

## Lamps and Components Limited

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## 1000W/2000W Universal Photoprint Lamp

A wide band photoprinting source.  
Specification Ref. 91-7466

### Identification

#### Applications

Photoprinting — graphic art, photoresist, Diazo and photopolymer reproduction, daylight film.

The lamp can be used as a direct replacement for the following:—

Theimer Strahler types 1000 and 1007  
Heraeus types Q1143 Z1 and Q1143 Z4.

#### Description

A high pressure metal halide lamp containing gallium and iron, producing a spectrum with an output optimised between 300 and 450nm, for use with both Diazo and photopolymer materials.

The lamp can be operated from 400 watts to 1000 watts with normal convected airflow, or from 1000 watts to 2000 watts with suitable forced cooling such that the maximum lamp body temperature is below 850°C and the ends of the pinches are below 350°C. If the lamp is overcooled when running below 1000 watts it is possible for the metal halides to condense on the inner wall of arc tube and thus alter the spectrum.

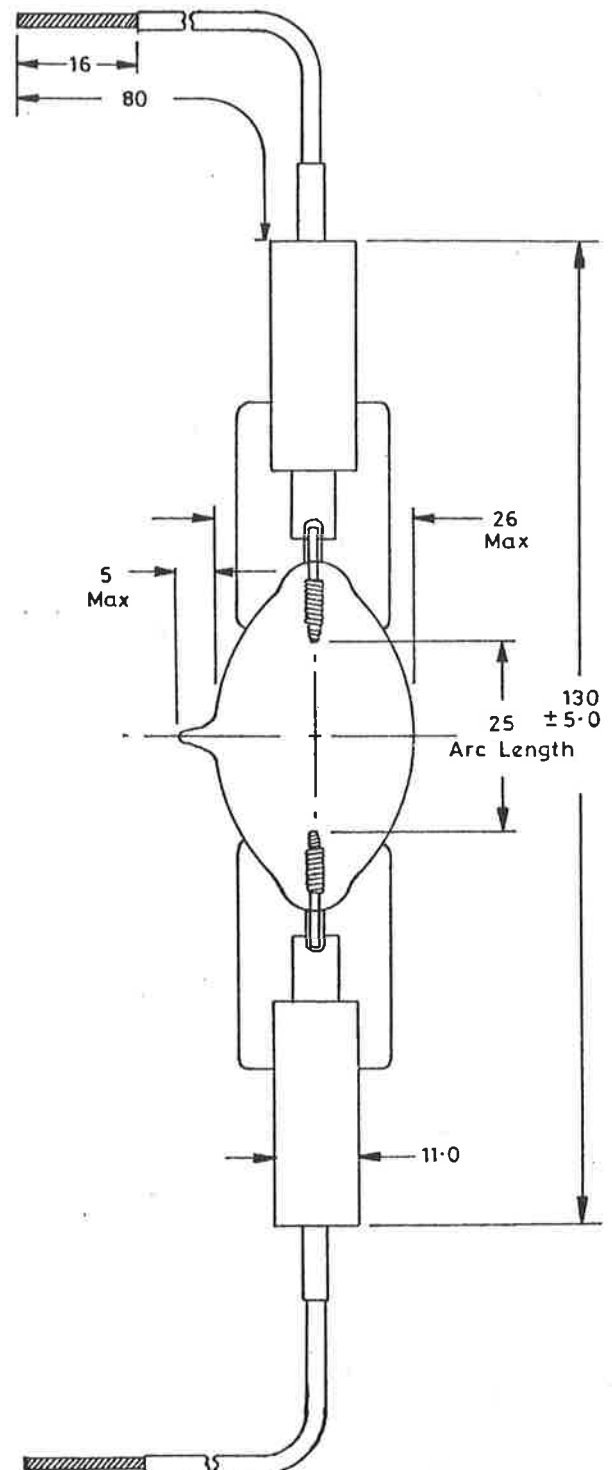
#### Warning

This lamp radiates short wave ultra violet energy which can be harmful to skin and eyes.

Users and equipment operators must be screened from direct emission from the lamp at all times.

#### Advantages

1. One lamp covers the complete range of photoprinting materials.
2. Suitable for operation at a wide range of powers allowing the lamp to be used in a simmer/exposure mode if required.
3. Short arc length allows small reflector systems to be used.
4. Flying PTFE covered leads allow electrical connections to be made well away from the heat of the lamp thus avoiding contact problems.



All dimensions are mm

## Performance

### Electrical Characteristics

#### 1000W Operation

	(220/240v 50HZ)
Arc watts	1100W
Arc volts	120V
Arc current	10A
Run-up time †	60 sec.
Restrike time in free air*	3-4 min

#### 2000W Operation

Arc watts	1900W
Arc volts	130V
Arc current	16A
Run-up time †	30 sec
Restrike time in free air*	3-4 min

\* If fan cooled restrike time is approx. 1 min.

