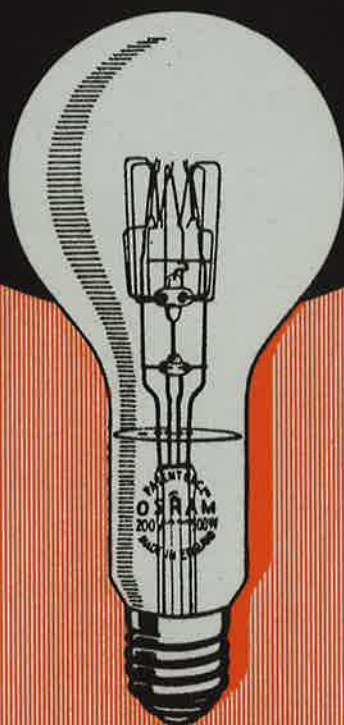
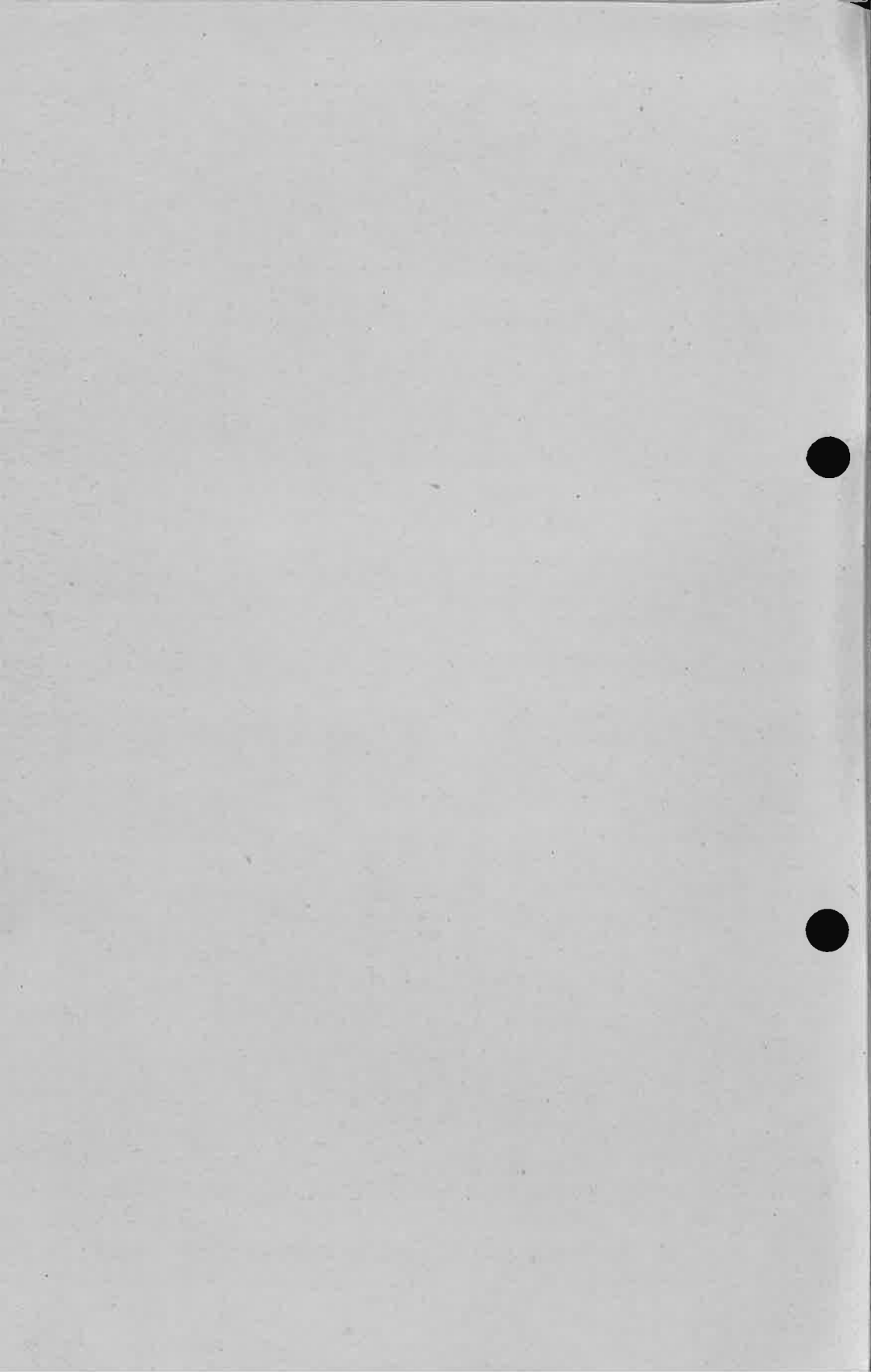


Osram

PROJECTOR LAMPS



A **S&C** Product





REGD. TRADE MARK

GASFILLED PROJECTOR LAMPS

(MADE IN ENGLAND)

INTRODUCTION

The production of OSRAM Gasfilled Projector Lamps opened a new chapter in the art of light projection, and year by year as new types have been produced, the field has grown, until other forms of illuminant have almost entirely been displaced.

The use of these lamps is by far the most satisfactory way of obtaining the concentrated source of light so necessary for many optical photographic and floodlighting purposes. For simplicity, efficiency and accuracy of effect the OSRAM Gasfilled Projector Lamp has proved itself to be unsurpassed.

Continual research is being carried out, and satisfactory as is the present OSRAM Projector Lamp, improvements to increase the scope and ability of the lamps are being made every day.

The chief characteristics of these lamps are the very concentrated filament (operating at a very high temperature), and the small bulb which contains this filament. As a consequence, all the elements of the lamp are stressed to a much greater extent than normally, and the margin of safety is correspondingly reduced, so that the raw material and every stage in manufacture have to be controlled and scrutinised with the utmost care.

Recent technical developments have resulted in a very great improvement in the reliability and uniformity of performance of OSRAM Projector Lamps, so that the annoyance caused by unexpected failure has been largely reduced. At the same time, steady increases have been made in the quality of light available, whilst improved methods of coiling filaments—the use of the coiled coil construction for instance—and filament mounting have made possible smaller filaments without any sacrifice in mechanical strength.

Continued overleaf.

THE GENERAL ELECTRIC CO., LTD.

(Manufacturers and Wholesale only)

Head Office : Magnet House, Kingsway, London, W.C.2.

Telephone : TEMple Bar 8000 (90 lines). Telegrams : Electricity, Westcent, London.
Cablegrams : Polyphase, London.

Branches throughout Great Britain and in all principal markets of the world.

Continued from previous page.

Indeed, changes in the technique of manufacture of tungsten filament wire and its subsequent heat treatment have made OSRAM Gasfilled Projector Lamps less and less susceptible to the effects of vibration and rough usage.

Users of OSRAM Gasfilled Projector Lamps may perhaps get a better idea of the difficulties of manufacture that have been so successfully overcome when it is realised that the filaments operate at a temperature above that of the oxy-acetylene flame and higher than the *boiling point* of iron. At these temperatures the fine wire—often only one-thousandth of an inch in diameter—must maintain its position rigidly with the very minimum of support; the movement of only a fraction of a millimetre is sufficient in many cases to bring about the immediate failure of the lamp.

The special technique of glass manufacture necessary for the bulbs of OSRAM Gasfilled Projector Lamps is also worthy of mention, as it is only as a result of exhaustive experiments at the G.E.C. Research Laboratories that it has been possible to develop glasses capable of withstanding the very high temperatures generated by the filaments of projector lamps.

