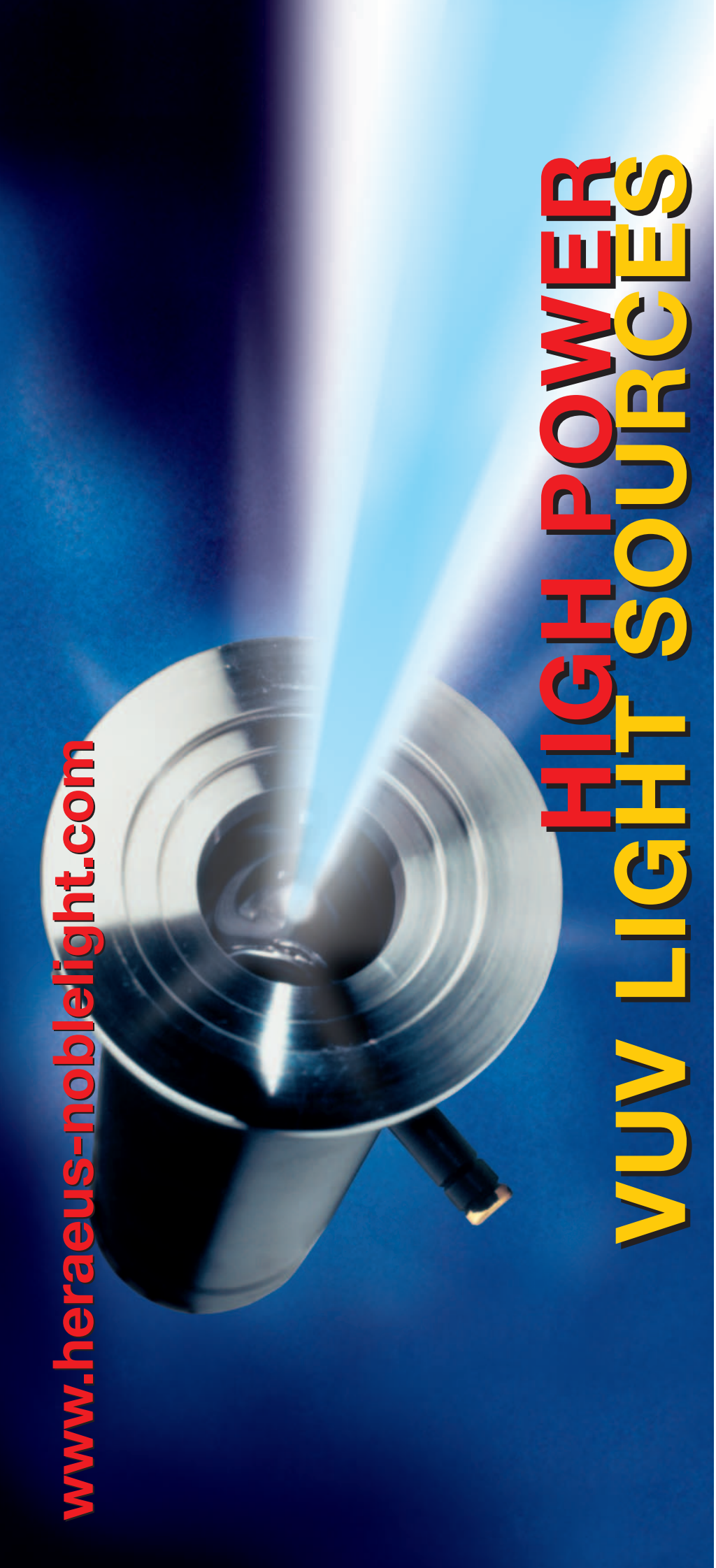


Heraeus

D 200 VUV LIGHT SOURCES FOR THE LABORATORY AND FOR PRODUCTION

Spectral Ranges
115 nm – 400 nm and 160 nm – 400 nm

D 200 high power VUV light sources are Deuterium discharge lamps, of 200 W electrical power. Important properties of the lamps are: directed UV radiation, a broad continuous spectrum between 160 nm and 400 nm, high UV radiation flux at 125 nm and 160 nm.

