

Technical Information

No. FO 4515

Edition: 08/2004 - subject to change

Supersedes: Edition 02/02

Status: valid

Mercury Short Arc Lamp

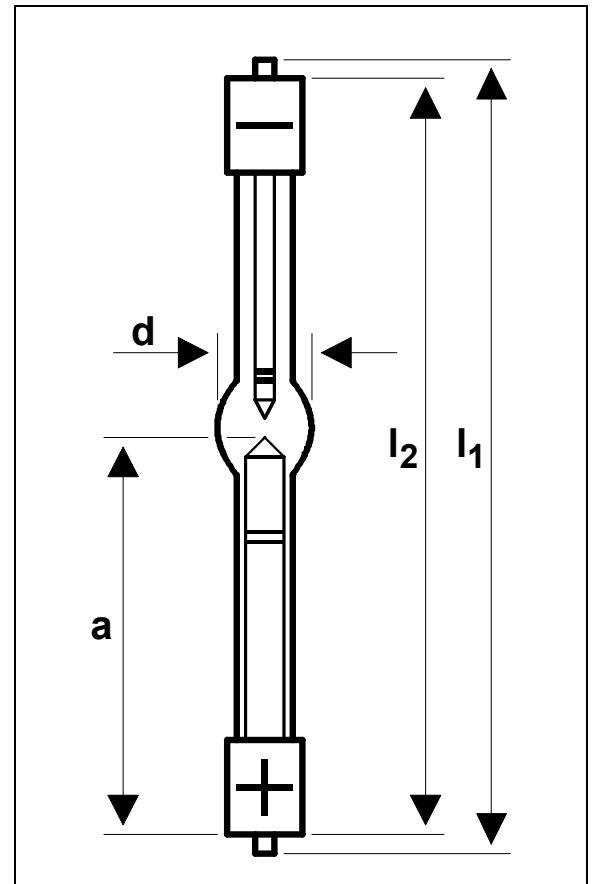
HBO[®] 103 W/2

■ 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 ± 0.2
Length a^1	mm	43.0 ± 1.5
Arc gap (cold)	mm	approx. 0.6
Base (anode side)		• SFa 9-2
Base (cathode side)		• SFa 7.5-2



■ Performance Data ²

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

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.

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

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

³ Light intensity in the plane containing anode tip and vertical to lamp axis

⁴ 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 ⁵	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.

⁵ It is recommended to operate this lamp with rated power.