The General Electric Co., Ltd., has led the world in scientific investigation into glass production, and as a result has been able to manufacture glasses having higher softening points than ever before. The outcome of this is that there are now available lamps having very small bulbs for a given wattage, which can be used in optical projectors to bring the filament very close to the lens or reflector, thereby increasing the optical efficiency of the unit.

Special optical jigs and other devices are regularly used in the OSRAM G.E.C. Lamp Works to ensure the proper positioning of the filament in relation to the cap, thus rendering the changing of lamps a simple process, which can be carried out by an unskilled operator without the necessity of expert re-focussing in order to obtain satisfactory results.

In addition to regular and exhaustive tests upon raw materials and during the processes of manufacture, each and every OSRAM Gasfilled Projector Lamp is carefully tested at full voltage before dispatch from the works, and any showing even the slightest signs of weakness are ruthlessly scrapped by inspectors who act independently of the Production Department.

The whole testing system is unique in the electrical industry, and guarantees to the user that OSRAM Gasfilled Projector Lamps can be relied upon to give the maximum satisfaction in performance.

The material listed in this Publication is offered subject to the Company's Terms of Business and Conditions of Sale, a copy of which may be obtained on request. Prices apply in Great Britain and Northern Ireland.



GASFILLED

PROJECTOR LAMPS

OUTSTANDING ADVANTAGES.

OSRAM Gasfilled Projector Lamps have several definite advantages over the arc and other earlier forms of projector lamps :—

1. The light, besides being of the highest intensity, is absolutely steady and silent.
2. The lamps are always ready for immediate use.
3. They are made for all standard voltages so that they can be run direct off any standard lighting mains, whether alternating or direct current systems.
4. They require no attention, whereas the arc lamp needs frequent replacements of carbons and continual regulation.
5. The risk of fire, and of breaking valuable condenser lenses, is eliminated.
6. High optical efficiency is assured by the concentrated form of filament used, made possible by the use of specially treated tungsten wire, which does not sag.
7. The lamp is robust and can be handled with freedom.
8. With the OSRAM Tubular Projector Lamp the source of light can be brought close up to the lens, and a short focus condenser used, thus enabling an unusually large amount of light to pass through the lens. The high efficiency so obtained can be increased by placing a reflector close behind the lamp.
9. There are no deposits or fumes to corrode the adjusting screws and guides, or cloud the lens. The inside of the lantern keeps perfectly clean, a valuable feature in micro-photography, and in the enlargement of photographs.
10. In stage lighting, many beautiful effects hitherto unattainable can be obtained by the use of OSRAM Gasfilled Projector Lamps, owing to the more flexible control of the beam of light.
11. The light output of OSRAM Gasfilled Projector Lamps is practically constant throughout their life. Blackening of the bulbs has been reduced to an imperceptible amount by the use of chromium-plated support wires and other highly technical refinements.

CONVERSION OF APPARATUS.

Most types of optical apparatus made for other forms of illuminant can be adapted at small cost to take OSRAM Gasfilled Projector Lamps.

TECHNICAL SERVICE.

The types shown in this catalogue represent a series which experience has shown will fulfil all ordinary requirements in connection with standard optical and projecting apparatus. The General Electric Company, Ltd., has, however, developed various special purpose types which are not included in this list.

The OSRAM Technical Department of the Company, having made an exhaustive investigation of the employment of OSRAM Projector Lamps in all types of apparatus, will be pleased to discuss with enquirers special requirements in projector lamps.



GASFILLED

PROJECTOR LAMPS

CLASSIFICATION

OSRAM Projector Lamps are supplied in a number of different shapes and dispositions of filament which for convenience are designated by Classes.

Below are given the Classes and the uses for which the respective lamps have been specially designed :—

CLASS A.1.

Bulb Shape.—Tubular. *Burning Position.*—Vertical, cap down. *Approximate Life.*—100 hours.

Lighting Service.—Cinematograph Projectors.—Home Cinemas.—Optical Lanterns.—Photographic Enlarging Apparatus. *See page 9*

CLASS A.2.

Bulb Shape.—Round. *Burning Position.*—Vertical, cap down. They may be tilted slightly without reducing their life. *Approximate Life.*—300 hours.

Lighting Service.—Stage Limes, Spotlights, etc. *See page 11*

CLASS A.3.

Bulb Shape.—Round. *Burning Position.*—Horizontal. They may be tilted slightly without reducing their life. *Approximate Life.*—300 hours.

Lighting Service.—Spotlights.—Stage Limes.—Medical Examination Tubes.—Advertising Projectors, etc. *See page 13*

CLASS B.1.

Bulb Shape.—Round. *Burning Position.*—These lamps may be used in any position, except within 45° from the vertical, cap upwards. *Approximate Life.*—800 hours.

Lighting Service.—Floodlighting the exterior of buildings where a narrow beam of light is required. For use in Theatre Spots and Floods, where length of life and hardness are more important than very high optical efficiency. Also for interior illumination with special fittings. *See page 15*

CLASS B.2.

Bulb Shape.—Pear. *Burning Position.*—Any. *Approximate Life.*—800 hours.

Lighting Service.—Floodlighting the exterior of buildings where a narrow beam of light is required. For use in Theatre Spots and Floods, where length of life and hardness are more important than very high optical efficiency. Also for interior illumination with special fittings. *See page 15*

CLASS E.

Bulb Shape.—Round. *Burning Position.*—Any position within 45° from vertical, cap down. *Approximate Life.*—100 hours.

Lighting Service.—Epidiascope Apparatus and Theatre and Studio Spotlights. *See page 17*



GASFILLED

PROJECTOR LAMPS

CLASSIFICATION (*continued*)

CLASS F.

Bulb Shape.—Round. *Burning Position.*—Horizontal up to, and including, 24 watts. Vertical for larger wattages. *Approximate Life.*—100 hours.

Lighting Service.—Small Home Cinemas.—Delicate Surgical and Ophthalmic Inspection Work, Small Advertising Projectors, Motor-Boat Searchlights, etc. *See page 19*

CLASS G.

Bulb Shape.—Tubular. *Burning Position.*—Vertical, cap down. *Approximate Life.*—100 hours.

Lighting Service.—Exciter Lamps for use in conjunction with Photo-cells for Sound Film reproduction and similar purposes. *See page 21*

CINEMA STUDIO LAMPS.

Bulb Shape.—Round. *Approximate Life.*—100 hours.

Lighting Service.—Film production, studio lighting, large Spotlights and Searchlights. *See page 23*

TUBULAR HORIZON LAMPS.

Bulb Shape.—Tubular. *Approximate Life.*—1,000 hours.

Lighting Service.—Wide beam floodlighting and stage work. Also for Aerodrome Lighting with lamps of special efficiency. *See page 21*

SIZE OF CLASS A.1 OSRAM PROJECTOR LAMP REQUIRED FOR OPTICAL LANTERNS.

On pages 6 and 7 will be found particulars of the sizes of OSRAM Projector Lamps generally used in a number of makes of optical lanterns.

When in doubt as to the correct size of Class A.1 Projector Lamp to use, it is advisable under favourable conditions and when a reflector is used behind the lamp to allow :—

At least 5 watts per square foot of screen surface for standard size lantern slides.

At least 7 watts per square foot of screen surface for cinematograph films.

Extra wattage must be allowed for very long throws, coloured slides and tinted films.



