

Technical Information

No. FO 5777

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Mercury Short Arc Lamp
for Microlithography

HBO® 6500 W/PIHL

■ Product description

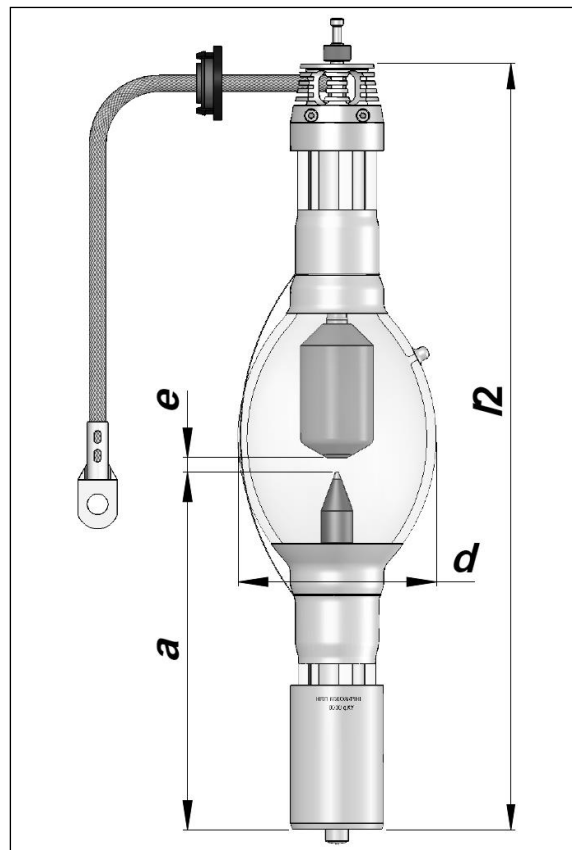
The OSRAM HBO® 6500 W/PIHL is a direct current mercury short arc lamp designed for the manufacture of integrated circuits (microlithography of semiconductors). This lamp type emits a very high radiant intensity in the ultraviolet and visible wavelength range and is designed with the latest technology for low degradation of intensity over lifetime. It has been developed and optimized for being used in the ASML TWINSCAN XT:4x0H/K/L series. APPROVED BY ASML!

■ Technical data

Order reference	HBO®	6500 W/PIHL
Max. lamp wattage	W	6,500
Rated lamp voltage	V	28 – 32
Rated lamp current (=)	A	203 – 230
Ignition voltage (cold)	kV _s	max. 30
Electrode gap e (cold)	mm	7
Lamp length (overall) l ₂	mm	372.5
Bulb diameter d	mm	92
LCL a	mm	174
Guaranteed lifetime	h	See warranty sheet
Operational wavelength	nm	365 (i-line)
Linewidth of i-line	nm	≤ 2.4 (FWHM)

Base

- Anode: SFa45-6/64.5
- Cathode: SFA44,97-11/70



■ 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.

OSRAM