

HIGH PRESSURE COMPACT SOURCE

XENON DISCHARGE LAMP

TYPE XE 1kW D.C. Ref. 98-1431

Number L117

Replaces -

Date June 1981

GENERAL DESCRIPTION

The 1 kW Xenon Discharge lamp consists essentially of an arc burning between tungsten electrodes in a high pressure of pure Xenon contained in a quartz bulb. It is designed to operate from a constant current (or constant power) d.c. supply.

The light source is very bright and compact, and emits radiation virtually in a continuum extending from the ultra-violet, through the visible to the infra-red. There is a pronounced peak in the near infra-red at about 900nm. Thus the lamp is a powerful source of ultra-violet and infra-red as well as light.

The colour of the visible radiation is very similar to noon sunlight having an approximate colour temperature of 5600 K. Colour rendering is excellent. The light output may be modified over a wide range by adjusting the power input without appreciably altering the colour of the light.

On starting the lamp approximately full light output is given immediately. The combined characteristics of high brightness, high efficiency, good colour and colour rendering of the compact source Xenon lamp can at the present time be matched only by the high intensity carbon arc. The Xenon lamp has a much longer life and is very much more convenient to operate than the carbon arc. Running costs are of the same order.

GENERAL APPLICATIONS

Cinematography.
Cine Projectors.
Laboratory and general scientific purposes.

PHYSICAL CHARACTERISTICS

	mm
Overall length: 1 ₁	235.0
Overall length: 1 ₂	205.0
L.C.L. Distance a	96.5
Bulb diam. max.: Distance d	40.0
Base anode	PSFa 27-11
Base cathode	PSFcX 27-8

ELECTRICAL CHARACTERISTICS

Lamp rating (watts):	1000
Supply Voltage:	65/75 DC
Supply ripple content (r.m.s.) Max:	5%
Lamp operating voltage (Volts):	20
Lamp operating current (Amps):	50

OPERATING POSITION

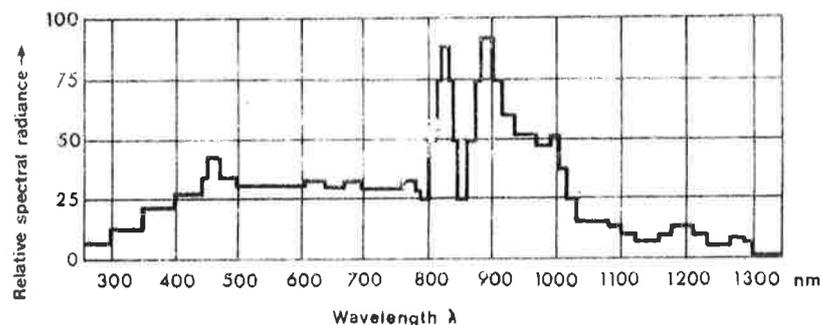
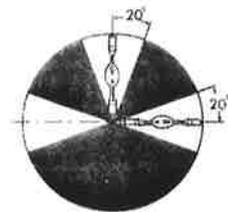
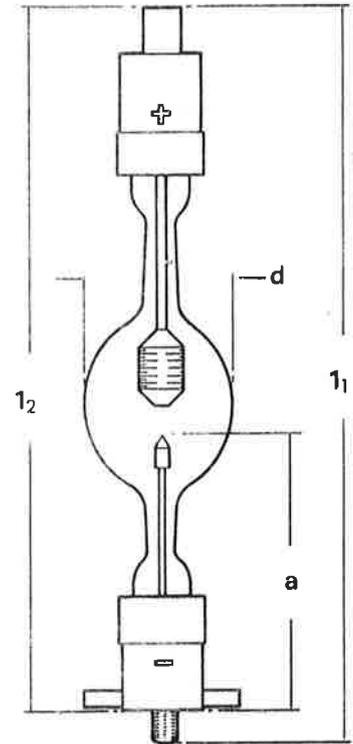
The lamp is designed to operate in a horizontal position providing a magnetic field is applied, either from a current carrying conductor or a permanent magnet to deflect the convective gas stream. It may also be operated in a vertical burning position free from any induced or magnetic fields which might deflect the arc.

LIGHT SOURCE CHARACTERISTICS AND PERFORMANCE

Light output (initial lumen):	32000
Mean horizontal candle power (initial cd.):	3000
Average luminance (cd/cm ²):	60000
Average objective life (hours):	1500

CONTROL GEAR

Further information on application.



Distribution of relative spectral radiance of XED lamps