

# Technical Information

No. FO 4567

Edition: 09/2003 - subject to change

Supersedes: Edition 02/02

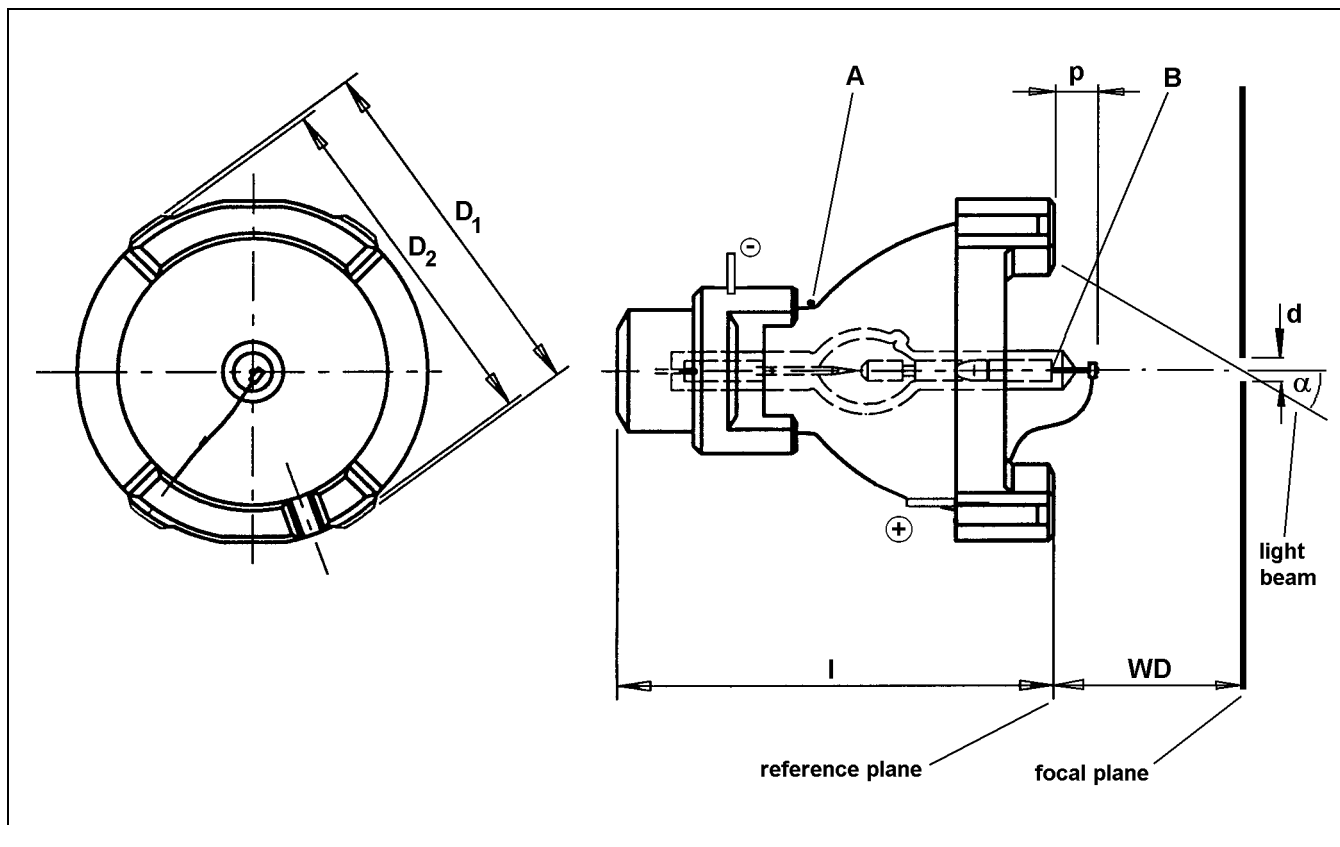
Status: valid

# Mercury Short Arc Reflector Lamp

# HBO<sup>®</sup> R 103 W/45

## ■ Product description

- Mercury discharge lamp
- Short arc
- For DC operation at constant power
- High pressure during operation
- Focussing reflector
- Dichroic coating for UV-reflection
- For light guides with up to 8 mm diameter
- Pin connectors



## ■ Technical data

Rated lamp current	A	4.44
Rated lamp wattage	W	100
Initial voltage range	V	20...25
Ignition voltage (cold)	V	max. 850
Beam-to-axis angle $\alpha$	deg	max. 22.4
Length l	mm	max. 77
Length p	mm	max. 4.5
Reflector diameter $D_1$	mm	max. $\varnothing$ 67.0
Diameter $D_2$	mm	$\varnothing$ 64.0 $_{-0.3}$
Electrical connectors	plus pole: pin, $\varnothing$ 2.0 mm; minus pole: pin, $\varnothing$ 2.5 mm	

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## ■ Performance data at rated wattage

Working distance WD	mm	45
Initial UV-A output <sup>1)</sup>	mW	• at d = Ø 3 mm, to be specified • at d = Ø 5 mm, to be specified
Declared service life <sup>2)</sup>	h	300

Full UV-A output is generated after a run-up period of approximately five minutes.

## ■ Mounting

Mounting	rim mounting; for details see Technical Information No. FO 4913
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## ■ Operation conditions

Burning position	horizontal ± 20° (p 20)
Temperature at point A °C	max. 250 allowed; 175 - 200 optimum
Temperature at point B °C	max. 350 allowed; 200 - 250 optimum
Cooling	Excessive airflow may lead to condensing of mercury in the discharge vessel and consequently to a performance drop
Current operation range A	min. 4, max. 5
Power operation range W	min. 70, max. 125 (observe Guidelines no. FO GL-2)
Polarity	proper polarity to be observed

The HBO<sup>®</sup> R 103 W/45 can either be operated on standard ballasts or on electronic power supplies.

## ■ Additional documentation

Title	Order Ref.
• Spectral distribution	-
• Guidelines for Mounting and Centring of Reflector Discharge Lamps (1)	FO 4913
• Mercury Safety Instructions for HBO Short Arc Lamps	FO 4574
• Guidelines for Power Supplies and Igniters for Mercury Short Arc Lamps Photo Optics	FO GL-2

<sup>1)</sup> UV-A output is understood as total energy in the range of 315-380 nm focussed on an aperture with diameter **d** at distance **WD** in front of the reflector .

<sup>2)</sup> Operation time after which aperture lumens can decrease to 50% of initial value;  
switching cycle: 1 hour on / 1 hour off.