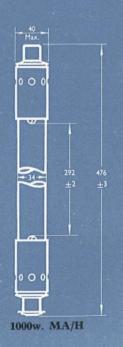
Purchase Tax not chargeable.













Section 24

Lampholders

Catalogue No.	Description (Prices and Full Details on Application)			
C 84456/7	Circular Fluorescent holder and supports			
C 84164	Porcelain B.C. (Sodium Lamps)			
C 87973	Neoprene sleeve for above			
C 87723	G.E.S. Skirted (Tungsten Lamps)			
C 84079	Bi-post (Studio Lamps)			
C 87804	G.E.S. Unskirted (Tungsten Lamps)			
C 88505	Medium Prefocus (Projector Lamps)			
C 83131	Miniature Bi-pin (Miniature Fluorescent Lamps)			
C 76551	B.C. Rubber Sleeve (Fluorescent Lamps)			
C 86267	Fixed B.C. (Fluorescent Lamps)			
C 86486	Medium Bi-pin Compact (Fluorescent Lamps)			
C 83145	Medium Bi-pin (Fluorescent Lamps)			
C 77969	Medium Bi-pin Rubber Sleeve (Fluorescent Lamps)			
C 88542				
C 88543	Pair of holders for 1-kW MA/H Lamp			













C 88505









C 86267

C 88542

C 84456/7

C 84164 & C 87973

G.L.S. Clear and Pearl Section 1 NOMINAL AVERAGE LUMENS THROUGHOUT LIFE*

			VOLTS		
Watts	200—260 Rated at 240	100—130 Rated at 110	60—75	35—55	25
15	112	133	_	_	_
25	200	228	246	262	299
40	390†	449	446	470	526
60	665†	759	747	777	849
75	880†	1000	_	_	_
100	1260†	1400	1395	1435	1535
150	1960	2230	2220	2260	_
200	2720	3090	3070	3160	_
300	4300	4950	4910	5030	_
500	7700	8960	8870	9020	
750	12400	14270	_	_	-
1000	17300	19640	_	_	_
1500	27500	30220	-	_	-

^{*} These values are intended to provide practical guidance for design purposes. † Coiled Coil.

0

Fluorescent Section 7

Watts	Length	Class	Colour	Average Lumens
125	8 ft.	MCFC/U	Warm White Daylight Natural 3500° White	7000 6750 5375 7125
80	5 ft.	MCF/U MCFA/U MCFE/U	Warm White Daylight Natural Colour Matching Deluxe Warm White 3500° White	4240 4080 3200 3040 2640 4320
40	4 ft.	MCF/U MCFA/U MCFE/U	Warm White Daylight Natural Colour Matching Deluxe Warm White 3500° White	2280 2200 1680 1600 1440 2320
40	2 ft.	MCF/U MCFA/U MCFE/U	Warm White Daylight Natural Colour Matching Deluxe Warm White 3500° White	1360 1320 1080 1000 760 1360
30.	3 ft.	MCF/U MCFA/U MCFE/U	Warm White Daylight Natural Colour Matching Deluxe Warm White 3500° White	1530 1470 1170 1080 960 1560
20	2 ft.	MCF/U MCFA/U MCFE/U	Warm White Daylight Natural Colour Matching Deluxe Warm White 3500° White	900 800 640 620 460 900
15	1½ ft.	MCF/U MCFA/U MCFE/U	Warm White Daylight Natural Colour Matching Deluxe Warm White 3500° White	540 555 420 375 330 510

^{*} Through first 5000 hours life.

Silverlight Section 1

Lamp Watts	Nominal Average Lumens throughout Life
Coiled Coil	
40	370
60	630
100	1200
Single Coil	
150	1860
200	2580

Mercury Vapour Sections 9 & 10

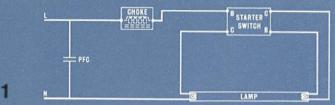
Watts	Average Lumen Output throughout Life
MA/V	
250 400	8750 15600
MA/U†	
250 400	7500 13200
MA/H	
250 400	7500 13200
MB/U	
80 125	2480 3875
MBF/U	
80 125 250 400	2480 3875 9250 16800

[†]In horizontal position. In vertical position 10% higher.

Sodium Vapour Section 9

Watts	Average Lumen Output throughout Life
45	2250
60	3420
85	5525
140	9100

FLUORESCENT SWITCH START CIRCUITS

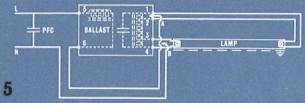


80w., 5 ft. 40w., 4 ft.