† There is an immediate response in output when switched from 400W to 1000W or from 400W to 2000W.

It would be normal for the lamp to be run up at exposure rating and then be switched down to 400W to simmer between exposures.

If switched on at 400W run up time will be extended to 3-4 minutes.

### Normal Life

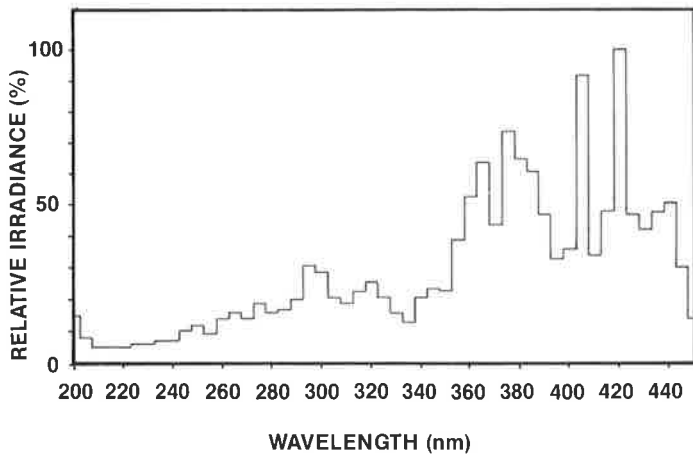
1000 hours at 400W standby/1000W exposure operation, or 500 hours at 400W standby/2000W Exposure operation.

### Operation and Maintenance

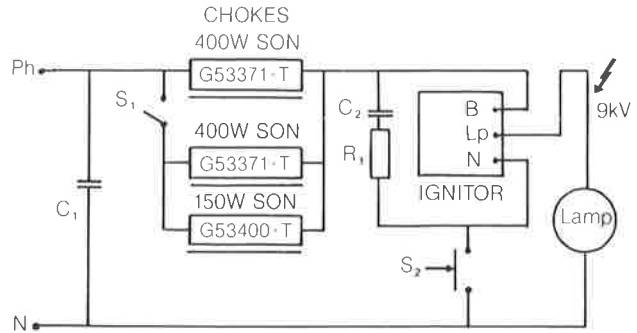
Operating Position – Horizontal  $\pm 20^\circ$ .

Cleaning – Fingerprints on the bulb of the lamp should be avoided if possible as they result in permanent marks during operation. Fingerprints can be removed from a cold lamp using a clean tissue moistened with methylated spirits.

SPECTRAL POWER DISTRIBUTION

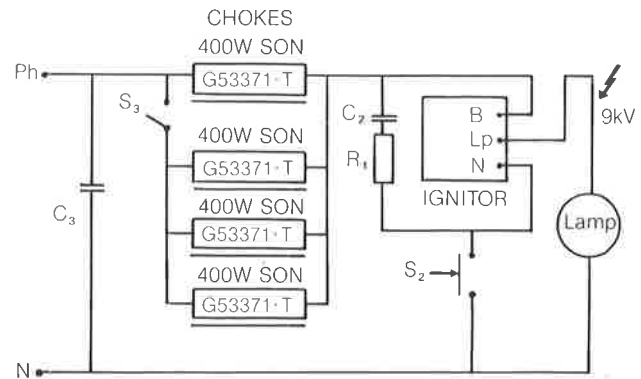


CIRCUIT DIAGRAM FOR 400W/1000W OPERATION



SWITCH S<sub>1</sub> CLOSE FOR 1000W OPERATION

CIRCUIT DIAGRAM FOR 400W/2000W OPERATION



SWITCH S<sub>3</sub> CLOSE FOR 2000W OPERATION

**IGNITOR** – BAG TURGI SE15/7U or THORN G53444  
Rated for 277V $\pm$ 10% 50/60Hz  
Spare starter element BAG Turgi SE 600/D or Thorn G53445.

C<sub>1</sub> – 70  $\mu$ F 240v [2 $\times$  GC 2382]

C<sub>2</sub> – 7.2  $\mu$ F 440v [GC 2173]

C<sub>3</sub> – 100  $\mu$ F 240v [4 $\times$  GC 2346]

R<sub>1</sub> – 10 $\Omega$  7W [RS Cat. No. 155–879]

S<sub>1</sub> – 15A Single pole switch or relay, to switch 6A inductive current [RS Cat. No. 348–403]

S<sub>2</sub> – 3A Momeny action [RS Cat. No. 336–602]

S<sub>3</sub> – 30A Single pole switch or relay, to switch 12A inductive current [RS Cat. No. 345–432]

### Packing

Individually packed in a white cardboard carton measuring 45mm $\times$ 45mm $\times$ 160mm.

### For further information

Refer to 'THORN EMI Safety Guide'.

THORN EMI reserve the right to alter the specification without prior notice or public announcement.

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