GASFILLED

PROJECTOR LAMPS

Types of OSRAM Projector Lamps generally used in the following Projection Apparatus :—

Apparatus.	Manufactured or Supplied by.	Type of OSRAM Projector Lamp recommended.
Pattern 45 " Miniature " Spotlight	The Strand Electric and Engineering Co., Ltd.	250w. Class B.1 round bulb projector lamp with E.S. cap.
Pattern 44 " Baby " Spotlight	Do.	500w. Class B.1 round bulb projector lamp with G.E.S. cap.
Pattern 43 Focus Lantern	Do.	1,000w. Class B.1 round bulb projector lamp with G.E.S. cap.
Pattern 50 " Pageant " Lantern	Do.	1,000w. Class A.1 tubular or Class B.1 projector lamp with G.E.S. cap.
Pattern 43a " Batten " Focus Lantern	Do.	1,000w. Class A.1 tubular or Class B.1 projector lamp with G.E.S. cap.
Pattern 51 " Optical Effect " Lantern	Do.	1,000w. Class A.1 tubular projector lamp with G.E.S. cap.
Pattern 27 " Float Baby " Spot	Do.	100w. or 250w. Class B.1 round bulb projector lamp with E.S. cap.
Pattern 52 2,000w. Focus Lantern	Do.	2,000w. round bulb Cinema Studio-Spotlight lamp with G.E.S. cap.
Optical Lanterns (all types)	Cinema Traders, Ltd.	Class A.1 and A.3 with E.S. cap.
Focuslite Outfits (all types)	Do.	Class A.1 and A.3 with E.S. cap.
No. 51 Self-contained Mirror Bowl	Do.	500w. Class A.1 with E.S. cap.
No. 54 Spotlight	Do.	100w. Class A.3 with E.S. cap.
No. 55 Spotlight	Do.	250w. Class A.1 with E.S. cap.
No. 58 Spotlight	Do.	500w. Class A.1 with E.S. cap.
No. 59 Spotlight	Do.	1,000w. Class A.1 with G.E.S. cap.
No. 61 Cabaret Flood	Do.	500w. General Service with G.E.S. cap.
No. 150 Floodlight	Do.	300w. to 500w. General Service with G.E.S. cap.
No. 63 Searchlight	Do.	500w. Class A.1 with E.S. cap.
No. 157/161 Floodlight	Do.	500w. Photographic with E.S. cap.
Pattern 73 Mirror Spot	The Strand Electric and Engineering Co., Ltd.	1,000w. Class A.1 or B.1 projector lamp with G.E.S. cap.
Pattern 41 Photo. Flood	Do.	1,000w. Class A.1 projector lamp with G.E.S. cap.
Pattern 46B Photo. Spot	Do.	2,000w. cinema studio projector lamp with G.E.S. cap.

Special Types of OSRAM Projector Lamps generally used in the following Special' Projection Apparatus. The lamps may be obtained from the manufacturers given below :—

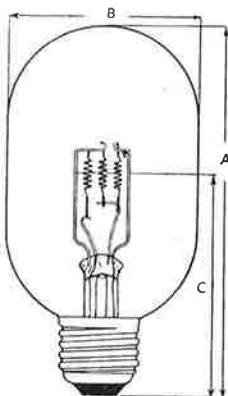
Apparatus.	Manufactured or Supplied by.	Type of OSRAM Projector Lamp recommended.
Monolite Lantern Outfits	Ensign, Ltd. High Holborn, London, W.C.2.	250w. or 500w. Class A.1 tubular projector lamp with E.S. cap.
" Alpha " or SS 100 Projector	Do.	60v. 100w. Class A.1 projector lamp with E.S. cap.
" Silent Sixteen " SS 180 Projector	Do.	60v. 180w. Class A.1 projector lamp with E.S. cap.
" Super Cine " SS 250 Projector	Do.	50v. 250w. Class A.1 projector lamp with prefocus cap.
Ensign " 50 " Projector	Do.	60v. 50w. Class A.1 tubular projector lamp with small bayonet cap.
Ensign " 100B " Projector	Do.	100v. 100w. Class A.1 projector lamp with prefocus cap and 25 mm. bulb.
Ensign " 300B " Projector	Do.	100v. 300w. Class A.1 projector lamp with prefocus cap.
" Optiscope " Lantern No. 6	Do.	250w. or 500w. Class A.1 tubular projector lamp, silver backed, with E.S. cap.
" Optiscope " Lantern No. 9	Do.	250w. or 500w. Class A.1 tubular projector lamp, silver backed, with E.S. cap.
Kodascope " A "	Kodak, Ltd., Kingsway, London, W.C.2.	50v. 200w. or 250w. Class A.1 tubular projector lamp with prefocus or E.S. cap.
Kodascope " B "	Do.	50v. 200w. or 250w. Class A.1 tubular projector lamp with prefocus cap.
Kodascope " C "	Do.	100v. 100w. Class A.1 tubular projector lamp with prefocus cap and 25 mm. bulb.
Kodascope " D " and " E "	Do.	100v. 300w. Class A.1 projector lamp with prefocus cap.
Kodascope " L "	Do.	100v. 300w., 110v. 500w., 110v. 750w. Class A.1 projector lamp with prefocus cap.
Kodatoy	Do.	115v. 50w. Class A.1 projector lamp with A.S.C.C. cap.
Kodalite "A" and " B "	Do.	500w. Class A.1 projector lamp with prefocus cap.
Kodalite " E "	Do.	500w. Photographic lamp with E.S. cap.
Kodak Spotlight	Do.	500w. Class A.1 or Class E projector lamp with E.S. cap.
Pathescope " B " Projector	Pathescope, Ltd., North Circular Road, Cricklewood, London, N.W.	110v. 200w. Class A.1 projector lamp with special " Pathé " cap.
Pathescope " Imp "	Do.	19v. 10w. Type C small tubular projector lamp.
Pathescope " Ace "	Do.	16v. 8w. round bulb projector lamp.
Pathescope " Ace "	Do.	18v. 9w. round bulb projector lamp.
Pathescope " Rex "	Do.	16v. 128w. round bulb projector lamp.



GASFILLED

PROJECTOR LAMPS

CLASS A.1 TUBULAR—VERTICAL BURNING



Class A.1 OSRAM Gasfilled Projector Lamp.

DIMENSIONAL DATA.

Voltage.	Watts.	Dimensions mm.			Approx. area of filament. Width × Height.	Standard Cap.
		A Overall length ±10.	B Diameter ±2.	C Light centre length ±5.		
		mm.	mm.	mm.	mm.	
30	100	135	32	75	6 × 6	E.S.
	250	135	63	75	8 × 8	E.S.
	600	230	63	120	13 × 12	G.E.S.
	900	230	63	120	14 × 12	G.E.S.
50	200	135	32	75	6 × 7	E.S.
	250	135	32	75	7 × 8	E.S.
	500	135***	63	75**	14 × 12	E.S. or G.E.S.
60	100	135	25	75	5 × 7	E.S.
100	300*	135	32	55.6 †	11 × 10	Prefocus
110	500*	135	32	55.6 †	9 × 9†	Prefocus
110	750*	135	38	55.6 †	10 × 10†	Prefocus
100 and 110	100	135	32 or 25	75	10 × 9	B.C. or E.S.
	250	135	32	55.6	11 × 10	Prefocus
	250	135	63	75	11 × 10	E.S.
	500	135***	63	75**	13 × 16	E.S.
	1000	230	63	120	16 × 15	G.E.S.
200 to 260	100	135	32	75	8 × 13	B.C. or E.S.
	250	135	63	75	11 × 13	E.S.
	500	135***	63	75**	15 × 18	E.S.
	1000	230	63	120	17 × 20	G.E.S.

* Forced cooling is essential.

** 90 mm. with G.E.S. cap. *** 150 mm. with G.E.S. cap.

† Biplane Filament, life 25 hours.

‡ ± 0.5 mm. from centre of filament to top of cap flanges.