Switch Start single-lamp choke-controlled circuit shunt power factor correction to 0.85 lagging.

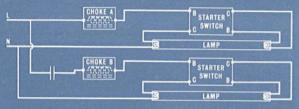
30w., 3 ft. 20w., 2 ft.

FLUORESCENT INSTANT START CIRCUITS

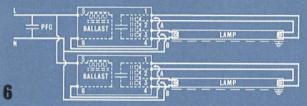


80w., 5 ft. 40w., 4 ft.

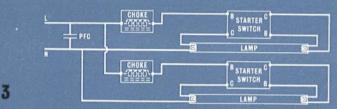
Instant Start single-lamp circuit employing combined choke/transformer ballast unit. Shunt power factor



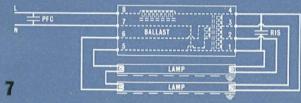
80w., 5 ft. Switch Start phase displaced twin-lamp lead-lag circuit, with near unity power factor.



40w., 4 ft. Instant Start two single-lamp circuits wired in parallel each employing a combined choke/transformer ballast unit. Shunt power factor correction to 0.85 lagging.



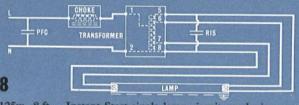
Switch Start two single-lamp choke-controlled circuits wired in parallel shunt power factor correction to 0.85 lagging. 40w., 4 ft.



Instant Start circuit for two lamps in series controlled by one combined choke/transformer ballast unit. 40w., 2 ft. Shunt power factor correction to 0.85 lagging.



Switch Start circuit for two lamps in series controlled 40w., 2 ft. by one choke with shunt power factor correction to 0.85 lagging.



Instant Start single-lamp circuit employing separate choke and starting transformer. Shunt power factor correction to 0.85 lagging. This lamp need not be 125w., 8 ft. earthed.

The instant start circuits listed above are for use with lamps having integral metal strip or silicone coated lamps in an earthed fitting. In low temperatures, dusty atmospheres, and where lamps are used remote from earthed metal, metalstriped lamps are necessary.

Circuit Diagrams

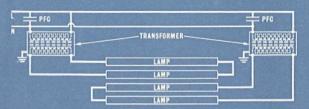
120mA. 8 ft. 6 in. Cold Cathode Three cold cathode lamp circuits controlled by two transformers in tandem operating the lamps in series at 120mA. shunt power factor correction to 0.85 lagging.

Four cold cathode lamp circuits employing two transformers each operating a pair of lamps in series at 120mA, shunt power factor correction to 0.85 lagging.

120mA. 8 ft. 6 in. Cold Cathode

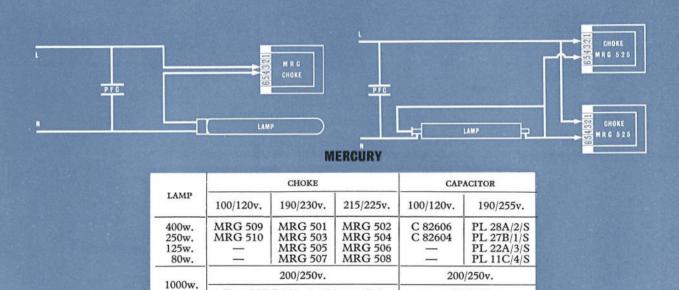
10

LAMP

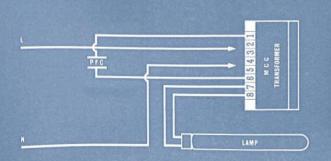


COLD CATHODE

LAMP	TRANSFORMER	CAPACITORS	CIRCUIT NO.
8 ft. 6 in. lamps @ 120mA.	3 Lamp 230/240 Two MB 562	PL 28A/2/S	9
8 ft. 6 in. lamps @ 120mA.	4 Lamp 200/250 Two MB 530 or Two MB 563	Two PL 26	10



Two MRG 525 wired in parallel



SODIUM

C 82602

LAMP .	TRANSFORMER	CAPACITOR
LAME	190/260v.	190/260v.
140w.	MCG 112	PL 31
85w.	MCG 113	PL 26
60w.	MCG 113	PL 26
45w.	MCG 113	PL 27B/1/S