D 200 Light sources with a spectral range between 160 nm and 400 nm have a wide field of application in the laboratory and in production:

- Optical research with UV radiation
- Quality assurance in the semi-conductor industry
- UV interferometry
- UV spectroscopy at high radiation density
- UV absorption measurements
- Fluorescence excitation
- Photochemical analysis

D 200 VUV light sources are used because of their high photon energy and the high optical resolution of the UV radiation at short wavelengths.
The lamps offer a high radiation density, especially at 121/125 nm and 160 nm. At these short wavelengths, there is a high interaction of the UV radiation with gas molecules. Consequently, the lamps can be used only under vacuum. Typical applications are:

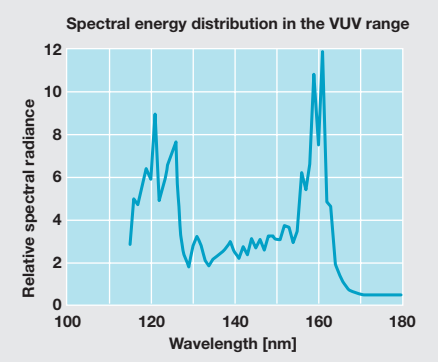
- Lithography
- Quality assurance in the semi-conductor industry
- Fluorescence excitation
- Photochemical processes with high photon energy

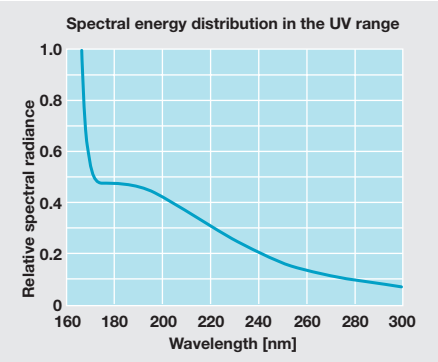
Three different D 200 lamp models
are designed for different spectral ranges by means of suitable window materials and specific construction:

- D 200 F: 200 nm – 400 nm in air, 160 nm – 400 nm under inert gas.
- D 200 F-HV: 160 nm – 400 nm under vacuum
- D 200 VUV: 115 nm – 400 nm under vacuum

All lamps are operated by the same PSD 200 power supply.

Heraeus Noblelight GmbH



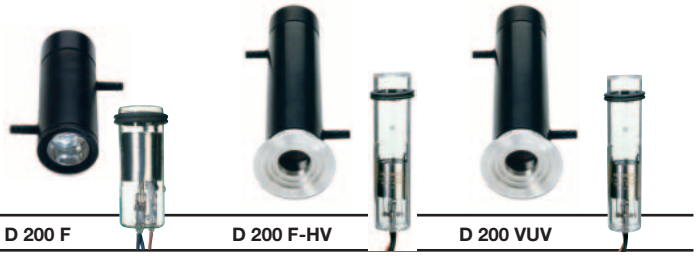


All lamp models offer the continuous spectrum between 165 nm and 400 nm. The spectral range 115 nm to 180 nm has the high UV radiation density at the wavelengths 121/125 nm and 160 nm with approximately 20 times the radiation density compared with the continuous spectral range > 170 nm.

Heraeus offers a standard power supply PSD 200 for all D 200 lamps.
The equipment controls the heat-up process automatically. Lamp ignition and the setting of the heating voltage and the anode voltage to the operating data takes place around 30 seconds after switch-on. After this the lamp is in operation.
The UV intensity/radiation density can be varied by means of the anode current.