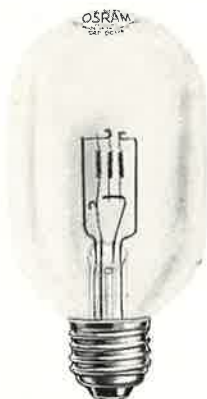
Mogul prefocus caps can be supplied instead of G.E.S. caps, in which case the light centre length measured from the bulb side of cap flange to the centre of filament is 35 mm. less than that quoted for G.E.S. caps. Medium prefocus caps can be supplied instead of E.S. if required, when the light centre length will be 55.6 ± 0.5 mm., measured from bulb side of flange.



GASFILLED

PROJECTOR LAMPS

CLASS A.1 TUBULAR. GRID FILAMENT
VERTICAL BURNING



CLASS A.1

BURNING POSITION.

The shaded portion of this diagram shows the position in which this lamp **MUST NOT** BE MOUNTED.



250 watts (Class A.1) OSRAM
Gasfilled Projector Lamp.

(Illustration approximately half full size.)

100 watts (Class A.1) OSRAM
Gasfilled Projector Lamp.

(Illustration approximately half full size.)

These lamps have grid filaments and must be burned **vertically**, cap below. Tilting the lamp results in reduction of burning life. Suitable for **OPTICAL LANTERNS, SPOT-LIGHTS, PHOTOGRAPHIC ENLARGING, ADVERTISING PROJECTORS, HOME CINEMAS, ETC.**

CAUTION.—It is essential for **projector** lamps to be used in the position for which they are designed, and for the **apparatus** in which they are used to be **well ventilated**, otherwise their life may be seriously reduced.

WATTAGES, VOLTAGE RANGES AND PRICES.

For Dimensions see opposite page.

Watts.	Diam.	Voltages and Price per Lamp.																
		30 volts.			50 volts.			60 volts.			110 volts.			100 and 110 volts.		200 to 260 volts.		
	mm.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		
100	—	11	9		1	1	0	12	6					10	9			
200	—																	
250	32				1	1	0				1	1	0	1	0	0		
250	63	1	2	6							1	0	0					
300	—										1	6	0†					
500	32																	
500	63				1	6	0			1	17	6		1	4	0		
600	—	1	15	0														
750	—									2	2	6						
900	—	1	15	0														
1000	—												1	10	0	1	10	0

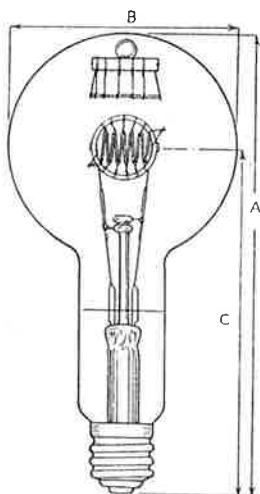
† 100 volts only.

Prefocus caps, where not standard, can be supplied at 1/- extra.
Mogul prefocus caps instead of G.E.S., 2/6 extra.



GASFILLED PROJECTOR LAMPS

CLASS A.2



CLASS A.2 OSRAM Gasfilled Projector
Lamp.

DIMENSIONAL DATA.

Voltage.	Watts.	Dimensions mm.			Approx. area of filament. Width × Height.	Cap.
		A Overall length ±10.	B Diameter ±2.	C Light centre length ±5.		
20 and 110	80	80	60	30	†9	S.B.C.
	100	115	75	80	10 × 13	E.S.
	250	160	90	115	11 × 10	E.S.
	500	250	120	190	13 × 16	G.E.S.
	1000	300	150	225	17 × 23	G.E.S.
	1500	330	170	250	22 × 32	G.E.S.
	2000	350	200	250	26 × 34	G.E.S.
	3000	395	240	275	30 × 35	G.E.S.
200 to 260	100	115	70	80	8 × 18	E.S.
	250	160	90	115	11 × 13	E.S.
	500	250	120	190	15 × 18	G.E.S.
	1000	300	150	225	20 × 36	G.E.S.
	1500	330	170	250	26 × 38	G.E.S.
	2000	350	200	250	22 × 35	G.E.S.
	3000	395	240	275	30 × 42	G.E.S.

† Line filament.



GASFILLED

PROJECTOR LAMPS

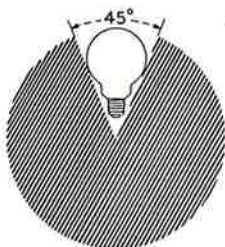
CLASS A.2

ROUND BULB. GRID FILAMENT. VERTICAL BURNING
CAP DOWN



100 watts (Class A.2) OSRAM
Projector Lamp.

(Illustration approximately
one-third full size.)



CLASS A.2.

The shaded portion of this
diagram shows the position
in which this lamp MUST
NOT BE MOUNTED.



1500 watts (Class A.2)
OSRAM Projector Lamp.

(Illustration approximately
one-sixth full size.)

The round bulb causes a small reduction in optical efficiency by keeping the reflector further away from the filament than in Class A.1, listed on page 9. These lamps may be tilted slightly without reducing their life. Suitable for STAGE LIMES, SPOTLIGHTS, ETC.

CAUTION.—It is essential for projector lamps to be used in the position for which they are designed, and for the apparatus in which they are used to be well ventilated, otherwise their life may be seriously reduced.

WATTAGES, VOLTAGE RANGES AND PRICES.

For Dimensions see opposite page.

Watts.	Voltages and Price per Lamp.					
	100 and 110 volts.			200 to 260 volts.		
	£	s.	d.	£	s.	d.
80		8	6†		—	
100		10	9		10	9
250	1	0	0	1	0	0
500	1	7	6	1	7	6
1000	1	18	0	1	18	0
1500	2	12	6	2	15	0
2000	3	16	0	4	6	0
3000	5	5	0	5	15	0

† 20 volts only.

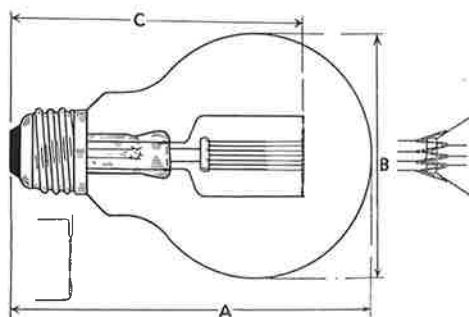


GASFILLED

PROJECTOR LAMPS

CLASS A.3

ROUND BULB. HORIZONTAL BURNING



Class A.3 OSRAM Gasfilled Projector Lamp.

DIMENSIONAL DATA.

Voltage.	Watts.	Dimensions mm.			Approx. area of filament. Width × Height.	Cap.
		A Overall length ±10.	B Diameter ±2.	C Light centre length ±5.		
		mm.	mm.	mm.	mm.	
100 and 110	100	115	75	95	10 × 15	E.S.
	250	160	90	120	13 × 13	E.S.
	500	250	120	205	15 × 18	G.E.S.
	1000	300	150	240	17 × 23	G.E.S.
	1500	335	170	270	22 × 32	G.E.S.
200 to 260	100	115	75	95	10 × 13	E.S.
	250	160	90	120	14 × 15	E.S.
	500	250	120	205	20 × 15	G.E.S.
	1000	300	150	240	20 × 36	G.E.S.
	1500	335	170	270	26 × 38	G.E.S.



GASFILLED

PROJECTOR LAMPS

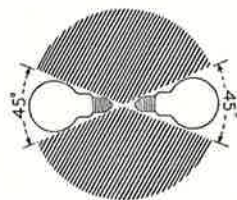
CLASS A.3

ROUND BULB. GRID FILAMENT. HORIZONTAL BURNING



100 watts (Class A.3) OSRAM Gasfilled Projector Lamp.