Fluorescent Lamp Auxiliary Gear

Catalogue No.	Lamps	Voltage	Description	Circuit No
MB 530	2—8 ft. 6 in. cold cathode 2 transformers in tandem for	200/250	Transformer tapped	10
562	3—8 ft. 6 in. cold cathode	230/240	Transformer	9
563	2—8 ft. 6 in. cold cathode	200/250	Transformer tapped	. 10
MC 208	125w. 8 ft.	230/250	Instant Start transformer	8
MK 129	2 × 40w. 2 ft. in series	230/240	Choke/Transformer unit	7
134	80w. 60 in.	230/240	do.	5
135	80w. 60 in.	240/250	do.	5
136	40w. 48 in.	200/210	do. including	5 & 6
138	40w. 48 in.	230/240	do. radio	5 & 6
139	40w. 48 in.	240/250	do. [interference]	5 & 6
140	80w. 60 in.	220/230	do. suppressor	5
143	80w. 60 in.	200/210	do. capacitors	5.
145	40w. 48 in.	220/230	do.	5 & 6
MRJ 201	40w. 48 in.	200/210	Choke	1 & 3
202	40w. 48 in.	210/220	do.	1 & 3
004	∫ 40w. 48 in.	230/240	do.	1 & 3
204	30w. 36 in.	200/210	do.	1
205	∫ 40w. 48 in.	240/250	do.	1 & 3
205	(30w. 36 in.	210/220	do.	1
215	20w. 24 in.	200/210	do,	1
216	30w. 36 in.	240/250	do.	1.
219	20w. 24 in.	230/240	do.	1
220	20w. 24 in.	240/250	do.	1
221	30w. 26 in.	230/240	do.	1 0 0
304	∫ 80w. 60 in.	200/250	Tapped choke	1 & 2
	\ 40w. 24 in.	200/240	do.	4
306	125w. 96 in.	230/240	Choke	8
307	125w, 96 in.	240/250	do.	ð

CAPACITORS

Catalogue No.	Capacity	Volt Working	Circuit No.
PL 11C/4/S	7.50 mfd.	250	1, 3, 4, 5, 6, 7 1 & 5
PL 12	3.25 mfd.	250	1 & 5
PL 13	4.50 mfd.	250	1
PL 26	13.00 mfd.	250	10
PL 27B/1/S	15.00 mfd.	250	8
PL 28A/2/S	20.00 mfd.	250	9
PL 51	7.00 mfd.	450	2
C 87079	0.02 mfd.	260	7
C 88507	0.02 mfd.	370	8

STARTERS

Catalogue No.	For use with	Type
ST 23	80w. 60 in. 40w. 24 in. 125w. 96 in.	Thermal Airbreak A.C./D.C.
ST 24	40w. 48 in.	Thermal Airbreak A.C./D.C.
ST 25	30w. 36 in. 20w. 24 in. 15w. 18 in.	} Thermal Airbreak A.C./D.C.
ST 26	80w. 60 in. 40w. 48 in. 30w. 36 in.	Glow type (200/250w. A.C. only)

C 77592—Starter sockets for all above type starters.

Note: All gear listed above is for operation on 50 cycle A.C. supply, and within 200/250v. range only. Details of auxiliary gear to operate on other voltages on application.

The Standard Fluorescent Circuits shown in Section 26 should be wired to the following gear components.

