



A.E.I. LAMP & LIGHTING CO. LTD

SfB (63)

UDC 621.32

MERCURY DISCHARGE HIGH PRESSURE TYPE MB/U

GENERAL DESCRIPTION

Mercury Vapour discharge lamps with quartz arc tubes loaded below 100 watts/cm of arc length and operating at pressures of 8-10 atmosphere.

The quartz arc tube is mounted in a glass outer bulb, pear shaped, pearl for the lower wattages and in a clear tubular bulb for the higher wattages. All caps are nickel plated to give maximum resistance against corrosion.

80 and 125W ratings

The Arc Tube mounting assembly is fixed by a clamp round the glass stem giving the most robust construction. The neck of the bulb is shaped to ensure positive locking on the cap.

250 and 400W ratings

In addition to the clamp round the glass stem, the arc tube assembly in these larger lamps is securely located by a unique spring clip located on a depression in the crown of the outer bulb.

The outer bulb is of hard glass and is suitable for use in exposed conditions. A new capping technique is employed whereby the glass is formed to the same shape as the cap thread. The cap is screwed on and locked without the use of conventional capping cement, and eliminates any possibility of the lamp becoming detached from the cap during life.

GENERAL APPLICATIONS

Industrial and streetlighting.

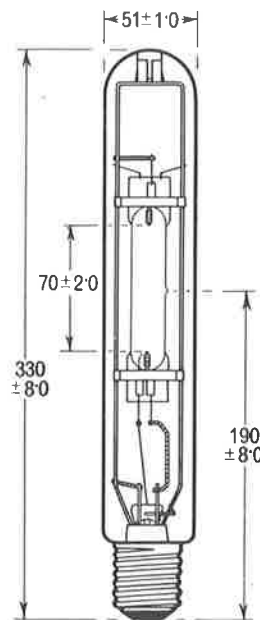


80 watt MB/U

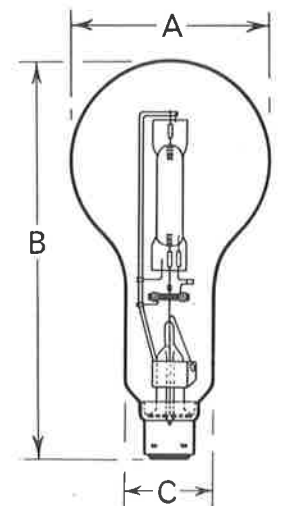
Standard ratings

Watts	Volts	Cap	Type	Bulb	Rated Life Hours	AEI L & L Ref Nos
80	200/250	3-pin BC (B22d-3/25 × 26)	MB/U	Spherical Pearl	5000	91-0037
		ES (E27/27)				91-0038
125	200/250	3-pin BC (B22d-3/25 × 26)				91-0137
		ES (E27/27)				91-0138
250	200/250	GES (E40/45)	Tubular Clear		91-0199	
400	200/250	GES (E40/45)			91-0299	

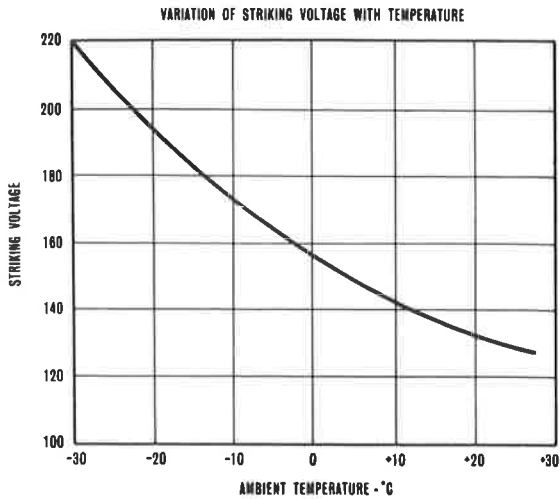
Note The three pins of the B22d-3/25 × 26 cap are spaced at 135°, 135°, and 90°.



400 watt MB/U



125 watt MB/U

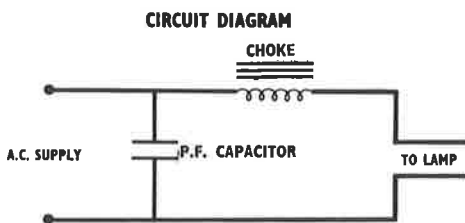


Dimensions (in mm)

Watts	Cap	Diameter A	OAL B	Max Neck Dia C
80	3-pin BC	80 ± 1	160 ± 4.5	40
	ES	80 ± 1	161.6 ± 4.5	40
125	3-pin BC	90 ⁺¹ / ₋₃	178 ± 5.5	42
	ES	90 ⁺¹ / ₋₃	179.5 ± 5.5	42
250	GES	51 ± 1	290 ± 8	—
400	GES	51 ± 1	330 ± 8	—

ELECTRICAL CHARACTERISTICS

Watts	Rating		Lamp Operating Volts	Nominal Lamp Operating Current (amps)	Starting Current (amps)
	Volts	Volts			
80	200/250	105/125	0.8	1.5 - 1.0	
125	200/250	110/140	1.15	2.0 - 1.5	
250	200/250	115/145	2.15	4.0 - 3.0	
400	200/250	120/150	3.25	7.0 - 5.0	



CH CHOKE
C POWER FACTOR CAPACITOR

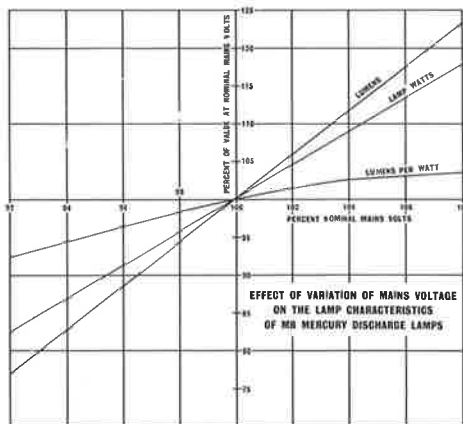
Note: The starting current values given above represent the short circuit current at nominal supply voltage of the standard chokes used to operate the lamps. Circuits of this type have an inherent lagging power factor and therefore a capacitor is required as given in the circuit and control gear instructions. The incorporation of power factor correction capacitors in the lamp circuits result in the starting current values being lowered.

Striking Voltage see graph.

Lumen Output - Average through first 5000hr.

80W	2720	250W	11,000
125W	4900	400W	18,800

Run up time 3-5 minutes (approx) - see graph.



OPERATING CONDITIONS

These lamps will operate satisfactorily in any position.

In the event of the lamp being extinguished by an interruption in the supply, a short delay will occur while the lamp cools down, restrikes and runs up again.

WARNING

Should the bulb be broken and the arc tube continue to glow, the lamp should not be used, as without the protection of the bulb the radiations from the arc tube are harmful to the eyes and skin.

CIRCUIT AND CONTROL GEAR

The MB/U type lamp is to be used with appropriate control gear. On a.c. 50-cycle circuits this takes the form of a choke connected in series with the lamp and also a capacitor for power factor correction, connected across the supply leads, as shown in the circuit diagram.

Further details of approved control gear is given in publication G.6.

British Standards

Lamps described in this leaflet conform to the following standards where applicable.

- BS 1270 : 1960 Schedule for Electric Discharge Lamps.
- BS 52 : 1952 Bayonet caps, holders and adapters.
- BS 98 : 1962 Screw caps and holders.

