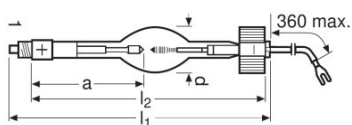
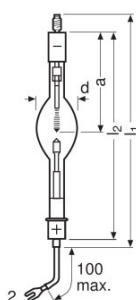


HBO-IC

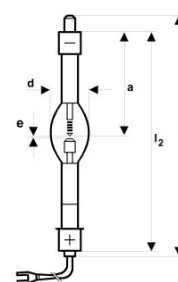
Microlithography lamps for Nikon i-line systems



Product line drawing



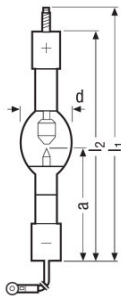
Product line drawing



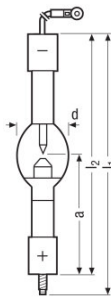
Product line drawing



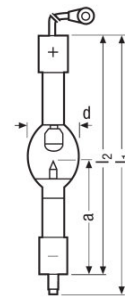
Product family datasheet



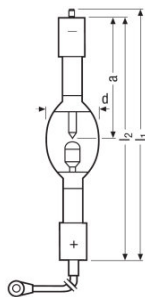
Product line drawing



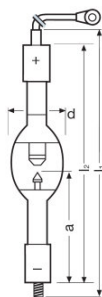
Product line drawing



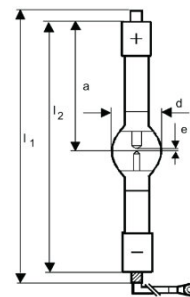
Product line drawing



Product line drawing



Product line drawing



Product line drawing

Product family datasheet

Technical data

Product description	Electrical data					Dimensions & weight	
	Nominal voltage	Nominal current	Type of current	Rated wattage	Nominal wattage	Diameter	Length
HBO 1000 W/NEL ¹⁾	47.0 V	16.0 A	DC	750.00 W	750.00 ... 1000.00 W	28.0 mm	187.0 mm
HBO 1002 W/NEL ¹⁾	47.0 V	16.0 A	DC	750.00 W	750.00 ... 1000.00 W	28.0 mm	187.0 mm
HBO 1002 W/NIL ²⁾	27.1 V	25.8 A	DC	750.00 W	750.00 ... 1000.00 W	29.0 mm	190.0 mm
HBO 2000 W/NIL	24.0 V	72.9 A	DC	1750.00 W	2000.00 W	55.0 mm	219.0 mm
HBO 2001 W/NIL ³⁾	26.0 V	67.0 A	DC	1750.00 W	2000.00 W	52.0 mm	251.0 mm
HBO 2001 W/NIEL	24.0 V	72.9 A	DC	2500.00 W	2000.00 W	55.0 mm	357.0 mm
HBO 2002 W/NIL	24.0 V	72.9 A	DC	1750.00 W	2000.00 W	999.0 mm	232.0 mm
HBO 2011 W/NIL	25 V	85.0 A	DC	2000.00 W	2000.00 W	55.0 mm	256.0 mm
HBO 2011 W/NILH ⁴⁾	23.5 V	83 A	DC	2000.00 W	2000.00 W	55.0 mm	234.0 mm
HBO 2501 W/NIL	23.0 V	109 A	DC	2500.00 W	2500.00 W	70.0 mm	357.0 mm
HBO 2510 W/NIL	23.0 V	109 A	DC	2500.00 W	2500.00 W	70.0 mm	357.0 mm
HBO 3500 W/NIL ⁴⁾	27.0 V	130 A	DC	3500.00 W	3500.00 W	82.0 mm	382.0 mm

