

CSI

Compact Source Iodide Sealed Beam Lamp 1kW

Identification

Specification Ref. 99-1222

Applications

Floodlighting, especially for filming and TV outside broadcasts, suitable for use with daylight colour film stock. Also as a radiation source for solarium and allied applications.

Description

The 1kW Sealed Beam Compact Source Iodide lamp consists of a high pressure discharge lamp 1kW CSI arc tube (see data sheet 4:99.9) enclosed in an 8" sealed beam reflector envelope.

The 1kW CSI 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 candlepower of some 1¼ million candelas with a total spread of 18° (to 1/10 peak).

Performance

Electrical Characteristics

Supply volts	220V, 240V A.C.
Arc watts	1,000
Arc volts	70/85
Arc current	15 amps approximately
Run-up time	50 secs (to 90%)
Re-starting time	10 mins (in OM 1000 floodlight)

Physical Dimensions

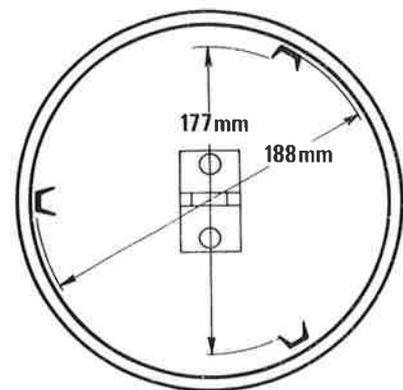
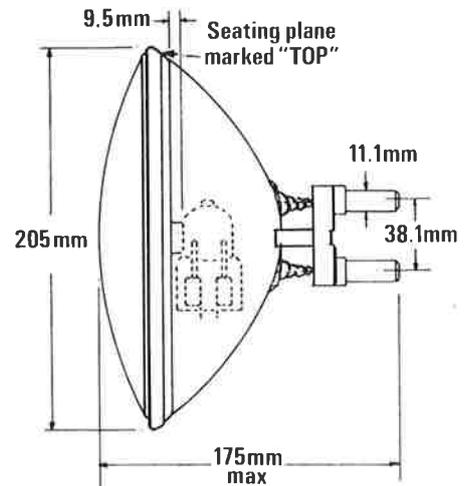
Diameter	205 mm
Overall length	175 mm
Cap	BIPOST G38

Luminous Characteristics

Initial beam candlepower (peak)	1.25 million cds
Beam spread	1/2 peak 1/3 peak 1/5 peak 1/10 peak 6° 8° 12° 18°
Lamp lumens	Initial 76,000 Design 67,000
Colour rendering	
RA index	RA 80
Chromaticity co-ordinates	x = 0.393 y = 0.395
Life (nominal objective)	1500 hrs
Operating position	Horizontal ± 90° (Note: Preferred mounting position marked 'Top')

Control Gear

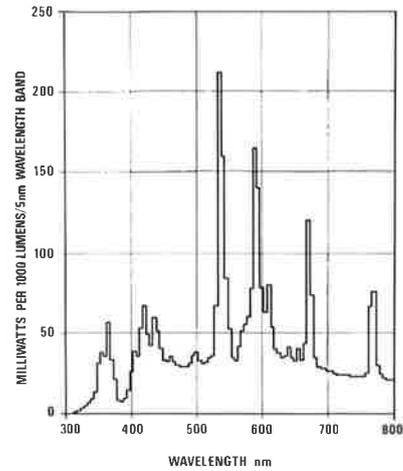
G53307.T	220/240V 50Hz choke (1 per lamp)	19.0 kg
G53319	Ignitor unit on open gear tray	1.17 kg
GC2346	25 µF 250V capacitors (use 7 per lamp)	0.68 kg



Notes

1. The connection from the ignitor to lamp should not be longer than 6 ft and suitable high tension cable should be used. (Ripaults high tension type PV 267 7 mm PVC 16/0.012, or similar.
2. The ignitor components are mounted on an open tray. The ignitor provides a high voltage pulse and should be totally enclosed and earthed.
3. To start the lamp the switch (see circuit diagram) 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. (Switch is not supplied.)
4. It will be necessary to allow the lamp to cool before restarting.

SPECTRAL POWER DISTRIBUTION CSI COMPACT SOURCE METAL HALIDE



Operation and Maintenance

Safety

Before Use

Always isolate the equipment from the electricity supply before inserting or replacing a lamp.

Check that the replacement lamp is the correct type for the application, wattage and cap for use in the circuit and with control gear.

Ensure that the lamp is correctly located in the lampholder and the glass outer is not scratched during insertion.

During Use

If the outer envelope is broken the lamp must not be operated.

Where mercury discharge and metal halide lamps are used for prolonged periods in close proximity to eyes and skin there may be a slight possibility of a low level UV radiation hazard. Suitable protection should be employed.

Certain metal halide lamps have operating restrictions, details of which are specified with the lamps.

Disposal

These lamps should be broken in a container. Precautions must be taken against flying glass or other fragments. The operation should be carried out outdoors (or in a well ventilated area). With high pressure mercury lamps it is not necessary to break up the inner arc tube. Where applicable, the debris of large quantities of lamps must be disposed of in accordance with the rules of the Local Authority.

Warning

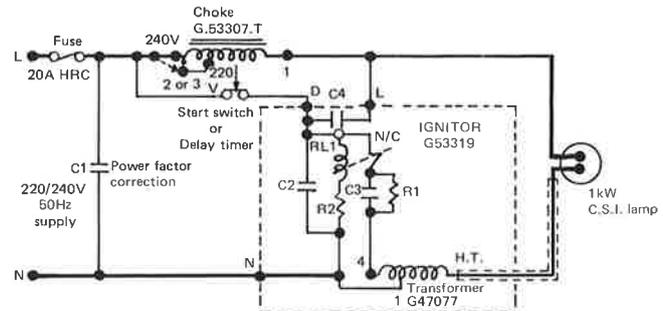
The unit generates high voltage pulses for lamp starting. Suitable safety precautions should be taken during installation and operation of the unit.

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.

Floodlighting Fitting

Suitable fittings ref: OQ 1000 series available for use with these lamps, giving a variety of light distributions, and incorporating the starter unit G53319 within the fitting housing.

1kW CSI Circuit Diagram Using Choke
G53307-T and Ignitor G53319



C1 – 175 μ F 250V A.C.	R1 – 4.7k Ω 10W
C2/C3 – 0.22 μ F 1000V	R2 – 4.7k Ω 1W
C4 – 0.005 μ F 250V A.C.	RL1 – Magnetic Devices 325/TS 14084