(Illustration approximately half full size.)



BURNING POSITION.

The shaded portion of this diagram shows the position in which this lamp MUST NOT BE MOUNTED.

Suitable for SPOTLIGHTS, STAGE LIMES, MEDICAL EXAMINATION TUBES, ADVERTISING PROJECTORS, ETC.

WATTAGES, VOLTAGE RANGES AND PRICES.

For Dimensions see opposite page.

Watts.	Voltages and Price per Lamp.					
	100 and 110 volts.			200 to 260 volts.		
	£	s.	d.	£	s.	d.
100		10	9		10	9
250	1	0	0	1	0	0
500	1	7	6	1	7	6
1000	1	18	0	1	18	0
1500	2	12	6	2	15	0

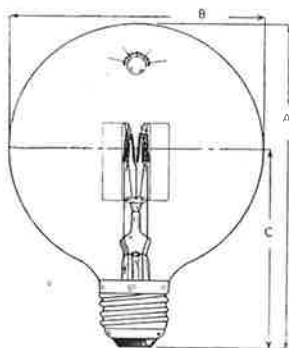
VENTILATION.—Owing to concentration of filament and small size of bulb, it is important that the lantern should be ventilated, otherwise the life of the lamp may be seriously reduced.



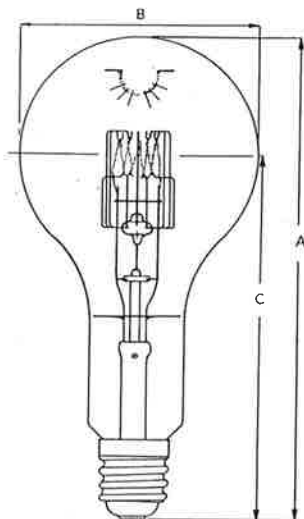
GASFILLED

PROJECTOR LAMPS

CLASS B.1 AND B.2



Class B.1 OSRAM Projector Lamp.



Class B.2 OSRAM Projector Lamp.

DIMENSIONAL DATA.

CLASS B.1.

Voltage.	Watts.	Dimensions mm.			Approx. area of filament. Width × Height.	Cap.
		A Overall length ± 10.	B Diameter ± 2.	C Light centre length ± 5.		
100 to 130	100	mm.	mm.	mm.	mm.	E.S.
	250	130	80	75	10 × 11	E.S.
	500	122	95	75	8 × 11	G.E.S.
	1000	190	130	115	11 × 14	G.E.S.
200 to 260	100	130	80	75	10 × 10	E.S.
	250	122	95	75	11 × 10	E.S.
	500	190	130	115	15 × 15	G.E.S.
	1000	190	130	115	20 × 25	G.E.S.

CLASS B.2.

200 to 260	500 1000	267 300	130 150	202 225	15 × 20 25 × 25	G.E.S. G.E.S.
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GASFILLED

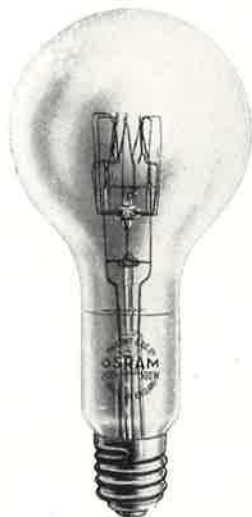
PROJECTOR LAMPS

CLASS B.1 AND B.2



BURNING
POSITION.

The shaded portion of
this diagram shows the
position in which the
Class B.1 lamp **MUST**
NOT BE MOUNTED.



250 watts (Class B.1) OSRAM
Gasfilled Projector Lamp.

(Illustration approximately one-third
full size.)

500 watts (Class B.2) OSRAM
Projector Lamp.

(Illustration approximately one-quarter
full size.)

CLASS B.1.

ROUND BULB. BUNCH FILAMENT. FLOODLIGHTING TYPE.

These lamps may be used at any angle except within 45° of vertical (cap upwards). They are suitable for floodlighting, and also for types of theatre spotlights in which ability to withstand rough usage is more important than high optical efficiency.

CLASS B.2.

STANDARD GENERAL SERVICE BULB. BUNCH FILAMENT.

These lamps can be used in any position.

WATTAGES, VOLTAGE RANGES AND PRICES.

For Dimensions see opposite page.

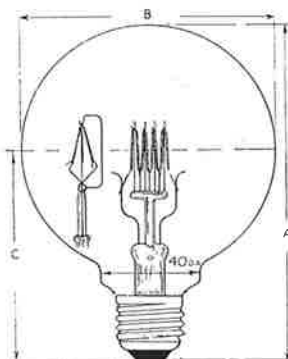
Watts.	Voltages and Price per Lamp.					
	100 to 130 volts.			200 to 260 volts.		
	£	s.	d.	£	s.	d.
Class B.1 {	100	9	0	9	0	
	250	17	6	17	6	
	500	1	3 0	1	3 0	
	1000	1	10 0	1	10 0	
Class B.2 {	500	—		1	3 0	
	1000	—		1	10 0	



GASFILLED

PROJECTOR LAMPS

CLASS E



OSRAM Gasfilled Epidiascope Lamp.

DIMENSIONAL DATA.

Voltage.	Watts.	Dimensions mm.			Approx. area of filament. Width × Height.	Cap.
		A Overall length ±10.	B Diameter ±2.	C Light centre length ±5.		
100 and 110	500	mm.	mm.	mm.	mm.	E.S.
		135	100	85	13 × 16	
200 to 260	500	135	100	85	15 × 18	E.S.

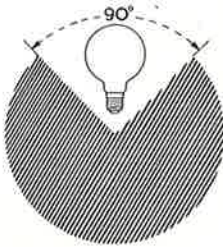


GASFILLED

PROJECTOR LAMPS

CLASS E

ROUND BULB. GRID FILAMENT. EPIDIASCOPE TYPE



BURNING POSITION.

The shaded portion of this diagram shows the position in which this lamp **MUST NOT BE MOUNTED.**



500 watts (Class E) OSRAM Gasfilled Epidiascope Lamp.

(Illustration approximately one-third full size.)

This class is specially designed for EPIDIASCOPE apparatus. It is suitable also for spotlight and shop window projectors, which have to be rotated through wide angles. They can be used safely in any position up to 45° from vertical, cap downwards.

WATTAGE, VOLTAGE RANGES AND PRICES.

For Dimensions see opposite page.

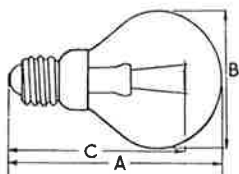
Watts.	Voltages and Price per Lamp.					
	100 and 110 volts.			200 to 260 volts.		
	£	s.	d.	£	s.	d.
500	1	10	0	1	10	0



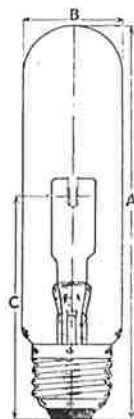
GASFILLED

PROJECTOR LAMPS

CLASS F



24 watts (Class F)
Horizontal Burning OSRAM
Gasfilled Projector Lamp.



100 watts (Class F)
Vertical Burning OSRAM
Projector Lamp.

DIMENSIONAL DATA.

Voltage.	Watts.	Dimensions mm.			Approx. area of filament. Width × Height.	Cap.
		A Overall length ±10.	B Diameter ±2.	C Light centre length ±5.		
		mm.	mm.	mm.	mm.	
4	8	60	38	50	*4	S.E.S.
6	24	60	38	50	*4	E.S.
12	24	60	50	50	*6	S.B.C.
12	48	70	50	40	4 × 3	E.S.
†12	100	135	32	75	5 × 6	E.S.
†12	300	135	63	90	*18	G.E.S.

