

**150W SONS-T** High Output  
Tubular High Pressure Sodium Lamp

**Identification**

**Applications**

Street lighting, floodlighting, warehouse and factory lighting.

**Description**

SONS-T high output lamps consist of a special alumina arc tube mounted in a tubular, hard glass bulb with an E40 cap. The arc tube is filled with a higher pressure of xenon than is used in standard lamps which results in an increased lumen output.

**Dimensions**

Bulb diameter	47 mm max
Overall length	210mm max
Light centre length	129mm nom
Lit length	55mm
Cap	E40/45
Operating position	Universal

**Advantages**

The compact size and clear outer bulb result in a luminous source of small dimensions which is ideal for good optical control of the light when used in conjunction with a suitably designed luminaire.

The additional light output when compared with standard 150W SON-T can result in savings in expenditure because of the fewer fittings required.

Other advantages are long life, good lumen maintenance and the ability to restrike within one minute of a momentary supply interruption.

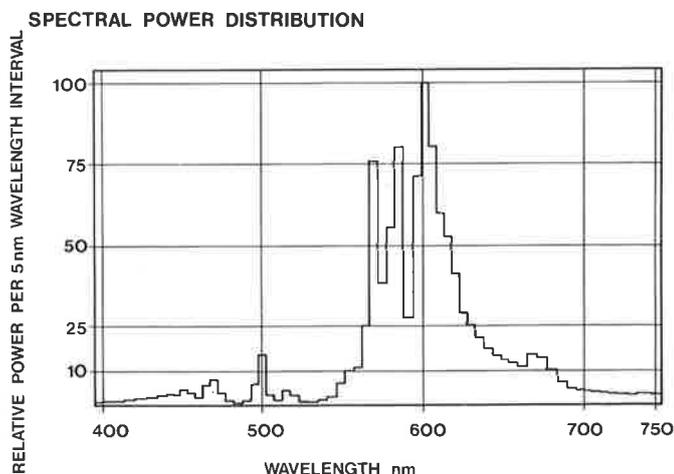
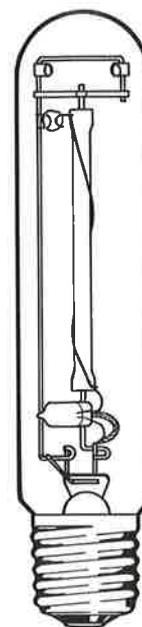
**Performance**

**Nominal electrical characteristics**

	150W SONS-T
Lamp volts	100 ± 15
Lamp current (amps)	1.8 ± 0.2

**Nominal luminous characteristics**

	150W SONS-T
Lumens at 100 hours	17,500
Lumens at 2,000 hours	17,000
Average luminance cd/cm <sup>2</sup>	330
Chromaticity co-ordinates	x 0.530
	y 0.415
General colour rendering	
Index Ra	25
Correlated colour temperature	2100 K



**Starting and Operating**

The lamp is started by a high voltage pulse applied by an ignitor which ceases to function once the lamp has started. External starting simplifies lamp construction and is very reliable. The lamp takes approximately 8 minutes to run up to 90% full brightness. SONS-T lamps will normally restrike within one minute of extinction and rapidly regain full light output. This is a most important feature and a considerable improvement on the restrike time of mercury lamps. Lamp starting is not affected by ambient temperatures down to -40°C.

## Fuse Ratings

Recommended fuse ratings (amps)	<b>150W</b>
Miniature circuit breaker,	
HRC fuse rating	4
Rewireable fuse rating	5

<b>Rating</b>	<b>Permissible Voltage Rise</b>
150W	5 Volts

<b>Temperature Limits</b>	<b>150W</b>
Maximum bulb temperature	450°C
Maximum cap temperature	250°C

## British and International Standards

Lamps conform to the following standards where applicable:--

IEC 662	High Pressure Sodium Lamps
BS5101	Part 1 Lamp Caps
IEC 61-1	Lamp Caps

## Guidance for Luminaire Manufacturers

It is a characteristic of high pressure sodium lamps that there is a rise in arc voltage when run in an enclosure over that obtained when running in free air. It is important that for maximum life performance the luminaire is so designed that this arc voltage rise is limited to the value shown in the table below. It is the change in voltage that is important, not the absolute magnitude, as with all lamps there is an allowable manufacturing tolerance in their electrical characteristics. A true RMS reading instrument should be used to measure this voltage.

## Packing

	<b>150W</b>
Individual carton dimensions mm	480 x 70 diam. (roll and corrugated)
Individual weight kg	0.21
Bulk pack dimensions mm	485 x 267 x 215
No. in outer pack	10
Weight kg	2.53

## Operation and Maintenance

**Guide for the installation, operation and disposal of high pressure sodium lamps (SON).**

### 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. This includes checking that the lamps voltage (if applicable), wattage and cap are suitable for use in the circuit and with the control gear.

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

### During Use

For all lamps (unless indicated to the contrary by the manufacturer) prevent rain, snow, condensation droplets or water, splashing on the lamp as these may cause the bulb to shatter. If the outer bulb is broken the lamp must not be operated.

### 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 sodium lamps it is not necessary to break up the inner arc tube. The debris of large quantities of lamps must be disposed of in accordance with the rules of the Local Authority.

**Thorn Lighting reserve the right to alter the specification without prior notice or public announcement.**