Opsytec Dr. Gröbel

High-power UV-led smart

UV-LED smart

High irradiance, compact dimensions, and programmable irradiation are highlights of the UV spot light source UV LED smart. The UV spot light source operates reliably and without an external control unit. The desired irradiance is pre-programmed on the PC and is available at the press of a button or trigger signal.

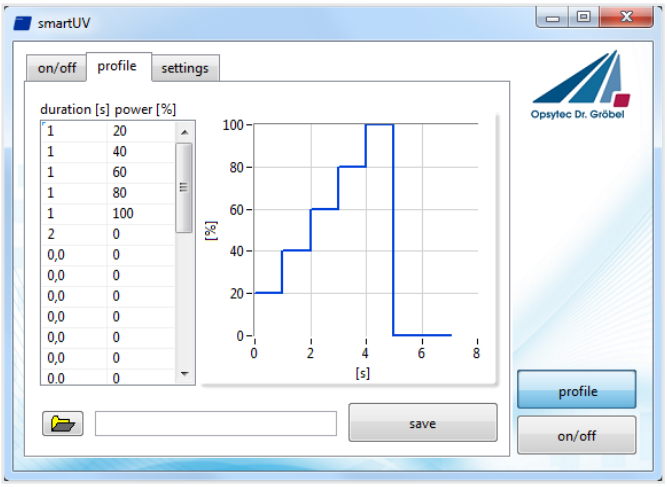
The wavelengths 365, 385, 395, 405, and 445 nm are available for different applications.

In addition, several beam profiles are available. Therefore, the UV radiation of a high-power LED is focused in the desired working distance via selectable optics. The maximum irradiance of > 25000 mW/cm² allows for extremely short process times. Available optics:

- Standard for working distance 19 mm
- High power for working distance 7 mm
- Wide working for distance 55 mm
- Parallel beam for working distance 30 to 60 mm

APPLICATIONS

- UV curing and bonding and UV sealing
- Micro curing
- Hairline or leak detection using fluorescence markers



Software smartUV

HIGHLIGHTS

- Best for laboratory use
- Adjustable output from 5% to 100 %
- Programmable exposure profile
- High-power UV-LED
- 365, 385, 395, 405 or 445 nm
- No thermal radiation
- No external control unit
- Ergonomic design

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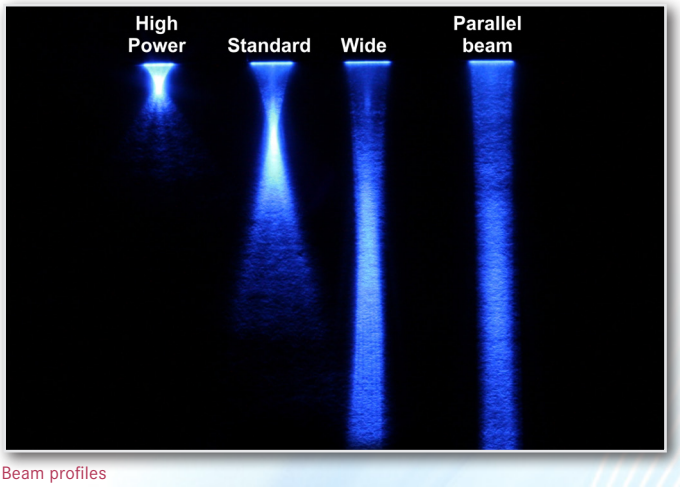
certified according
DIN EN ISO 9001:2008

TECHNICAL DATA

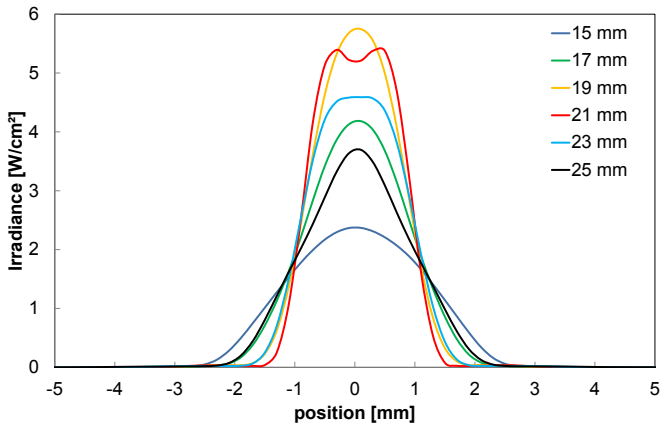
Wavelength	365, 385, 395, 405 or 445nm
Max. irradiance	> 25000 mW/cm²
Irradiance time	0,1 – 725 s, 0,1 s increments
Irradiance profile	up to 29 steps
Accurany, irradiance time	~20 ms, step 1
	~2 ms, steps 2-29
Dimming	5 to 100 %, 1% steps
Dimensions	Ø 15 x 143 mm
Cable length	1,5 m
Weight	~130 g
Operating voltage	DC, 24 V
Power	5 W
Classification	risk group 3 according
	DIN EN 62471:2009-03
Operating temperature	5 to 40 °C
Surface temperature	max 60°C
	ED >0,5 may require cooling
Storage temperature	-10 to 60 °C
Humidity	< 80%, non-condensing
Connection	USB, Trigger, DC ein
System requirements	Windows 7 or XP,
	300 MB HDD, 1 GB RAM

