

# PHILIPS



CI/SfB (63.9)

UDC 696.6 : 628.94

## HIGH PRESSURE SODIUM (SON & SON/T)

### Discharge Lamps

High-pressure sodium lamps combine extremely high efficacies (up to 112 Lumens/Watt) with good colour rendering, and are therefore suitable for many applications where a warm white light and long lamp life are important factors. The discharge tube is made of sintered aluminium oxide, containing a mixture of mercury and sodium at high pressure. The effect of high pressure is to broaden the sodium spectrum, so that the lamp gives an output throughout the entire visible spectrum.

### RANGE

SON (Ovoid outer envelope, with white internal diffusive coating):  
Available in ratings of 50W, 70W (also available with clear envelope), 150W, 250W, 400W and 1000W.

SON/T (Tubular outer envelope of clear glass):  
Available in ratings of 150W, 250W, 400W and 1000W.

### APPLICATIONS

Suitable for any application where high efficacy, reliability and long life coupled with good colour rendering is required, in situations such as:

- Security lighting
- Docks and goods yards
- Transport termini
- Churches
- Swimming pools
- Exhibition halls
- Outdoor markets and civic centres.

In addition, the clear tubular outer envelope of the SON/T lamp lends itself to these applications where precise optical control is essential, as in luminaires for floodlighting and the lighting of stadia.

Handbook Ref.

**2.2.6**

To reorder this data sheet quote

9.77 PL 1776

Replaces

8190/4.15 (773)

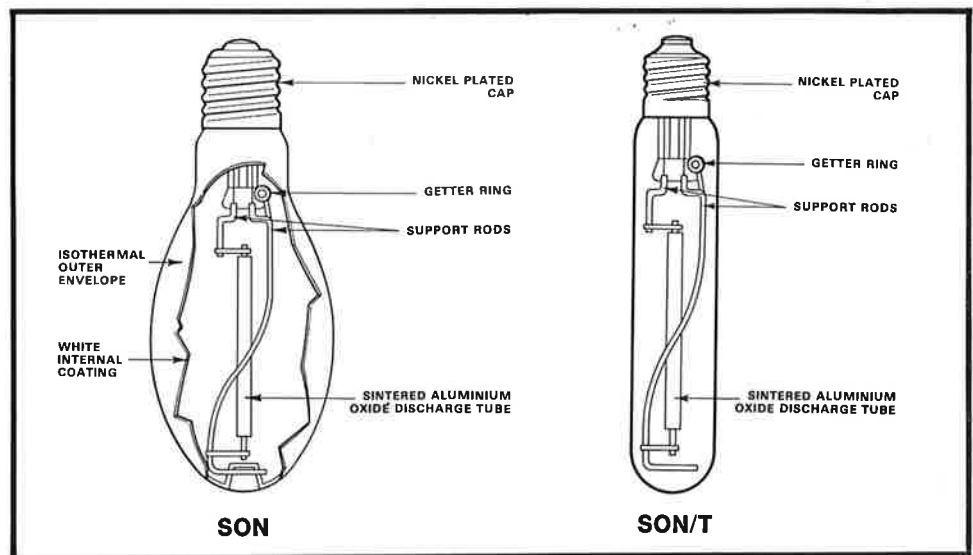
**DISCHARGE LAMPS**

## FEATURES

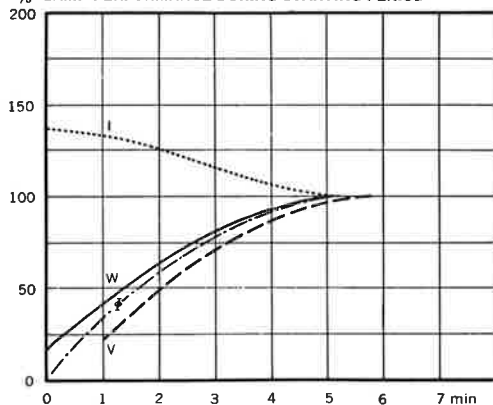
- Short run-up time – 80% of full light output is achieved after only 3½ minutes.
- Solid-state ignitor on lamps of 150W rating and above ensures reliable and quick starting – even when hot – at temperatures down to –40°C.
- Reliability, stable operation and long life permits lamps to be used in situations where 'lamp outage' could create a hazard.
- Excellent lumen maintenance.
- Isothermal hard glass outer envelope guards against breakage due to thermal shock.
- Warm white colour appearance, with colour rendering capable of reproducing blue surfaces clearly, and enhancing red or yellow surfaces. Complexions and skin tones are flattered by the light.
- Universal burning position for all lamps in the range.

