

MultiSpot UV-LED LedControl



new 1.6 x higher
irradiance



Spot P

Spot

The use of ultraviolet curing adhesives and casting compounds increases constantly. With the UV LED control, LedControl S, you will stay flexible even in the event of future requirements.

Due to the modular construction, 1, 5 or up to 16 UV LED spots with various wavelengths can be operated by the LedControl S. The LedControl S individually controls the UV LED spots.

For applications, such as bonding, casting or fluorescence excitation, the following wavelengths are available: 365, 385, 395, 405 and 450 nm. Due to the variety of wavelengths and the exchangeable optics, you remain extremely flexible and you will be able to upgrade or retrofit at any time.

With the intelligent UV LED control you can set the performance of the ultraviolet LEDs to between 2% and 100%. A timer for the irradiation times between 0.01 s and 9999 s is already integrated. Optionally you can choose between continuous or triggered operation.

Here, the LedControl S operates either as the master or slave and is cascable. Remote control can be done via RS485, USB or RS232 for each channel and enables the use in industrial production. Other digital and analog inputs are also available as an option.

The high irradiance of 39.000 mW/cm² and the compact dimensions distinguish the UV LED spots from others and enable extremely short process times. For this purpose, the UV LED is focused in the desired operating distance.

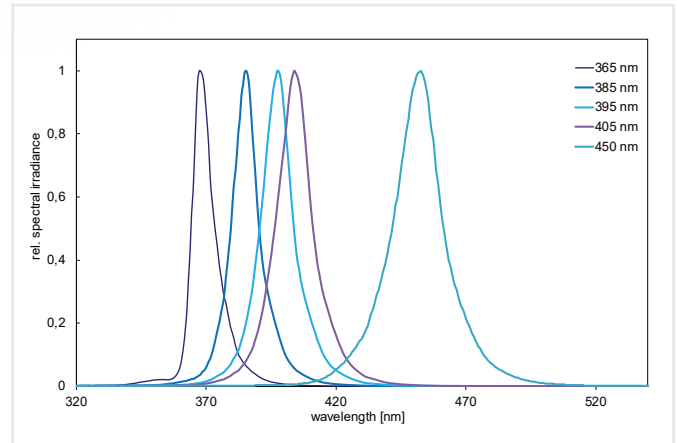
For monitoring the UV LEDs, we recommend our calibrated UVA+ sensors. These are available as PLC sensors and hand radiometers.

APPLICATIONS

- Industrial UV curing and bonding
- IC Encapsulation
- UV sealing
- Hairline / leak detection using fluorescence markers
- Fluorescence Spectroscopy
- Surface Inspection

TECHNICAL DATA UVLED SPOTS

Wavelength	365, 385, 395, 405 o. 450nm
Emission, peak tolerance	+/- 5 nm
Emission, FWHM	10 - 20 nm
Max. irradiance	> 39000 mW/cm ²
Lifetime	20.000 h, typical
Dimensions, Spot P	Ø 15 x 143 mm
Dimensions, Spot P short	Ø 15 x 60 mm
Cable length	1,5 m; optional up to 5 m
Weight	~ 130 g
Classification	risk group 3 according DIN EN 62471:2009-03
Operating temperature	5 to 40 °C
Surface temperature	max 60°C, ED >0,5 and short version require add. cooling



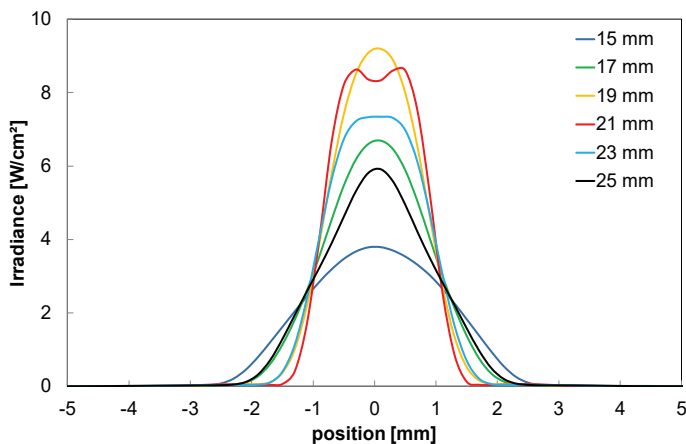
Typical UV-LED spectra

Typical UV LED spectra are illustrated.

Tip: At the LedControl you can operate several wavelengths simultaneously.

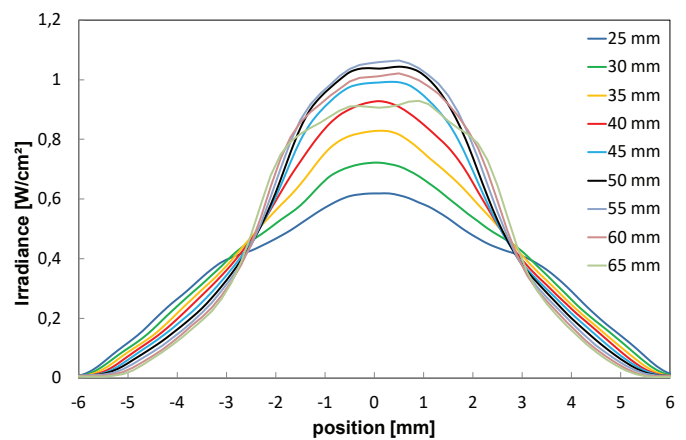
BEAM PROFILES AND OPTICS

For small spot diameters, we recommend the optics "Standard" and "High Power".