* Filament length.

† Tubular bulb.



GASFILLED

PROJECTOR LAMPS

CLASS F

EXTRA LOW VOLTAGE



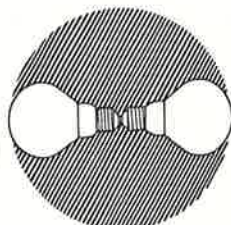
100 watts
(Class F)
OSRAM
Gasfilled
Projector
Lamp.



BURNING POSITION.
The shaded portion of
this diagram shows the
position in which this
lamp **MUST NOT BE**
MOUNTED.



24 watts (Class F)
OSRAM Gasfilled Pro-
jector Lamp.



BURNING POSITION.
The shaded portion of
this diagram shows the
position in which this
lamp **MUST NOT BE**
MOUNTED.

(Illustrations approximately half full size.)

These lamps, though of low wattage, give a very intense, concentrated light. They are specially suitable for all purposes where small dimensions in the apparatus employed is of primary importance. The 8 and 24 watts lamps have line filaments, the 48 and 100 watts twin pillar filaments. The 48, 100 and 300 watts sizes are designed for vertical burning.

WATTAGES, VOLTAGE RANGES AND PRICES.

For Dimensions see opposite page.

Watts.	Volts.	Price per Lamp.		
		£	s.	d.
8	4		3	9
24	6		4	3
24	12		3	9
48	12		3	9
100	†12		10	9
300	†12	1	12	6

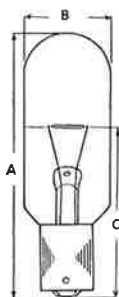
† Tubular Bulb.



GASFILLED

PROJECTOR LAMPS

CLASS G

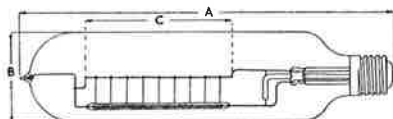


Class G. OSRAM Exciter Lamp.

DIMENSIONAL DATA.

Code numbers.	A Length.	B Diameter.	C Filament centre to cap central contact plate.
	Tolerance ± 2 mm.	Tolerance ± 1 mm.	Tolerance ± 1.5 mm.
8450	mm. 72	mm. 26	mm. 50
8456	72	26	56
85450	72	26	50
105475	72	26	47.5
1075475	72	26	47.5

TUBULAR HORIZON LAMPS



1000 watts OSRAM Tubular Horizon Lamp.

DIMENSIONAL DATA.

Voltage.	Watts.	Approx. Dimensions.			Cap.
		A Overall Length. ± 10 .	B Diam. ± 2 .	C Length of Light Source.	
100-130 200-260	1000	mm. 390	mm. 90	mm. †160 210	G.E.S.

† High efficiency. Life 200 hours.



GAS FILLED

PROJECTOR LAMPS

CLASS G



32 watts (Class G)
OSRAM Exciter Lamp.
(Illustration approximately
half full size.)

EXCITER LAMPS FOR SOUND FILM APPARATUS

These lamps are intended for use in conjunction with photo-cells for sound reproduction and similar purposes.

Of tubular bulb shape, they are designed for burning vertically, cap down, and it is essential they should be used in this position only.

Owing to concentration of filament and small size of bulb it is important that the lantern in which this lamp is used should be ventilated. Otherwise the life of the lamp may be seriously reduced.

WATTAGES, VOLTAGE RANGES AND PRICES.

Watts.	Code numbers.	Voltage.	Apparatus for which suitable.	Cap.	Price per Lamp.
32	8450	8	{ British Acoustic }	A.S.C.C.	s. d. 5 6
32	8456	8		"	5 6
34	85450	8.5	—	"	6 0
50	105475	10	R.C.A.	"	7 6
75	1075475	10	"	"	7 6

TUBULAR HORIZON LAMPS

These lamps have filaments of a special construction for use in special fittings. The resultant beam is of very narrow vertical divergence and a large horizontal spread, and has many uses in theatre and floodlighting schemes. A special high efficiency type is also available for the lighting of aerodrome landing grounds at night.

Approx. life :—1000 hours. This lamp is also made at a considerably higher efficiency for aerodrome lighting, which reduces the life to about 200 hours.



1000 watts OSRAM Horizon Lamp.
(Illustration approximately one-eighth full size.)

WATTAGE, VOLTAGE RANGES AND PRICE.

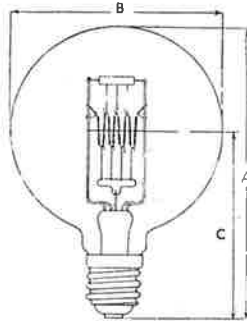
For Dimensions see opposite page.

Watts.	Volts.	Price per Lamp.
1000	{ 100-130 200-260 }	£ s. d. 2 5 0



GASFILLED

CINEMA STUDIO LAMPS

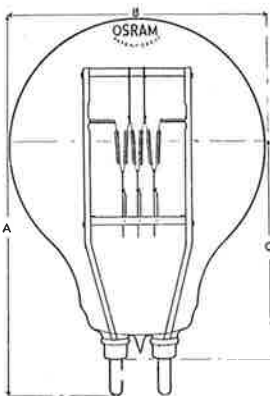


OSRAM Cinema Studio Lamp.

DIMENSIONAL DATA.

Voltage.	Watts.	Approx. Dimensions.			Type of Filament.	Approx. Area of Filament. Width × Height.	Cap.
		Overall Length. ± 10.	Diam. ± 2.	Filament Centre to Cap Contact. ± 5.			
100 110 and 115	2000	mm.	mm.	mm.	Grid	mm.	G.E.S.
	3000	210	150	135	"	23 × 20	"
	5000	350	200	250	"	40 × 20	Two Pin*
200 to 260	2000	386	388	230	"	35 × 25	"
	3000	220	150	135	Grid	32 × 20	G.E.S.
	5000	350	200	250	"	40 × 27	"
		386	388	230	"	42 × 32	Two Pin

*Also supplied with G.E.S. cap.



OSRAM Bipost Projector Lamp.

BIPOST LAMPS

DIMENSIONAL DATA.

Voltage.	Watts.	Approx. Dimensions.			Type of Filament.	Cap.
		A Overall Length.	B Diam.	C Light Centre Length.		
110 and 115	1000	mm.	mm.	mm.	Grid	Bipost
	2000	232	152.5	127	"	"
	5000	295	203	165	"	"



GASFILLED

CINEMA STUDIO LAMPS

ROUND BULB.

The large OSRAM lamps shown here are designed to meet the many onerous demands of the studio world. The lamps are robust, silent and efficient ; the colour is suitable for black and white or colour work, and is constant, so that full advantage can be taken of modern film emulsions.

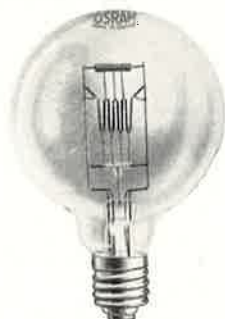
The mounting of the filament is such that the lamps can be burnt at an angle. Moreover, the design of the filament includes a number of special processes whereby it is possible to produce a concentrated source which can give an extraordinarily even beam of light when used in the appropriate G.E.C. projector.

WATTAGES, VOLTAGE RANGES AND PRICES.

For Dimensions see opposite page.

