

# Technical Information

No. FO 4635

Edition: 08/2004 - subject to change

Supersedes: Edition 02/02

Status: valid

# Mercury Short Arc Lamp

# HBO<sup>®</sup> 50 W/3

## ■ Product description

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

## ■ Electrical Data and Geometry

Rated power	W	50
Rated current	A	2.3
Initial voltage range	V	20 ... 26
Ignition voltage (cold)	V	850
Overall lamp length $l_1$	mm	max. 53
Lamp length $l_2$	mm	max. 47
Bulb diameter $d$	mm	max. 9
Length $a^1$	mm	$22 \pm 2$
Arc gap (cold)	mm	approx. 0.6
Base (anode side)		• SFa 8-2
Base (cathode side)		• SFa 6-2

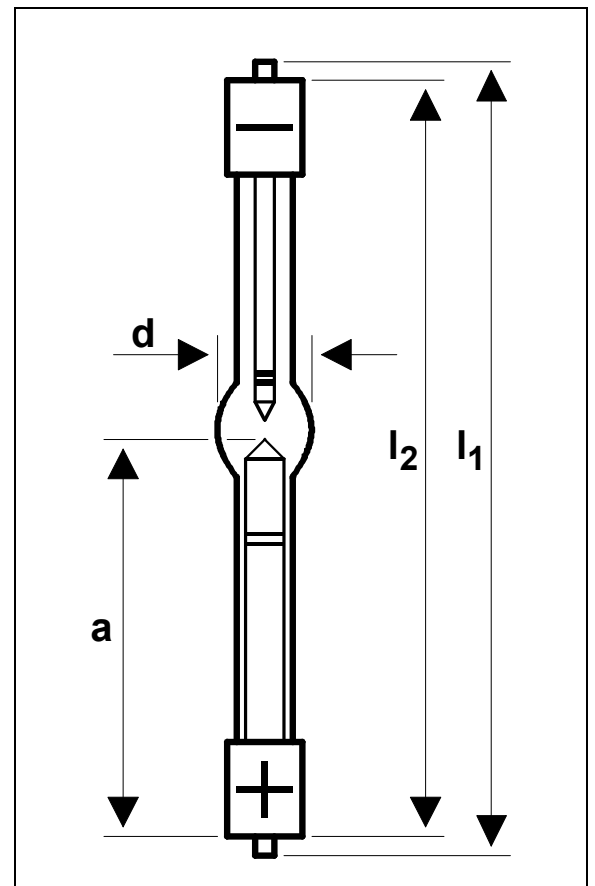
## ■ Performance Data <sup>2</sup>

Initial luminous flux	lm	min. 11,000
Initial average luminance	cd/cm <sup>2</sup>	min. 70,000
Initial light intensity <sup>3</sup>	cd	min. 130
Initial arc stability	%	> 85
Declared service life <sup>4</sup>	h	200

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 vertical operation.

<sup>3</sup> Light intensity in the plane through 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 45 (vertical-to-45°, anode down)
Base temperature	°C	max. 230 allowed
Cooling		convection may be sufficient
Arc stabilization		not required
Allowed power range <sup>5</sup>	W	36 ... 64 (in case of short-time line voltage deviations)
Required inrush current	A	min. 2.8, max 4.5
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-32

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

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