

# Technical Information

No. FO 4515

Edition: 08/2004 - subject to change

Supersedes: Edition 02/02

Status: valid

# Mercury Short Arc Lamp

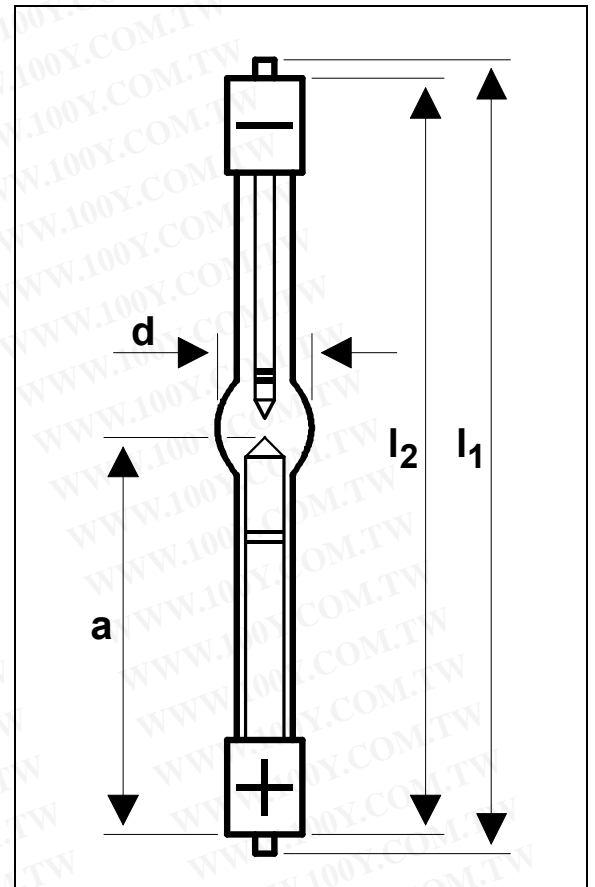
# HBO<sup>®</sup> 103 W/2

## Product description

- Mercury discharge lamp
- Short arc
- For DC operation at constant power
- High pressure during operation
- For vertical and horizontal operation

## Electrical Data and Lamp Geometry

Rated lamp power	W	100
Rated lamp current	A	4.44
Initial voltage range	V	20 ... 25
Ignition voltage (cold)	V	850
Overall lamp length $l_1$	mm	max. 90
Lamp length $l_2$	mm	max. 82
Bulb diameter $d$	mm	$10.0 \pm 0.2$
Length $a^1$	mm	$43.0 \pm 1.5$
Arc gap (cold)	mm	approx. 0.6
Base (anode side)		• SFa 9-2
Base (cathode side)		• SFa 7.5-2



## Performance Data<sup>2</sup>

Initial luminous flux	lm	min. 2550
Initial average luminance	cd/cm <sup>2</sup>	min. 150000
Initial light intensity <sup>3</sup>	cd	min. 270
Declared service life <sup>4</sup>	h	300

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Full luminous flux is generated after a run-up phase of approximately five minutes.

## Mounting

This lamp should be mounted at the anode base; the cathode base should be left unsupported. It is allowed to mount at the cathode base leaving the anode base unsupported; however, this renders length „a“ meaningless.

<sup>1</sup> Length „a“ specifies the position of anode tip referring to reference plane at room temperature.

<sup>2</sup> At rated power if not otherwise specified; data pertains to both vertical and horizontal operation.

<sup>3</sup> Light intensity in the plane containing anode tip and vertical to lamp axis

<sup>4</sup> At switch cycle 2 hours on, 2 hours off

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## ■ Operation Conditions

Burning position		s 90 (vertical-to-horizontal, anode down)
Base temperature	°C	max. 230 allowed
Cooling		depending on lamp housing convection may be sufficient
Arc stabilisation		not required
Allowed power range <sup>5</sup>	W	70 ... 125 (in case of short-time line voltage deviations)
Required inrush current	A	min. 5, max 8
Polarity		for proper polarity observe base marking

This lamp type can be operated both on a standard ballast and on an electronic power supply provided they comply with the requirements laid down in *Guidelines for Power Supplies and Igniters* (see table below).

## ■ Additional Documentation

Title	Order reference
• Typical Spectral Distribution	
• Mercury Safety Instructions for HBO Short Arc Lamps	No. FO 4574
• Guidelines for Power Supplies and Igniters	No. FO GL-2

For the above mentioned publications contact an OSRAM representative in your neighbourhood.

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<sup>5</sup> It is recommended to operate this lamp with rated power.