

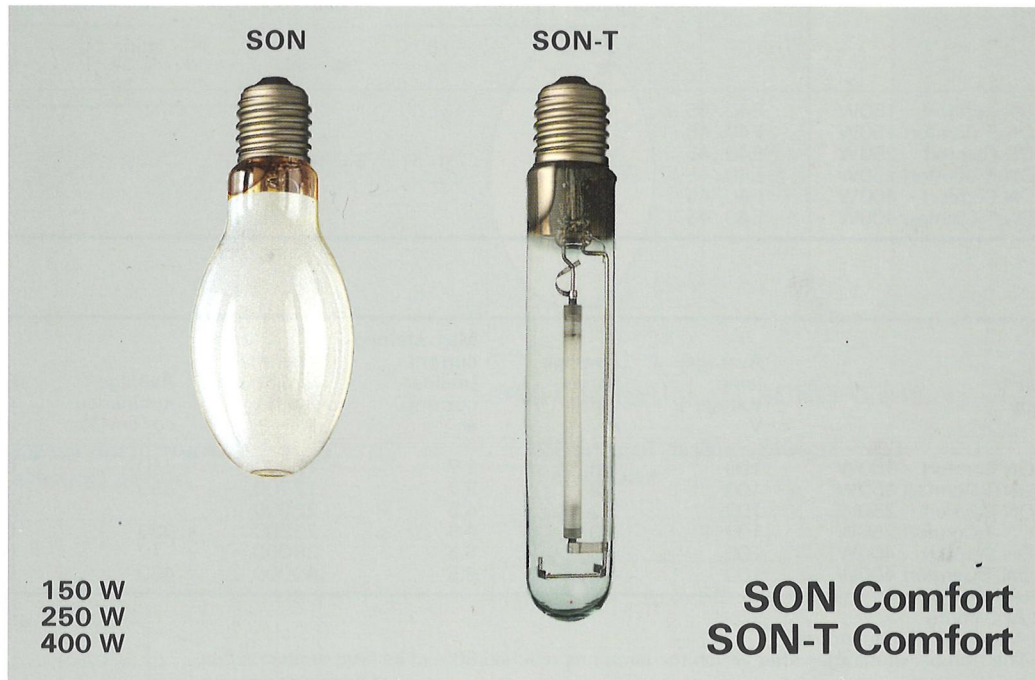
Philips Lighting

Product information

Gas-discharge lamps



SON Comfort and SON-T Comfort high-pressure sodium lamps



Introduction

The SON Comfort lamp range, available in two different outer bulbs (ovoid coated and tubular clear), offers features which fit the requirements of applications where quality of light and low running costs have an important role to play.

Application fields

- **Urban lighting** where a warm and appealing colour of light, combined with high light output and low energy consumption are required (e.g. squares, parks, city centres, residential areas).
- **Decorative outdoor lighting** where lighting can create image and life in the cities (e.g. monuments, facades, historic buildings).
- **Industrial lighting** for a relatively high lighting level with good rendering of colour at low cost (e.g. industrial halls, light industry).
- **Large-scale shop and commercial centre lighting** to create warm ambience with good colour rendering in a cost-saving general lighting solution.
- **Outdoor/Indoor sports lighting** to provide quality in colour and a good lighting level at low cost.

SON Comfort features

- Good colour rendering of light (Ra 65).
- Warm colour of light (colour temperature: 2150 K).
- High light output (from 12 250 up to 38 000 lumen).
- Low running cost (long economic life and excellent lumen maintenance).
- Flexibility (retrofit lamp fitting on standard SON gear and fixtures).
- High efficacy (88 lm/watt).

Installation information

Son(T) Comfort lamps require high quality ballasts for optimum operation, as well as ignitors to ensure reliable ignition. For ballasts and ignitors, see relevant leaflets. SON(T) Comfort lamps are retrofit lamps, suitable for standard SON gear and fixtures.

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Technical data

Lamp type	Base	Supply voltage; deviation in percentage of nominal mains voltage (220, 230 or 240 volt) V						
		Min. for ignition ¹⁾		Min. for stable operation %	For operation within colour spec.		Max. permissible temperatures	
		+ 20 °C %	— 18 °C %		min. %	max. %	Bulb °C	Base °C
SON Comfort 150W	E40/45	— 10	— 9	— 9	— 3	+ 3	350	250
SON-T Comfort 150W	E40/45							
SON Comfort 250W	E40/45							
SON-T Comfort 250W	E40/45							
SON Comfort 400W	E40/45							
SON-T Comfort 400W	E40/45							

Lamp type	Average lamp voltage ²⁾ V	Average lamp current ²⁾ A	Max. starting current (mains current) A	Average luminous flux ²⁾ lm	Average luminance cd/cm ² 2)	Run-up time minutes ³⁾	C.R.I. Ra	T _c K
SON Comfort 150W	100	1.8	2.7	12 250	10	6	65	2150
SON-T Comfort 150W	100	1.8	2.7	12 700	350	6	65	2150
SON Comfort 250W	100	3.0	4.5	22 000	17	6	65	2150
SON-T Comfort 250W	100	3.0	4.5	23 000	330	6	65	2150
SON Comfort 400W	105	4.5	6.5	38 000	17	6	65	2150
SON-T Comfort 400W	100	4.5	6.5	40 000	480	6	65	2150

¹⁾ At 0 hours.