Watts.	Volts.	Price per Lamp.		
2000	{ 100, 110 and 115 200 to 260	£	s.	d.
		4	5	0
3000	{ 100, 110 and 115 200 to 260	5	5	0
		5	15	0
5000	{ 100, 110 and 115 200 to 260	15	0	0
		15	0	0

Approximate life —100 hours.



2000 watts OSRAM
Studio Lamp.
(Illustration approximately
one-eighth full size.)



5000 watts OSRAM
Studio Lamp.
(Illustration approximately
one-eighth full size.)

BIPOST LAMPS

Cinema Studio Lamps are now available with a new form of construction. The cap consists of two hollow pins welded into a glass dish and two channel members carrying the filament are mounted firmly to the inside of the pins: the bulb is then joined to the edge of the glass dish.

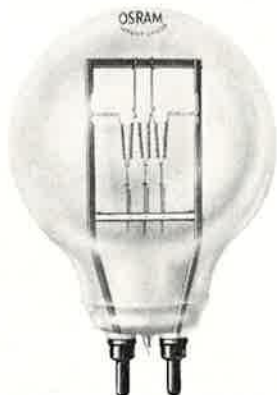
The result is a rigidly constructed lamp with the filament accurately fixed in relation to the cap pins: as a consequence accurate control of the light is possible without expert focussing.

WATTAGES, VOLTAGE RANGE AND PRICES.

For Dimensions see opposite page.

Watts.	Volts.	Price per lamp.		
1000	{ 110 and 115	£	s.	d.
2000		3	5	0
5000		4	5	0
		15	0	0

Approximate life—100 hours.



5000 watts Bipost OSRAM
Lamp.
(Illustration approximately
one-sixth full size.)



GASFILLED

PROJECTOR LAMPS

LIGHT OUTPUT

Below is given the approximate total light output of each of the various types of OSRAM Projector Lamps listed in this catalogue.

These light output values are only given as a standard of comparative brilliance between one projector lamp and another, and do not indicate the intensity of the beam of light obtainable from each lamp when used with apparatus which concentrates the light of the filament in one direction.

CLASSES AND LIGHT OUTPUT VALUES.

Class.	Voltage.	Watts.	Approximate Light Output. Lumens.	Approximate Efficiency. Lumens per Watt.
A1	30	100	2150	21·5
		250	6250	25
		600	15600	26
		900	25650	28·5
	50	200	4800	24
		250	6250	25
		500	13250	26·5
	60	50	750	15
		100	1570	15·7
		180	2420	19
	100	300	6900	23
	110	500	12000	24
		750	18750	25
	100 and 110	100	1800	18
		250	5650	22·5
		500	12000	24
		1000	24000	24
	200 to 260	100	1300	13
		250	4250	17
		500	1000	20
		1000	22000	22
A2	100 and 110	100	1500	15
		250	4625	18·5
		500	10000	20·0
		1000	20500	20·5
		1500	31500	21
		2000	43000	21·5
		3000	67500	22·5
	200 to 260	100	1050	10·5
		250	3500	14
		500	8250	16·5
		1000	15500	18·5
		1500	30000	20
		2000	41000	20·5
		3000	63000	21
A3	100 and 110	100	1400	14
		250	4500	18
		500	9500	19
		1000	20000	20
		1500	33000	22
	200 to 260	100	1050	10·5
		250	3500	14·0
		500	8250	16·5
		1000	18500	18·5
		1500	30000	20

(Continued on next page.)



GAS FILLED

PROJECTOR LAMPS

LIGHT OUTPUT *(continued)*

Class.	Voltage.	Watts.	Approximate Light Output. Lumens.	Approximate Efficiency. Lumens per Watt.
B1	100 to 130	100	1200	12
		250	3625	14.5
		500	8000	16
		1000	17500	17.5
	200 to 260	100	1000	10
		250	3125	12.5
		500	7250	14.5
		1000	16000	16
B2	100 to 130	500	8000	16
		1000	17500	17.5
	200 to 260	500	7250	14.5
		1000	16000	16
E	100 and 110	500	11200	22.4
	200 to 260	500	10300	20.6
F	4	8	104	13
	6	24	432	18
	12	24	455	19
		48	1010	21
		100	2100	21
		300	6600	22
G	8	32	560	17.5
	8.5	34	595	17.5
	10	50	975	19.5
	10	75	1575	21.0
Cinema Studio	100, 110 115	2000	52000	26
		2500	60000	24
		3000	81000	27
		5000	140000	28
	200 to 260	2000	48000	24
		3000	75000	25
		5000	132500	26.5
Bipost	110 and 115	1000	23000	23
		2000	49000	24.5
		5000	145000	29.0
Tubular Horizon	100 to 130	1000	16500	16.5
			23500	23.5†
	200 to 260	1000	15500	15.5
			22500	22.5†

† 200 hours life.



GASFILLED

PROJECTOR LAMPS

STANDARD LAMP CAPS

The illustrations below show the standard types of lamp caps fitted to OSRAM lamps together with the names by which they are known. The letters in brackets are the abbreviations used for these names throughout this catalogue.

SCALE :—HALF SIZE.



Prefocus.



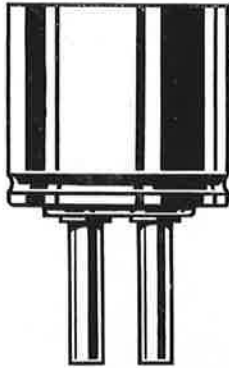
Goliath Edison Screw (G.E.S.).



Edison Screw (E.S.).



Small Bayonet (S.B.C.).



Two-pin.



American Small
Centre Contact
(A.S.C.C.).



Small Edison Screw (S.E.S.).

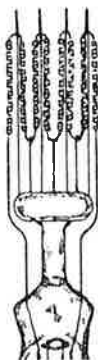


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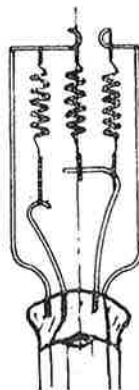
PROJECTOR LAMPS

STANDARD FILAMENTS

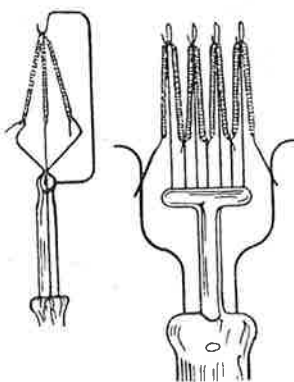
Below are illustrated a range of standard filaments as fitted to OSRAM Projector Lamps.



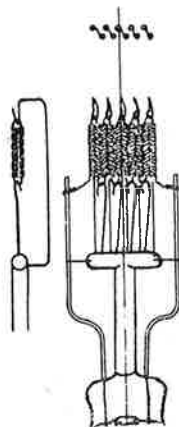
Single Coil Flat Grid.



Coiled Coil Flat Grid.



Staggered Grid.



Biplane Grid.

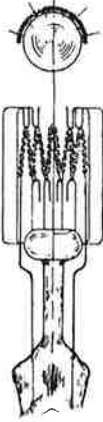


GASFILLED

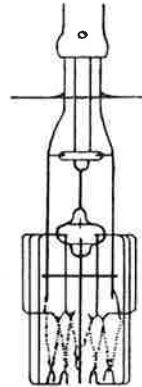
PROJECTOR LAMPS

STANDARD FILAMENTS

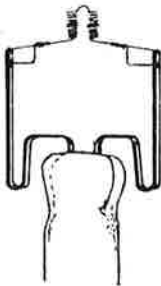
(continued)



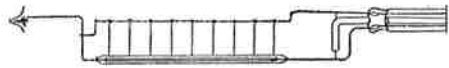
Bunch (cap down).