BEAM PROFILES AND OPTICS

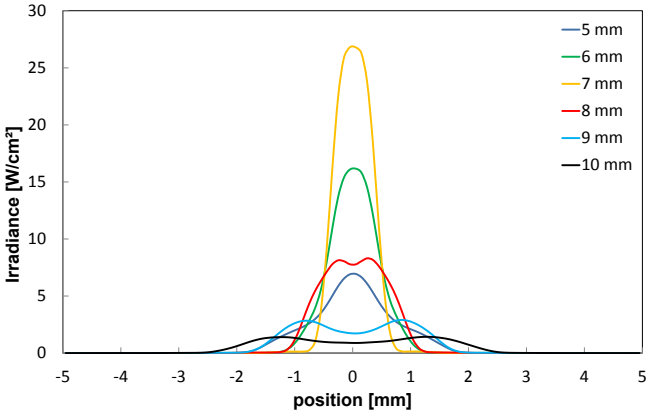
Four replaceable lenses are available for the smart UV LED. Our standard and high-power optics are suitable for small spot diameters. Larger working distances and spot diameters can be achieved with the wide and parallel beam optics.



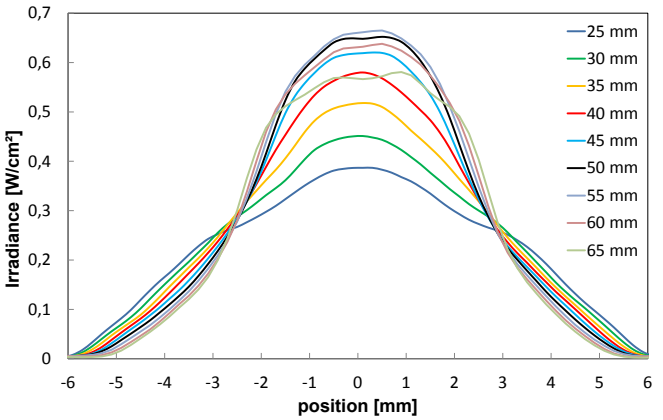
Beam profiles



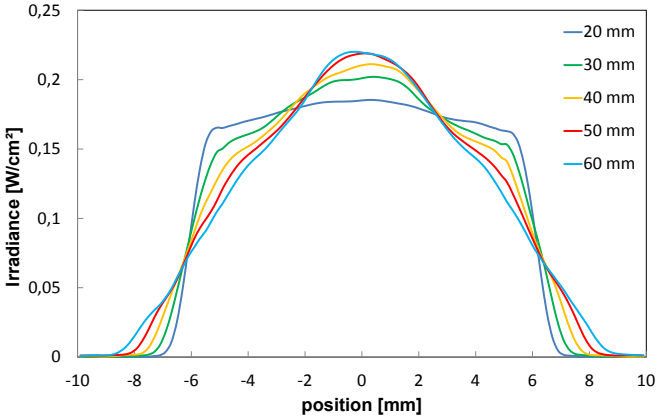
Irradiance profile vs. distance for 385 nm and optic „Standard“



Irradiance profile vs. distance for 385 nm and optic „High Power“



Irradiance profile vs. distance for 385 nm and optic „Wide“



Irradiance profile vs. distance for 385 nm and optic „Parallel Beam“

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PART NUMBERS

UV-LED smart	400 [L][O][T]
Additional optic	860605
Foot switch	860611
UV safety goggles	918800
Clamping mount	860604k
Wall plug adapter for smart	400POW
Bend protection & extension	860604V3 (cable 3 m)
Bend protection & extension	860604V5 (cable 5 m)

400 [L] [O] [T]

Trigger [T]	
T	Trigger
B	Taster

Optik[O]	
S	Standard
H	High power
W	Wide
P	Parallel

Emission [L]	
6	365 nm
8	385 nm
9	395 nm
0	405 nm
4	445 nm

EXAMPLE

400 0ST = UV-LED smart with emission at 405 nm, standard optic.

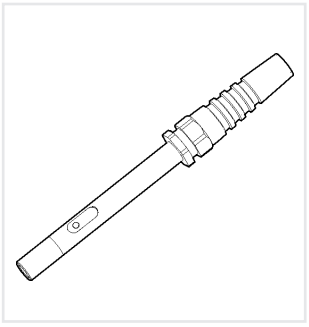
SCOPE OF DELIVERY

UV-LED smart incl. optic, PC software, breakout-box (for programming), manual, wall plug adapter for breakout-box. Unless otherwise stated we deliver optic „Standard“ and wavelegth 365 nm. Please specify wavelenght and optic during ordering.

EASY-TO-USE-TIPS

For the easy-to-use operation we recommend to order the optional, non-upgradeable footswitch. A separate wall plug adapter is available for use of UV-LED without breakout-box. Extension cable with bend protection is available for work on hard-to-reach places.

Breakout-box



Bend protection for cable

SAFETY

The equipment contains LEDs that emit UV-A radiation and blue light. UV radiation is invisible. The light you see is just luminescence caused by the UV. Mostly, luminescence is much weaker than the exciting UV.

UV-A light may lead to cataract formation in the eye lens and to photo-retinitis. Always use proper UV protection goggles when operating the device. The UV-A also causes pigmentation and aging of the skin. Please use proper clothing, gloves, and/or sunscreen depending on exposure. Avoid irradiating skin or eyes directly! UV irradiance in the spot is several hundred times higher than that of sunlight!

This device is classified to risk group 3 (High Risk) according to DIN EN 62471:2009-03 “Photobiological safety of lamps and lamp systems.”

For protection, the operating staff should not look into the LED and should not expose their skin continuously to UV/VIS radiation.

In most cases straylight from the LED application is not critial, but the job security and risk assessment must be secured by the user.

We will gladly assist you with UV job security and risk assessment according to EN 14255:2005.

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