		F SW	ITC	H - S T	ART	ı	HOT CAT	HODE		FX IN	STA	N T - S	TART	•	
		СН	OKE				G: - 1.			BALLAST					
Lamp	200/210 v.	210/220 v.	230/240 v.	240/250 v.	Capacitor	Starter	Circuit No.	Lamp	200/210 v.	220/230 v.	230/240 v.	240/250 v.	Capacitor	R.I.S. Capacitor	Circuit No.
		SI	NGL	E-LA	МР					S	INGI	E-L	AMP		
80w. 5 ft.	MRJ 304	MRJ 304	MRJ 304	MRJ 304	PL 11C	ST 26	1	80w. 5 ft.	MK 143	MK 140	MK 134	MK 135	PL 11C		5
40w. 4 ft.	MRJ 201	MRJ 202	MRJ 204	MRJ 205	PL 12	ST 26	1	40w. 4 ft.	MK 136	MK 145	MK 138	MK 139	PL 12		5
30w. 3 ft.	MRJ 204	MRJ 205	MRJ 221	MRJ 216	PL 12	ST 26	1								
20w. 2 ft. 15w. 1½ ft.	MRJ 215	MRJ 221	MRJ 219	MRJ 220	PL 13	ST 25	1								
			TWO	- LAM	P						TWO	- L A N	M P		
80w. 5 ft.	Two MRJ 304	Two MRJ 304	Two MRJ 304	Two MRJ 304	PL 51	Two ST 26	2	80w. 5 ft.	Two MK 143	Two MK 140	Two MK 134	Two MK 135	Two PL 11C		5+5 connected in paralle
40w. 4 ft.	Two MRJ 201	Two MRJ 202	Two MRJ 204	Two MRJ 205	PL 11C	Two ST 26	3	40w. 4 ft.	Two MK 136	Two MK 145	Two MK 138	Two MK 139	PL 11C		6
40w. 2 ft.	MRJ 304	MRJ 304	MRJ 304	_	PL 11C	Two ST 23	4	40w. 2 ft.	_	-	MK 129	-	PL 11C	C 87079	7
								125w. 8 ft.	-	-	Two MC208 Two MRJ 306	()	Two PL 27	Two C 88507	8+8 connected in paralle

THE FOLLOWING CONNECTIONS SHOULD BE MADE IN ACCORDANCE WITH SUPPLY VOLTAGE

Connections for T	Tapped Units	Supply Voltage	Supply Leads to	Link Terminals
Circuit No. 1	MRJ 304	200/210 220/230 240/250	1 and 4 1 and 3 1 and 3	2 and 3 2 and 3 2 and 4
Circuit No. 2	MRJ 304 (Choke A) MRJ 304 (Choke B)	200/210 220/230 240/250 200/210 220/230 240/250	1 and 4 1 and 3 1 and 3 1 and 3 1 and 3 1 and 4	2 and 3 2 and 3 2 and 4 2 and 4 2 and 3 2 and 3
Circuit No. 4	MRJ 304	200 210/220 230/240	1 and 4 1 and 3 1 and 3	2 and 3 2 and 3 2 and 4
Circuit No. 10	MB 530 or MB 563	200 210 220 230 240 250	3 and 4 2 and 4 1 and 4 3 and 5 2 and 5 1 and 5	
THE FOLLOWI NECESSARY	NG EXTERNA FOR INSTAN	L CONNECTIONS ARE T START BALLASTS	LEAD A TO	LEAD B TO
Circuit No. 5	MK 143 MK 140 MK 134 MK 135	80w.	omit 2 2 2 1	6 3 4 4
Circuit No. 5	MK 136 MK 145 MK 138 MK 139	40w.	2 1 1 1	3 4 4 4

³⁻lamp fittings are wired with one single circuit and one 2-lamp circuit connected in parallel. 4-lamp fittings are wired with two 2-lamp circuits connected in parallel.



