

Technical Information

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Mercury Short Arc Lamp
for Microlithography

HBO[®] 5510 W/PIH

■ Product description

The OSRAM HBO[®] 5510 W/PIH is a direct current mercury short arc lamp designed for the manufacture of printed circuit boards and semiconductor manufacturing. This lamp type emits a very high radiant intensity in the ultraviolet and visible wavelength range and is designed with the latest technology for a low intensity degradation over lifetime. It has been developed and optimized for being used in the ASML XT:400F, XT:450E, XT:450F; future AT:400D with upgrade package, scanner series.

■ Technical data

Order reference	HBO [®]	5510 W/PIH
Max. lamp wattage	W	5,500
Rated lamp voltage	V	27 @5.5.KW
Rated lamp current (=)	A	204 @5.5.KW
Ignition voltage (cold)	kV _s	max. 30
Radiant intensity 365 +/- 2,5 (mW/sr)	W/sr	tbd
Electrode gap e (cold)	mm	5.5
Lamp length (overall) l ₂	mm	352.5 / max. 395
Bulb diameter d	mm	85
LCL a	mm	154
Guaranteed life	h	850

Base	<ul style="list-style-type: none">• Anode: SFax 42.5- 6/50 with cable connection (M10)• Cathode: SFa 37,5-18/50
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■ Lamp operation

Maximum permissible base temperature	°C	200
Cooling	forced base cooling	
Burning position	vertical, anode (+) up	

■ Safety Instruction

Because their high luminous efficacy, the UV radiation which they emit and the high pressure within the lamp, HBO[®] 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).

The lamp contains overpressure even in the cold status – additional safety regulations, supplied with the lamps, have to be fulfilled. Please read Technical bulletin DO-SEM TB 004 carefully.