Product description	Mounting length	Light center length (LCL)	Electrode gap cold	Length with base excl. base pins/connection	Capabilities
					Dimmable
HBO 1000 W/NEL ¹⁾	190.0 mm	84.5 mm ⁵⁾	3.0 mm		No
HBO 1002 W/NEL ¹⁾	190.0 mm	78.5 mm ⁵⁾	3.0 mm		No
HBO 1002 W/NIL ²⁾	168.0 mm		3.0 mm		No
HBO 2000 W/NIL	219.0 mm		4.5 mm		No
HBO 2001 W/NIL ³⁾	251.0 mm	122.25 mm ⁵⁾	4.5 mm	219.00 mm	No
HBO 2001 W/NIEL	251.0 mm	112.0 mm ⁵⁾	4.5 mm	229.00 mm	No
HBO 2002 W/NIL	254.0 mm	107.75 mm ⁵⁾	4.5 mm	232.00 mm	No
HBO 2011 W/NIL	256.0 mm	107.75 mm ⁵⁾	4.5 mm	234.00 mm	No
HBO 2011 W/NILH ⁴⁾	256.0 mm	107.75 mm ⁵⁾	4.5 mm	234.00 mm	No
HBO 2501 W/NIL	367.0 mm		4.5 mm	325.00 mm	No
HBO 2510 W/NIL		157.75 mm ⁵⁾	4.5 mm	325.00 mm	No
HBO 3500 W/NIL ⁴⁾		180.0 mm ⁵⁾	5.5 mm	335.00 mm	No

Product family datasheet

Product description	Burning position	Cooling	Additional product data	
			Base anode (standard designation)	Base cathode (standard designation)
HBO 1000 W/NEL ¹⁾	Other ⁶⁾			
HBO 1002 W/NEL ¹⁾	Other ⁶⁾			
HBO 1002 W/NIL ²⁾	Other ⁶⁾			
HBO 2000 W/NIL	Other ⁷⁾			
HBO 2001 W/NIL ³⁾	Other ⁶⁾			
HBO 2001 W/NIEL	Other ⁶⁾	Forced ⁹⁾	SFc27-10/35	SFc27-7/35 ⁸⁾
HBO 2002 W/NIL	Other ⁷⁾			
HBO 2011 W/NIL	Other ⁷⁾	Forced ⁹⁾	SFc27-7/35 ¹⁰⁾	SFc27-12x1.5/35
HBO 2011 W/NILH ⁴⁾	Other ⁷⁾			
HBO 2501 W/NIL	Other ⁶⁾			
HBO 2510 W/NIL	Other ⁷⁾	Forced ⁹⁾	SFc33.5-12/50 ¹⁰⁾	SFc33.5-14/50
HBO 3500 W/NIL ⁴⁾	Other ⁷⁾	Forced ⁹⁾	SFc33.5-16/50 ¹¹⁾	SFa33.5-12/50 ⁸⁾

¹⁾ Lamp suitable for pulsed operation between 700...1000 W/Maximum permissible power 750 W for constant power operation

²⁾ Lamp suitable for pulsed operation between 700...1000 W

³⁾ Also available as Super Longlife version with 2,250 h lifespan: HBO 2001 W/NIEL (4050300538211)

⁴⁾ Lamp contains overpressure even in cold status - additional safety regulations, supplied with the lamps, have to be fulfilled. Please read Technical bulletin DO-SEM TB 004 carefully

⁵⁾ Distance from end of base to tip of anode or cathode (cold)

⁶⁾ Anode underneath

⁷⁾ Anode on top

⁸⁾ With cable connection (M8)

⁹⁾ Maximum permissible base temperature: 200 °C

¹⁰⁾ With cable connection (M 8)

¹¹⁾ With thread (M 16)

Product family datasheet

Safety advice

Because of their high luminance, UV radiation and high internal pressure (when hot) HBO lamps may only be operated in enclosed lamp casings specially constructed for the purpose. Mercury is released if the lamp breaks. Special safety precautions must be taken. More information is available on request or can be found in the leaflet included with the lamp or in the operating instructions.

Application advice

For more detailed application information and graphics please see product datasheet.

References / Links

For further information on HBO lamps and notes for manufacturers of control gear, please refer to the following publications, available on request from OSRAM:

“Specifications for power supply units for dc operated HBO mercury short-arc lamps”

“Specifications for power supply units for ac operated HBO mercury short-arc lamps”

“Specifications for igniters for HBO mercury short-arc lamps”

“Availability of power supplies and igniters”

“Mercury short arc lamps HBO for microlithography, Technology and Application”

Disclaimer

— Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.