A.E.I. Lamp and Lighting Company Limited

Rugby, Warwickshire*

	Telegraphic Address	Telephone Number			Telegraphic	Telephone
Lamp Department	WWW. TOTATION	ager: Mr. W. C. Huston		North-East Region	Address	Number : Mr. G. W. Nattrass
44 Fitzroy Rd., N.W.1*	LAMPLITE			46 Wellington Street,	200 TO THE RESERVE AND THE RES	SLOC UL PERCENTAGENTON
	N.W.I	111111030 7750		Leeds	LAMPLITE	Leeds 31541/4
Lighting Department	Manager	: Mr. C. W. M. Phillips		Mazda Buildings, Campo Lane, Sheffield	LAMPLITE	Sheffield 23086
44 Fitzroy Rd., N.W.1*	LAMPLITE N.W.I	Primrose 7750		24 Northumberland Road, Newcastle	LAMPLITE	Newcastle 26060/2
Publicity Department	Manage	r: Mr. O. W. J. Farmer		26 Tennant Street, Stockton-on-Tees	LAMPLITE	Stockton 66302
18 Bedford Square, W.C.1	LAMPLITE	Langham 7056		Princes Dock Chambers, Princes Dock St., Hull	LAMPLITE	Central 36241
oquate, mon	WESTCENT	Dangham 7050				
Southern Region	Mana	ger : Mr. E. J. Melville		North-West Region Including Isle of Man	Manag	er : Mr. F. C. Tyrrell
				Trafford Park Road, Trafford Park,	LAMPLITE	Trafford Park 3281
132/135 Long Acre, W.C.2	LAMPLITE RAND	Covent Garden 2831		Manchester, 17	FRAFFORD PARK	
44 Fitzroy Road, N.W.1	LAMPLITE N.W.I	Primrose 7750		Ashburton Road, Trafford Park, Manchester, 17	LAMPLITE FRAFFORD PARK	Trafford Park 3281
Brent Road, Southall, Middx.	SPEDILAMP	Southall 2281		27/29 Stanley Street, Liverpool, 1	LAMPLITE	Central 4371/5
133 Fitzroy Street, Cambridge	LAMPLITE	Cambridge 54370 Cambridge 57366		40 Parkgate Road, Chester	LAMPLITE	Chester 26411/2
Culver Street, Colchester	LAMPLITE	Colchester 2843		154-158 Fylde Road, Preston	LAMPLITE	Preston 57891/2
17 Dorset Place, Hastings	LAMPLITE	Hastings 2734		8 Edward Street, Blackpool	LAMPLITE	Blackpool 26936
Bedford House, Bedford Road, Guildford	LAMPLITE	Guildford 67742		38 South William Street, Workington	LAMPLITE	Workington 93
220 High Road, Leytonstone, E.11	LAMPLITE E.II	Maryland 4784/5		Scotland and N. Irelan	d Region	
St. Andrew Street, Norwich	LAMPLITE	Norwich 22541		74 Waterloo Street,		Mr. J. M. Anderson Central 4295/8
90 St. Aldates, Oxford	LAMPLITE	Oxford 4170		Glasgow, C.2 53 Pitt Street,	CT ASCOT IMP	C: 6505
54 St. Vincent Street, Southsea, Portsmouth	LAMPLITE	Portsmouth 4383		Glasgow, C.2	GLASGOLITE	City 6585
74 Oxford Road, Reading	LAMPLITE	Reading 2700		12 Thistle Street, Edinburgh	LAMPLITE	Caledonian 3888/9
33 Carlton Crescent,	LAMPLITE S	Southamp'n 27401/2/3		17 Baltic Street, Dundee	LAMPLITE	Dundee 5600
Southampton				12 Alfred Street, Belfast	LAMPLITE	Belfast 29368/9
Midland Region	Manager	: Mr. R. P. B. Voaden		South-West Region	Manada	or: Mr. S. G. Turner
26/28 Holloway Head, Birmingham, 1	LAMPLITE	Midland 7921/5		National Provincial Bank	LAMPLITE	Cardiff 27495
5 Campbell Street, Leicester	LAMPLITE	Granby 291/2		Buildings, West Bute St., Cardiff		0
Stoke Road,	TRENTLITE	Stoke-on-Trent		6 Gwennyth Street, Cathays, Cardiff	SPEDILAMP	Cardiff 20795
Stoke-on-Trent		47537/8		63 Wind Street, Swansea	LAMPLITE	Swansea 50430 and 50439
17 Grosvenor Street, Cheltenham	LAMPLITE	Cheltenham 2776		1/5 Trinity Street, Bristol, 2	LAMPLITE	Bristol 51494
College Street, Northampton	LAMPLITE	Northampton 2981	2	Mary Arches Street, Exeter	LAMPLITE	Exeter 55749
71/73 Lower Parliament Street, Nottingham	LAMPLITE	Nottingham 43588/9		Chapel Street, Regent Street, Plymouth	LAMPLITE	Plymouth 61915
*With effect from 1st January, 1958 Leicester. Telegraphic Address Leicester 61531.	3, these address : Asteroidal L	ses become—Melton Rd., eicester. Telephone No.		Regional Headquarters		

