

## Technical Information

No. FO 4685

Edition: 06/02 - subject to change

Substitutes: 09/00

Status: valid

## Mercury Short Arc Lamp

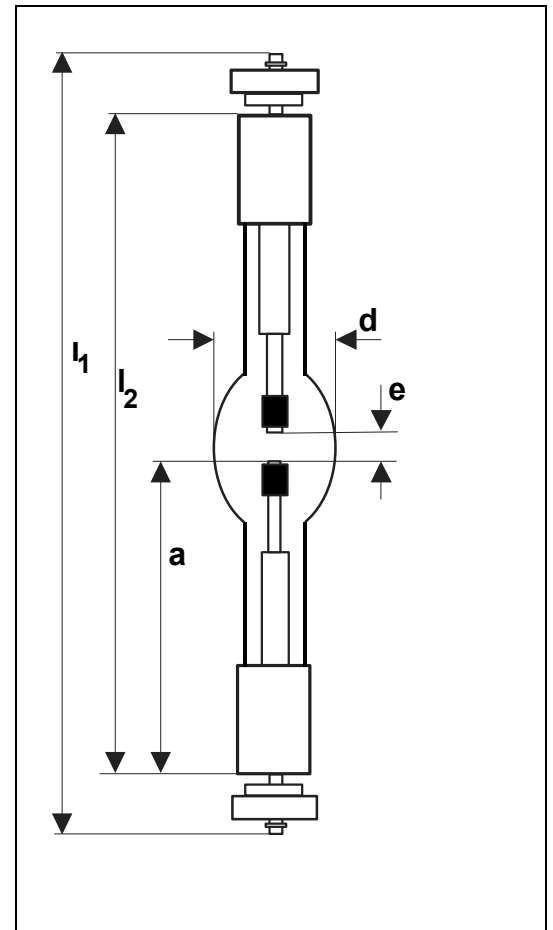
# HBO<sup>®</sup> 500 W/2

### ■ Product description

The OSRAM HBO<sup>®</sup> 500 W/2 belongs to the group of mercury short arc lamps, of which the discharge arc burns in an atmosphere of high pressure mercury vapour. Characteristic for the lamp, which generally is used in spectroscopy, are the high spectral density and the possibility to operate the lamp in alternating as well as in direct current mode.

### ■ Technical data

Order reference	HBO <sup>®</sup> 500 W/2		
Rated lamp wattage	W	500	
Lamp voltage	DC	V	85 - 67
	AC / L <sub>1</sub>	V	81 ± 4
	AC / L <sub>2</sub>	V	73 ± 4
Operating current	DC	A	5.9 – 7.4
	AC / L <sub>1</sub>	A	7.1
	AC / L <sub>2</sub>	A	7.8
Ignition voltage (cold)	kV <sub>s</sub>	20	
Luminous flux	lm	30,000	
Luminous efficacy	lm/W	60	
Luminous intensity	cd	2,850	
Average luminance	cd/cm <sup>2</sup>	30,000	
Electrode gap e (cold)	mm	4.5	
Lamp length l <sub>1</sub>	mm	max. 170	
Lamp length l <sub>2</sub>	mm	140 / max. 142	
Bulb diameter d	mm	26.5	
LCL (a)	mm	65.5	
Average service life	DC	h	400
	AC		200
Base	SFc 13-4/20		



### ■ Lamp operation

Maximum permissible  
base temperature                      °C                      200

Cooling    Forced cooling, fan

Burning position    vertikal ± 20°, s 20; Anode (+) underneath

The HBO<sup>®</sup> 200 W/2 is an "all-current" lamp and can be operated with both alternating or direct current. However direct current operation improves the stability of the luminous data (particularly arc stability) and makes for a longer overall life. For alternating current operation, special choke or leakage transformers are mainly used. Due to leakage of the operating voltage, it is not possible to use fixed chokes. The chokes are equipped with two taps for the two operating voltage ranges, which are marked L<sub>1</sub> and L<sub>2</sub>.

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### Safety Instruction

Because their high luminous efficacy, the UV radiation which they emit and the high pressure within the lamp, HBO<sup>®</sup> lamps must be operated within enclosed, purpose-built housings. When a lamp breaks, mercury is released. Particular safety regulations must be paid attention (for details please request technical information sheet no. FO 4574).