

LAMP DATA SHEET

HYTEK LAMPS 1kW 8in SEALED BEAM COMPACT SOURCE IODIDE LAMP REF: 99-1222

99-122

September 1973
Replaces
November 1972

GENERAL DESCRIPTION

The 1 kW Sealed Beam Compact Source Iodide Lamp consists of a high pressure discharge lamp 1 kW CS1 arc tube (see data sheet 99 — 0221) enclosed in a 8" sealed beam reflector envelope.

The 1 kW CS1 Arc Tube comprises a discharge in a quartz envelope operating between tungsten electrodes in an atmosphere of mercury vapour with additional metallic iodides. These additives ensure a high efficiency white light source of good colour rendering, and the accurate positioning of this arc tube within the sealed beam reflector outer gives a beam candle power of some 1½ million candelas with a total spread of 18° (to 1/10 peak).

APPLICATIONS

Floodlighting, especially for filming and T.V. Outside broadcasts, suitable for use with day-light colour film stock. Also as general replacement for carbon arcs.

ELECTRICAL CHARACTERISTICS

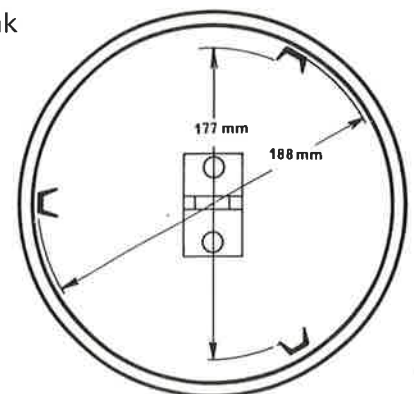
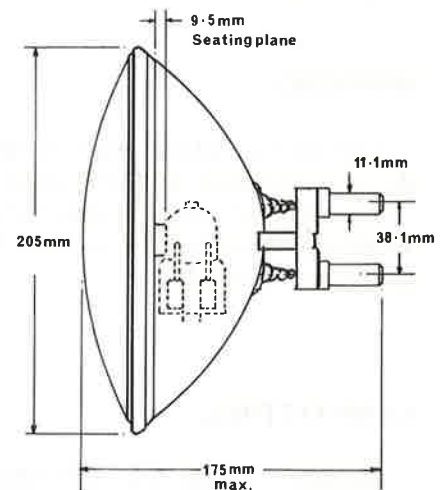
Supply Volts	220, 240v A.C.
Arc Watts	1,000
Arc Volts	70/85
Arc Current	15 amps approximately
Run-up Time	50 secs.
Re-starting Time	5 minutes

PHYSICAL DIMENSIONS

Diameter	205 mm
Overall length (max)	175 mm
Caps	BIPOST G38

LUMINOUS CHARACTERISTICS

Initial beam candlepower (peak)	1.5 million CDS			
Beam Spread	½ Peak ± 3°	1/3 Peak ± 4°	1/5 Peak ± 6°	1/10 Peak ± 9°
Colour Rendering	Good			
Chromaticity Co-ordinates	x = 0.395 y = 0.395 CV 3.5%			
Life (Nominal Objective)	1000 hours			
Operating Position	Any			



CONTROL GEAR

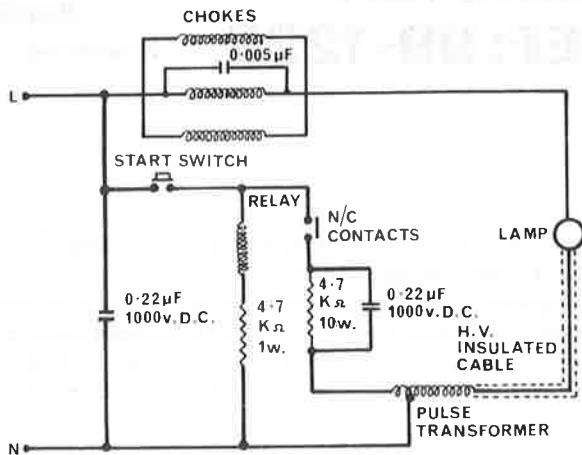
Control Gear Ref: G 53255. Dimensions 413mm x 190mm x 220mm

This is a complete unit comprising a series ballast circuit together with a high voltage pulsed starter unit to initiate the arc. The circuit diagram of the complete unit is indicated.

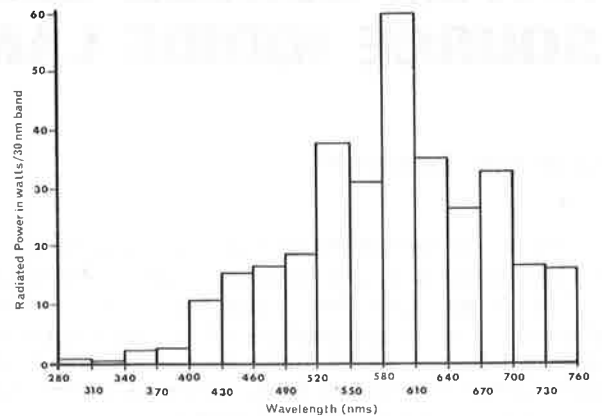
1) The lamp connection from the high voltage terminal on the pulse transformer should not be longer than 6 ft. and suitable high tension cable should be used.

- 2) The starting unit is mounted on a detachable chassis, and may be removed and fixed separately. This enables the starter unit to be mounted on the side of the lamp housing ensuring a short H.T. lead totally enclosed within the equipment for additional safety.
- 3) The case of the unit should be earthed.
- 4) To start the lamp the switch should be depressed for a few seconds until the lamp is burning steadily and then released. The switch should not be operated whilst the lamp is working.
- 5) It will be necessary to allow the lamp to cool before restarting.

CIRCUIT DIAGRAM



SPECTRAL ENERGY HISTOGRAM



WARNING

The unit generates high voltage pulses for lamp starting. Suitable safety precautions should be taken during installation and operation of the unit.

The control unit and associated lamp house must be earthed. The H.V. cable should be protected from accidental damage. The supply must be disconnected before servicing. For outdoor use the lamp must be protected from rain.

LAMP FITTINGS

Suitable fittings ref. OM1000 series are available for use with these lamps, giving a variety of light distributions, and incorporating the starter unit with the fitting housing.

A complete gear box G 53255 is not required with this fitting. Only the ballast and capacitor tray assembly ref: OMG B3C8 is needed.