

Technical Information

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Mercury Short Arc Lamp for Microlithography

HBO® 1000 W/NEL & /NL

n Product description

The OSRAM HBO® 1000 W/NEL is a direct current mercury short arc g-line lamp designed for the manufacture of integrated circuits (microlithography). This lamp type emits a very high radiant intensity in the ultraviolet and visible wavelength range and is especially suited for use in Nikon equipment (NSR-1505 G3, G4/A, G4/B, G4/C, G4/D). The extended longlife HBO® 1000 W/NEL is also available as longlife type HBO® 1000 W/NE with 1500h and standard type with an average 750h service life. All types can both be operated in constant power operation or in pulse mode operation.

n Technical data

Order reference	HBO®	1000 W/NEL	/NL
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	
Radiant power (wave length range 350 ... 450)	W	82	
Radiant intensity (wave length range 350 ... 450)	mW/sr	8.300	
Electrode gap e (cold)	mm	3	
Lamp length (overall) l_1	mm	max. 190	
Lamp length l_2	mm	166 / max. 168	
Bulb diameter d	mm	28	
LCL a	mm	84,5	
Average service life	h	2.500	1.500
Base		• Cathode: SFaX 14-5/21 sleeve base with cooling fins with cable connection (M5)	

n Lamp operation

Maximum permissible base temperature	°C	230
Cooling	Convection, cooling fins on cathode base	
Burning position	vertical, anode (+) underneath	

The HBO® 1000 W/N types can either be operated on standard ballasts or on electronic power supplies (ECG).

n 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).