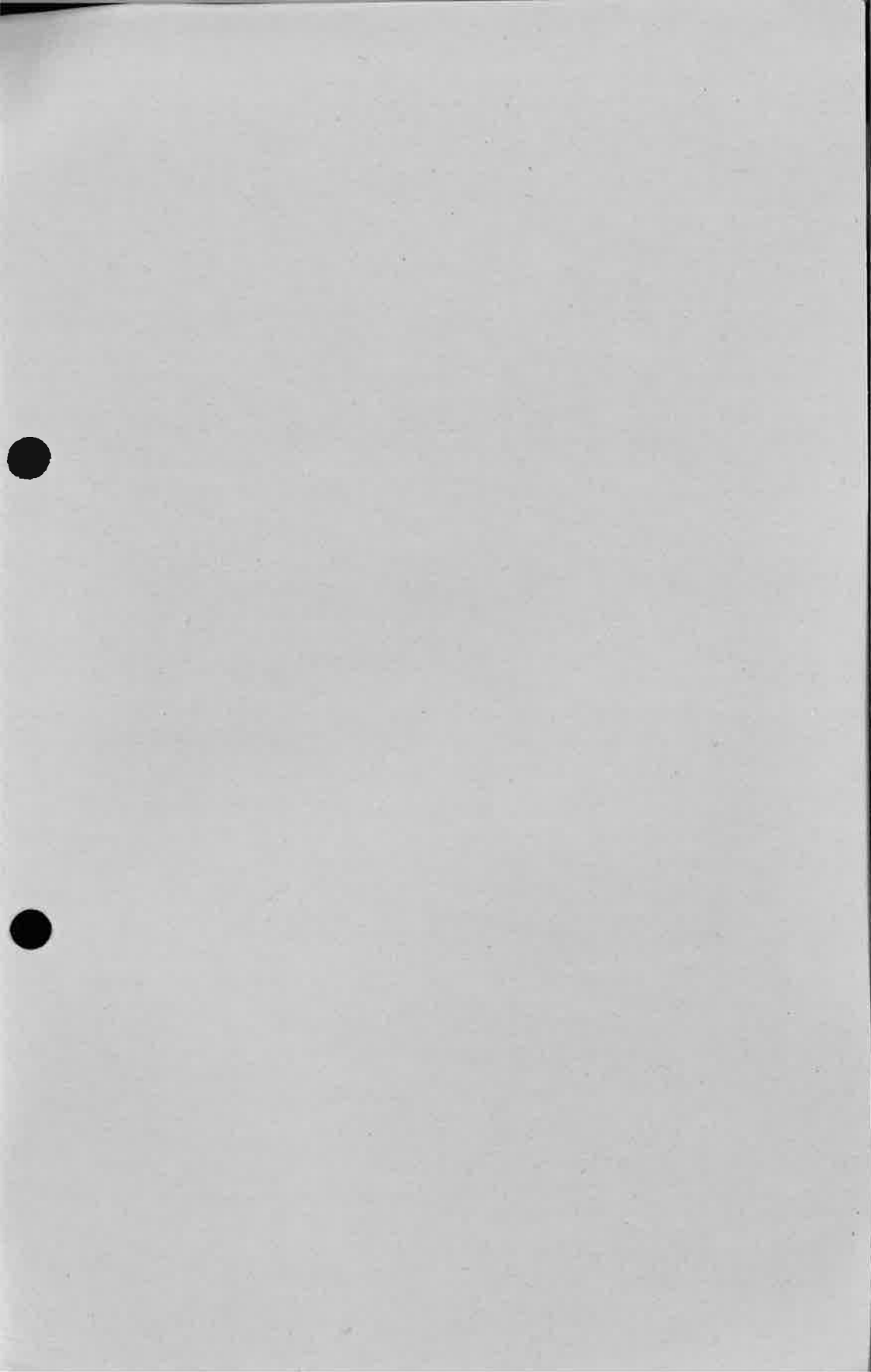
Bunch (cap up).



Twin Pillar.



Line Filament.



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EASTLEIGH, ERITH, NORTHAMPTON AND LEMINGTON-ON-TYNE.

RESEARCH LABORATORIES: WEMBLEY.

HOME BRANCHES:

	Address.	Telephone No.
ABERDEEN	Magnet House, 32, Market Street	Central 2770/1
BELFAST	Magnet House, Queen Street	25656 (3 lines)
BIRMINGHAM	Magnet House, Moor Street	Midland 4421/8 (8 lines)
BLACKBURN	Magnet House, 40/42, Darwen Street	4141/2 (2 lines)
BLACKPOOL	Magnet House, 24, Birley Street	3233 (2 lines)
BRIGHTON	Regent Hill, Western Road	3277/8
BRISTOL	Magnet House, 26, Victoria Street	24551 (3 lines)
CARDIFF	Magnet House, Castle Arcade & Womanby St.	2620
CORK	Magnet House, Grand Parade	823
CROYDON	516, London Road	Thornton Heath 3246
DUBLIN	Magnet House, Trinity Street	71141/2/3/4
DUNDEE	26/30, North Lindsay Street	2168/9 (2 lines)
EDINBURGH	Magnet House, 8 George Street	23241/2/3/4/5
GLASGOW	Magnet House, 71, Waterloo Street	Central 9250
GLOUCESTER	Magnet House, 2, St. Aldate Street	3017
HULL	Magnet House, 164, 166, 168, George Street	Central 34625/6
INVERNESS	14, Falcon Square	830
IPSWICH	Electric House, Lloyds Avenue	3771/2/3 (3 lines)
LEEDS	Magnet House, Wellington Street	20671 (3 lines)
LEICESTER	Magnet House, 33, Rutland Street	58111/2/3
LIVERPOOL	Magnet House, Church Alley	Royal 5380 (6 lines)
MANCHESTER	Magnet House, Victoria Bridge	Blackfriars 8434 (8 lines)
MIDDLESBROUGH	Magnet House, 52/58, Corporation Road	3621/2
NEWCASTLE-ON-TYNE	Magnet House, Gallowgate	25160/1/2/3/4
NOTTINGHAM	Magnet House, 25, Stoney Street	43547/8/9 and 43540
PLYMOUTH	Magnet House, 175, Union Street	60228 (3 lines)
SHEFFIELD	Magnet House, Fitzalan Square	25101/2/3
SOUTHAMPTON	Magnet House, Commercial Road	5631/2/3
STOKE-ON-TRENT	Magnet House, South Wolfe Street	48575/6 (2 lines)
SWANSEA	Magnet House, Northampton Place	5026/7/8 (3 lines)

OVERSEAS BRANCHES:

AUSTRALIA: SYDNEY (N.S.W.). MELBOURNE (Victoria). PERTH (Western Australia). NEWCASTLE (N.S.W.). HOBART (Tasmania). LAUNCESTON (Tasmania). With Agencies in:— BRISBANE (Queensland). ADELAIDE (S. Australia). And in the Fiji, Navigation and Friendly Islands & New Guinea.	SOUTH AFRICA: JOHANNESBURG. CAPETOWN. PORT ELIZABETH. DURBAN. With Agencies in:— EAST LONDON (Cape Pro- vince). SALISBURY BULAWAYO } RHODESIA. NDOLA	BURMA: RANGOON.
NEW ZEALAND: WELLINGTON. CHRISTCHURCH. AUCKLAND.	INDIA: CALCUTTA. MADRAS. BOMBAY. NEW DELHI. LAHORE. CANNPORE. BANGALORE. TRIVANDRUM. KARACHI. COIMBATORE. HYDERABAD (Deccan).	MALAYA: SINGAPORE (Straits Settlements). KUALA LUMPUR (Federated Malay States).
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