GENERAL INFORMATION

Standard Packing Quantities

A00 - 25 (F)			(lear Coile	or Pe	earl oil							r Pea e Coi							Silve	rlight						I	Pearl	Pink			
Watts	Ea s.	ach d.	£	25 s.	d.	£	50 s.	d.	E s.	ach d.	£	25 s.	d.	£	50 s.	d.		d.	£	25 s.	d.	£	50 s.	d.	Ea s.	d.	£	25 s.	d.	£	50 s.	d.
15	-	<u></u> ,							1	$6\frac{1}{2}$	1	18	$6\frac{1}{2}$	3	17	1	-	-		_			_		-	_		_			_	
25	-	-		-			_		1	$6\frac{1}{2}$	1	18	$6\frac{1}{2}$	3	17	1	-	-		_			_		-	_		_	9		_)
40	1	9	2	3	9	4	7	6	1	$4\frac{1}{2}$	1	14	$4\frac{1}{2}$	3	8	9	2	0	2	10	0	5	0	0	-			_			_	
60	1	9	2	3	9	4	7	6	1	$4\frac{1}{2}$	1	14	$4\frac{1}{2}$	3	8	9	2	0	2	10	0	5	0	0	1	$7\frac{1}{2}$	2	0	$7\frac{1}{2}$	4	1	3
75	2	$1\frac{1}{2}$	2	13	$1\frac{1}{2}$	5	6	3	1	10	2	5	10	4	11	8	-			-		N.	-		۰.	_		_			_	
100	2	$1\frac{1}{2}$	2	13	$1\frac{1}{2}$	5	6	3	1	10	2	5	10	4	11	8	2	$4\frac{1}{2}$	2	19	$4\frac{1}{2}$	5	18	9	2	1	2	12	1	5	4	2
150				_			_		2	7	3	4	7	6	9	2	3	1	3	17	1	7	14	2	3	1	3	17	1	7	14	2

In the table above are given the Standard Packing Quantities for General Lighting Service lamps from 15 watt to 150 watt in the voltage range 200-260.

The Ready Reckoner given for such quantities shows list price totals and the applicable purchase tax must be added.

Lamp Groups

For discount and similar purposes all electric lamps have been divided into the following groups. The convenience of this classification has promoted its use throughout the trade.

Groups 1 and 9. Filament lamps for general lighting purposes up to 300 volts: Filament lamps for special purposes in 25 to 300 volts (excluding aircraft and trolleybus lamps), projector type lamps in all voltages. Discharge lamps including Fluorescent and Glow discharge lamps. Christmas Tree decoration sets and lamps.

Group 2. Lamps of Battery type in 24 volts and below (28 volts and below for certain aircraft purposes, 40 volts and below for trolleybuses) except those in groups 1, 4, 5, 6, 7, 10 and Flashlamps.

Group 3. Flashlamps

Group 4. Cycle Dynamo

Group 5. Miners'

Group 7. Telephone

Group 10. Radio Panel

How to order lamps

When ordering lamps, the following particulars should be stated:—

Quantity

required .. If possible, order standard packing

quantities.

Voltage .. Wattage .. or amperage.

Service .. e.g. General Lighting, Decorative,

Car etc.

Type or Class e.g. Longlite, A 1, MB/U etc.,

where applicable.

Finish .. e.g. Pearl, Silverlight, Sprayed

etc.

Filament . . e.g. Coiled-coil, Biplane, Axial etc.

Cap .. e.g. B.C., Prefocus P 22d/21 etc.

Example.

Quantity 50, 240 volt 60 watt G.L.S. lamps, pearl, coiled-coil fil., B.C. cap.

Delivery Conditions

Packing and delivery of lamps is free of charge.

This Company will credit or replace lamps broken in transit between their store and the customer's premises provided they are advised at once and the lamps returned, carriage paid, within seven days of date of dispatch, the Company's dispatch note number to be quoted. The Company will not accept responsibility for safe custody of such returned lamps. Claims for transportation and breakage allowance can be entertained by the Company only on their own consignments.

Amendments

Lamp Price Reduction

4w. 6in. Fluorescent Tube (Section 7)

With effect from 5th September, 1957, the list price of the above tube in Warm White, Daylight, Natural, Colour Matching, or De Luxe Warm White, is reduced from 15/- to 11/6.

125w. 8ft. Fluorescent Tube (Section 7)
With effect from 5th September, 1957, the list price of the above tube in Warm White, Natural or 3500°K White is reduced from 25/- to 20/-.

Fitting Price Increase

Mazda Circular Fluorescent Fitting (Section 8) Since going to press, the price of the circular fitting as above has been increased from $\pounds 8:1s.:0d$, to $\pounds 8:10s.:3d$, complete with gear but less lamp.