**Lamps and ignitors:** Made in Holland

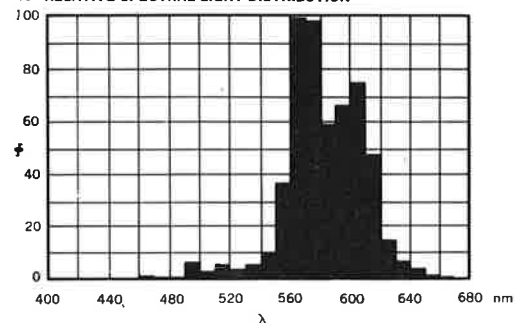
**Ballasts and capacitors:** Made in U.K.



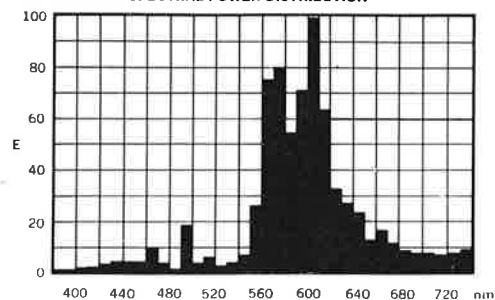
% LAMP PERFORMANCE DURING STARTING PERIOD



% RELATIVE SPECTRAL LIGHT DISTRIBUTION



% RELATIVE SPECTRAL POWER DISTRIBUTION



## PHOTOMETRIC & ELECTRICAL DATA

Catalogue Number	Lumens		Lamp Volts	Lamp Current (Amperes)	Total circuit Watts	Overall length (mm/in.)	Diameter (mm/in.)	Cap	Ignitor	Ballast	PF Capacitor	Packing quantity (Lamps)
	100 hrs.	2000 hrs.										
50 SON	3300	—	85	0.75	61	156/ 6.14	72/2.83	ES	Internal			—
70 SON	5800	—	90	1.0	85	156/ 6.14	72/2.83	ES	Internal	L4074	L4010/07	—
70 SON/C (clear bulb)	6000	—	90	1.0	85	156/ 6.14	72/2.83	ES	Internal	L4074	L4010/07	—
150 SON	14000	13500	100	1.8	174	227/ 8.90	92/3.54	GES	S50	L4154BX	L4016/07	9
150 SON/T	14500	14000	100	1.8	174	211/ 8.31	47/1.81	GES	S50	L4154BX	L4016/07	12
250 SON	25000	24000	100	3.0	280	227/ 8.94	92/3.58	GES	S50	L4254	2 x L4016/07	9
250 SON/T	26000	25000	100	3.0	280	257/10.12	47/1.81	GES	S50	L4254	2 x L4016/07	12
400 SON	47000	45000	105	4.4	440	292/11.42	122/4.78	GES	S50	L4404	2 x L4020/07	6
400 SON/T	48000	46500	105	4.4	440	283/11.22	47/1.89	GES	S50	L4404	2 x L4020/07	12
1000 SON	120000	110000	110	10.3	1100	400/15.75	170/6.56	GES	S53	L4410	4 x L4025/07	4
1000 SON/T	130000	123000	110	10.3	1100	390/15.75	67/2.60	GES	S53	L4410	4 x L4025/07	4

Notes: Please order lamps by catalogue numbers, in multiples of the packing quantity.

All lamps are suitable for operation in ambient temperatures down to –40°C.

Products offered for sale may differ from those described or illustrated in this leaflet due to later production changes in specifications, components or place of manufacture. The contents of this leaflet are therefore not to be treated as representations as to the current availability of products as described, or as to products actually offered for sale.

**PHILIPS  
ELECTRICAL LIMITED**

Lighting Division P.O. 298 City House  
London Road Croydon CR9 3QR