



Available from:—
THORN EMI Lamps and Components Limited

Miles Road Mitcham Surrey CR4 3YX
 Telephone 01-640 1221 Telex 25534 Sandby Mitcham

Issue date: August 1983
 Replaces: September 1982

4:99.9

CSI

**Compact Source Mercury Iodide Projector Lamp
 1kW**

Identification

Specification Ref. 99-0221

Applications

The high efficacy, robustness and small size of this lamp makes it eminently suitable for projector purposes such as for follow spotlights. For photographic use it is suitable for use with daylight colour film stock.

Description

The 1000W Compact Source Iodide Lamp gives white light of good colour rendering at an efficacy of 90 L/W for 500 hours life. The arc size is approximately 15 mm x 5 mm and the brightness is about 8000 candelas per square cm.

The high efficacy is obtained by the use of an arc discharge. The iodide technique has been used to introduce additional elements into the arc and to keep the bulb wall clean throughout life.

The lamp is somewhat unconventional in appearance. It is extremely robust. The small total physical size and the ability to operate it in any position ensures that the lamp can be readily fitted into existing equipment, and simplifies the design of new equipment. The single ended construction and the degree of prefocusing provided means that lamp replacement is straightforward.

Performance

Electrical Characteristics

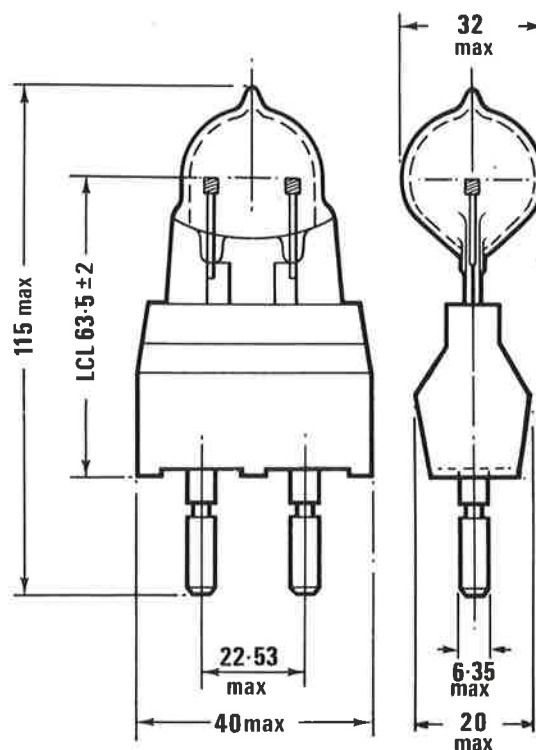
Supply volts	240
Arc watts	1000
Arc volts	70/85
Arc current	15 amps
Run-up time	30 secs
Re-start time	2/5 mins

Dimensions

Arc length	14-15 mm
Overall length	85 mm max excluding pins
Light centre length	63.5 ± 2 mm
Diameter	32 mm max
Cap	Medium Bipost-G22

Luminous Characteristics

Initial efficacy	90 L/W
Lumen maintenance	85%
Colour rendering index	RA 85
Chromaticity co-ordinates	x = 0.385 y = 0.395
Life (nominal objective)	500 hours
Operating position	Universal



All dimensions in mm

Control Gear

Control gear and box G 53255.

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 Quartz envelope is not scratched during insertion.

During Use

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.

High pressure mercury discharge lamps with quartz envelopes without glass outer bulbs emit short wave ultra violet radiation which is readily transmitted through quartz. This radiation is harmful to eyes and skin, operators must be shielded from direct or reflected short wave ultra violet radiation.

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

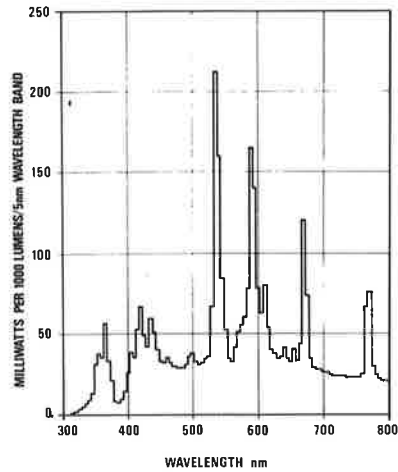
The unit generates high voltage pulses for lamp starting. Suitable safety precautions should be taken during installation and operation of the unit.

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.

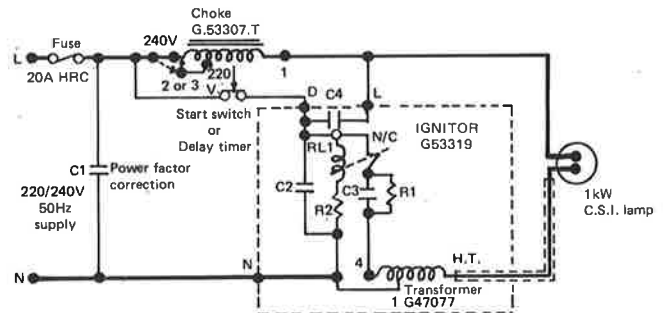
Floodlighting Fitting

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.

SPECTRAL POWER DISTRIBUTION CSI COMPACT SOURCE METAL HALIDE



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



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