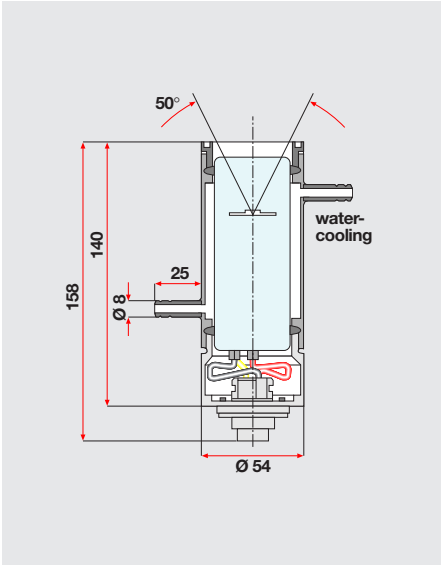
Technical data Power supply PSD 200

Mains voltage	230 V/115 V, 50/60 Hz
Dimensions	21 cm x 17.5 cm x 30 cm (WHD)
Weightt	12 kg
Identification no.	45006028
Mains voltage	100 V, Identification no. 45006277

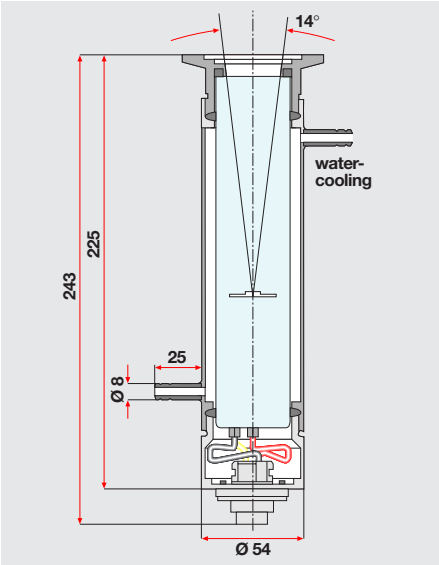


Technical Data

Lamp Type	D 200 F	D 200 F-HV	D 200 VUV
Part no.	56001671	45006278	45006010
	with cooling jacket	with cooling jacket	with cooling jacket
Spectral range	160 – 400 nm	160 – 400 nm	115 – 400 nm
Window material	Synthetic quartz	Synthetic quartz	MgF_2
Vacuum flange	Without flange	DN 50 KF	DN 50 KF
Aperture	1.0 mm diameter		
Cooling/Volume	Water-cooling / ≥ 0.5 l/min		
External diameter	54 mm		
Plug	Amphenol-Tuchel 3109/1		
Total length	158 mm	243 mm	243 mm
Weight	0.65 kg	0.9 kg	0.9 kg
Replacement lamp part number	56001669	45006286	45006127



D 200 F
Opening angle of the UV radiation 50°



D 200 VUV, D 200 F-HV
Opening angle of the UV radiation 14°

Electrical Data

		All lamp types D 200	Power supply PSD 200
Heating up	Heating voltage	6 Vdc	6 Vdc
	Heating current	4.5 Adc	4.5 Adc
	Heat-up time	30 s	30 s
Operating data	Heating voltage	3.0 Vdc	3.0 Vdc
	Heating current	2.5 Adc	2.5 Adc
	Ignition voltage	≥ 500 V	600V
	Anode current	Adjustable	Adjustable
		0.9 Adc – 1.8 Adc	0.9 Adc – 1.8 Adc
	Operating voltage	110 +10/-15Vdc	95 – 145 Vdc
Stability of the UV radiation	Noise (at 250nm)	< 0.1 % p-p	
	Drift (at 250 nm)	± 0.5 %/h	

HNG - B 155 E · D 3C 07/04/M+T
Printed in Germany

Heraeus

Heraeus Noblelight LLC
2150 Northmont Parkway, Suite L
Duluth, GA 30096
USA
Phone +1 (770) 418-0707
Telefax +1 (770) 418-0688

analytical@heraeusnoblelight.com
www.noblelight.net

Reg. No. 39254