²⁾ After 100 burning hours.

³⁾ The number of minutes after which the lamp has reached 80% of its final luminous flux.

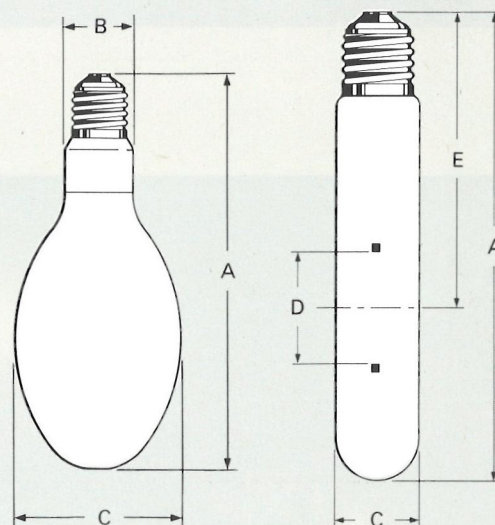
Note: In order to obtain optimum performance regarding colour characteristics and life, the gear system should be adapted to the real mains voltage, within the smallest tolerance possible.

Ordering and packing data

Lamp type	Ordering number	Nett weight g	Packing unit			
			Qty	Weight kg	Dimensions cm	Volume m ³
SON Comfort 150W	9281 502 098 ..	175	12	3.9	48 x 37 x 29	0.052
SON-T Comfort 150W	9281 546 092 ..	170	12	3.1	34 x 27 x 32	0.029
SON Comfort 250W	9281 551 098 ..	175	12	3.9	48 x 37 x 29	0.052
SON-T Comfort 250W	9281 560 092 ..	165	12	3.6	34 x 27 x 37	0.034
SON Comfort 400W	8222 341 422 ..	250	6	2.9	44 x 31 x 35	0.056
SON-T Comfort 400W	8222 341 423 ..	200	12	3.9	34 x 27 x 37	0.034

Dimensions

Lamp type		A max.	B max.	C max.	D nom.	E nom.
SON Comfort 150W	227	53	92	-	-	-
SON Comfort 250W	227	53	92	-	-	-
SON Comfort 400W	292	58	122	-	-	-
SON-T Comfort 150W	211	-	48	58	132	-
SON-T Comfort 250W	257	-	48	65	158	-
SON-T Comfort 400W	283	-	48	85	175	-

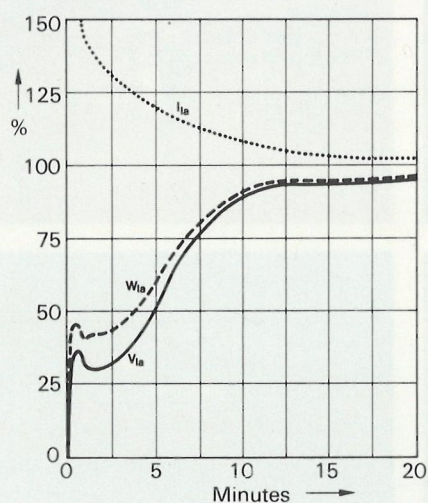


SON Comfort

SON-T Comfort

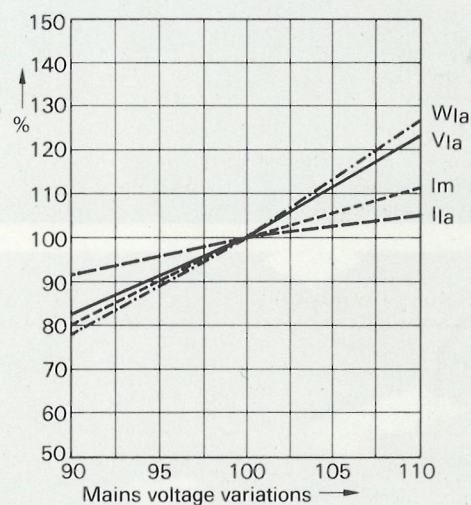
Typical curves

Lamp performance during starting period



W_{la} = Lamp wattage
 I_{la} = Lamp current
 V_{la} = Lamp voltage
 I_m = Luminous flux

Effects of mains voltage variations



Spectral power distribution

