

Technical Information

No. FO 4790

Edition:06/02 - subject to change

Substitutes: Edition 06/00

Status: valid

Mercury Short Arc Lamp
for Microlithography

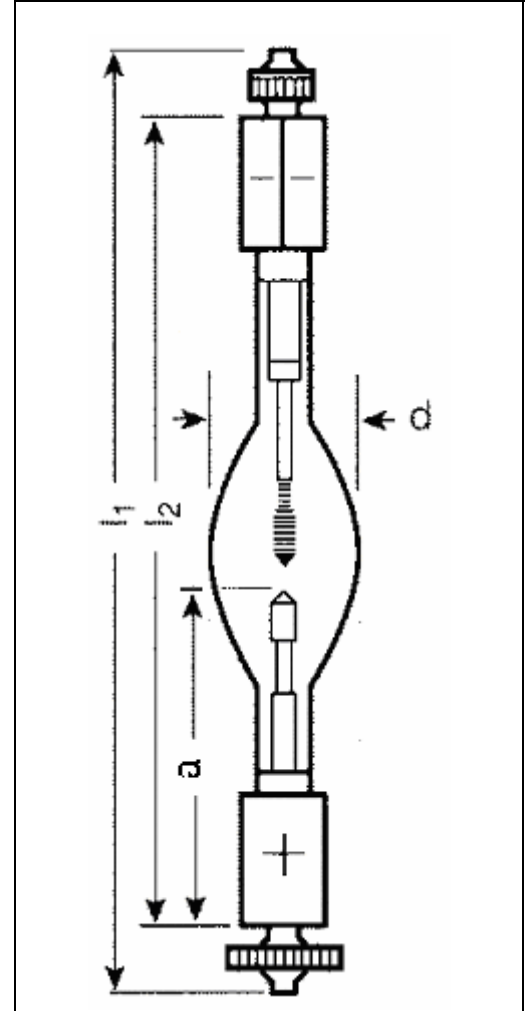
HBO[®] 1002 W/CEL

■ Product description

The OSRAM HBO[®] 1002 W/CEL is a mercury short arc lamp designed for the manufacturing of integrated circuits (microlithography). The lamp emits very high radiant intensity in the ultraviolet and visible wavelength range and is especially suited for use in Canon stepper machines (FPA 1550 Mark III, Mark IV). The HBO[®] 1002 W/CEL stands out due to its long service life and can be operated both constant power operation and pulse mode operation.

■ Technical data

Order reference	HBO [®]	1002 W/CEL
Rated lamp wattage (constant power operation)	W	max. 750
Rated lamp wattage (pulse mode operation)	W	700 / 1,000
Rated lamp voltage	V	47
Rated lamp current (=)	A	16
Ignition voltage (cold)	kV _s	max. 15
Radiant power (wave length range 350 ... 450 nm; measured at rated power)	W	85
Radiant intensity (wave length range 350 ... 450 nm; measured at rated power)	mW/sr	8,300
Electrode gap e	mm	3
Lamp length (overall) l ₁	mm	max. 175
Lamp length l ₂	mm	155
Bulb diameter d	mm	28
LCL a	mm	78.5
Guaranteed life	h	2,500



Base	• Cathode: SXFc 15-6/20 Hexagon base with thread M6 • Anode: SFc 15-6/25 with thread M6
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■ Lamp operation

Maximum permissible base temperature	°C	230
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Cooling	Convection
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Burning position	vertical, Anode (+) underneath
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■ Safety Instruction

Due to 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).