A.E.I. LAMP AND LIGHTING CO LTD

LAMP CATALOGUE

AL154 ND/8/57

TABLE A Lamps in Groups 1 and 9

Li	ST	PRI	CE	Т	ax	LI	ST	PRIC	CE	Т	ax be
0	ver	Not	Over	to	be	Ov	er	Not (Over		be ded
s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
22223333334444555555	135810026810036811136681112581379036906903690690369	111112222223333333444444555555666667777888889999101001111111111111111111111	$\begin{smallmatrix} 3 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 &$	1 1 1 1	334 4 15 15 16 17 18 15 16 16 17 18 16 16 17 18 16 16 17 18 16 16 17 18 16 16 16 17 18 16 16 16 16 16 16 16 16 16 16 16 16 16	13 13 13 13 14 14 14 15 15 16 16 16 16 16 16 17 17 17 17 18 18 18 18 19 19 20 21 22 22 23 32 44 25 33 34 44 44 45 35 36 46 47 36 37 37 38 38 38 38 38 38 38 38 38 38 38 38 38	036903903690369036903603000600000600000000	13 13 13 14 14 14 15 15 15 16 16 16 16 17 17 17 17 18 18 18 19 19 20 21 22 22 23 24 25 26 27 28 30 30 40 40 40 40 40 40 40 40 40 40 40 40 40	369039036903690360300060000000000000000	2222233333333333333333334444445555666677777888888899	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

TABLE B Lamps in Groups 2, 4 and 10

LIST
Over
57 11 11 11 11 11 11 11 12 24 47 79 05 81 11 22 22 33 33 33 34 44 55 55 66 66 67 26 67 26 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28

LAMP GROUP CLASSIFICATIONS **OVERLEAF**

AMP CLASSIFICATIONS



AIIII OLAGOII	IONTIONO	
Continu	C 9	C
oup 1 Section craft Landing 22	Group 2 Aircraft Lamps (e.	Section
chitectural 3	landing and certain	indi-
Alla A		
or (GTS)	Bus & Trolley Bus	21
our Sprayed (G.L.S.)	Motor Headlamps Motor Side & Tail	17 & 18
ylight Blue 2	Motor Side & Tail	19_
mm. Round Bulb 2 coration Sets & Lamps 5	Motor Stop, Indi	cator
spital Theatre 13	& Festoon	19
ra Red 6	Group 3 Flashlight Lamps	20
rigation 2	Flashinght Lamps	20
on 23	Group 4	
rl (G.L.S.) 1	Cycle Dynamo	20
rl Pink (G.L.S.) 1	Group 5	
to-pearl, Photo-flood 14	Miners'	22
to-enlarger 14	Group 7	
jector Class A1 11	Certain Aircraft	Indi-
jector Class A3, B1, 32, E & F 12	cator	22
12, E & F 12 jector Class G 13	Telephone	23
lector Spotlight &	Group 9	
loodlight 6	Fluorescent Mercury Vapour Sodium Vapour	7 & 8
igh Service 2	Mercury Vapour	9 & 10
n 5	Sodium Vapour	9
rerlight (G.L.S.) 1	Group 10	
dio (Photographic) 14	Radio Panel	23
itchboard Indicator 23	Certain Aircraft	Indi-
eatre Spotlight 13	cator	22
action 21	Unclassified	-
iffic Signal 21	Cold Cathode	7
bular Floodlight 13	Electronic Flash Photoflash	15
bular 3 bular Floodlight 13	r notonasn	10
AMP LIFE GL	IARANTEE	
AIIII EIIE GO	MINANIEL	
prescent tubes type MCF/U	within the range 15w.	to 125w.
any lamp failing within tw	elve months from th	e date of
chase by the user (or pri	ior to 3000 hours	burning,
ichever is the shorter) exc	cept through misuse	will be
laced free of charge.		
XTRAS		
AINAO		
tras for Special Finishin	ig and Non-standa	rd Caps
lour Spraying and Exter	rnal Frosting	
e following extra charges	will be made for	Colour
aying or Frosting Group 1	lamps not thus liste	d in this
alogue.		
		Each
		Extra
Group 1 lamps up to 150w.	(inclusive) 1	d. 0
Group 1 lamps over 150w.		0
100 miles	=	
vering	1 1 7	0
Group 1 lamps of any listed	l voltage 7	0
ps		
e following extras will appl		
fitted to quantities of less		lamps of
Group, in place of the lis		
1) B.C., E.S., S.B.C., S. C.C., 3-pin B.C. or Bos	E.S., S.C.C.,	
C.C., 3-pin B.C. or Bos	ch 1	0
 G.E.S., Medium Prefo Clamp Caps	9	0
3) Bell and Howell 38 or 4		0
4) Large Prefocus Cap		ő
5) Extras for 1000 and	over identical	
lamps	01	appl'n