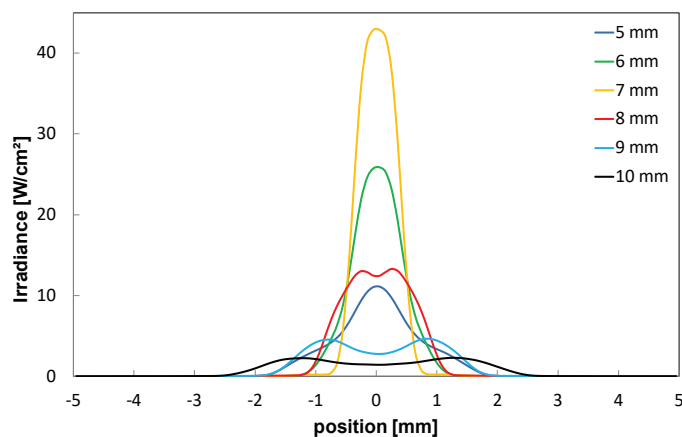


Irradiance profile vs. distance for 385 nm and optic „Standard“

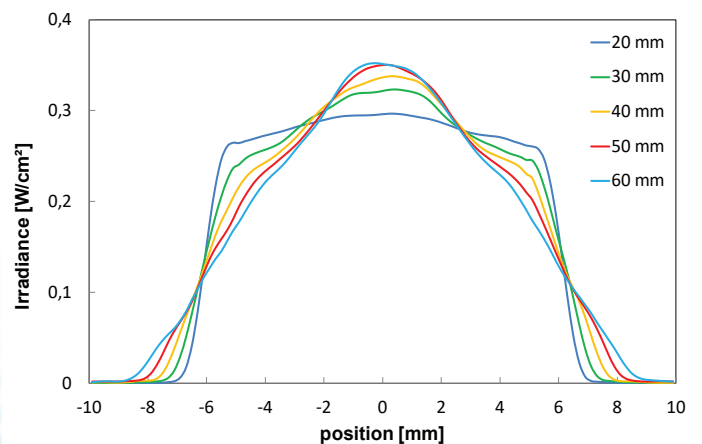
Larger distances and spot diameters are reached by the optics "Wide" and "Parallel Beam".



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



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



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

TECHNICAL DATA LEDCONTROL S

Number of UVLED-Spots	1 spot (LedControl S)
	5 spot (LedControl 5S)
	16 spot (LedControl 16S)
Functions	2 to 100%, each spot separate timer, continuous operation
	Master / slave mode
Display	graphical, 128 x 64 px
Connections	Interlock
Interface option	dimming in (0-10V), common
	Trigger (IN/OUT), common
Terminals, Interface option	Galvanically isolated
Signals, Interface option	24 V, 5 mA max
Programming, optional	RS485, RS232 or USB
Dimensions	185 x 251 x 100 mm (S/5S)
	305 x 358 x 145 mm (16S)
Cooling	Aircooling
Operating temperature	5 to 40 °C
Storage temperature	-10 to 60 °C
Humidity	< 80%, non-condensing
Internal security circuit	Over-temperature, LED N.C.
Power (el.)	20 W - 100 W
Mains	100 - 240 V, 50/60 Hz

REMOTE OPERATION

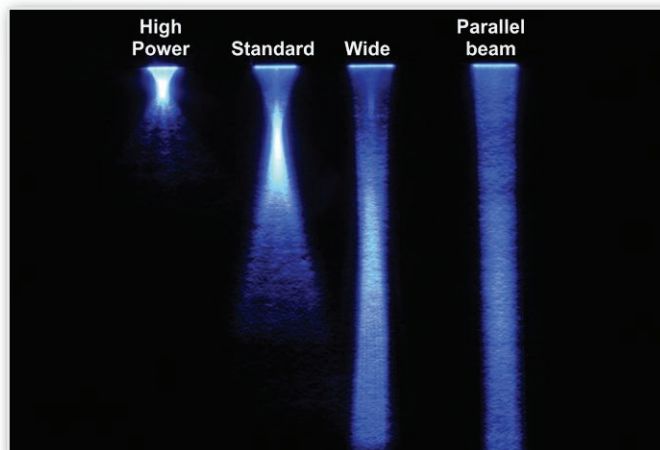
The LEDControl can be controlled via the rear programming interface (USB, RS485 or RS232). Communication takes place as ASCII communication, which is illustrated below using the example of „Switching on“:

- control transmits: LOnOff: 1!
- LedControl answers: LOnOff: 1 (CRC-16)

Each channel can be individually controlled. The LedControl sends only when requested by the controller.

Via the other interface option LED powers can be set together for all channels (0-10V), LEDs on / off (trigger IN 24V) and the status (trigger OUT 24V) can be set and queried.

This option is suitable for simple system integration with common signals and allows cascading of any number of LedControl.



Beam profiles

MAX IRRADIANCE

High-Power optic	39 W/cm ²
Standard optic	9,0 W/cm ²
Wide optic	0,9 W/cm ²
Parallel beam optic	0,3 W/cm ²

Within UV-LED spot focus, wavelength 395 nm, power 100%

PART NUMBERS

LEDCONTROL S	860610B1
LEDCONTROL 5S	860610B5
LEDCONTROL 16S	860610B16
Wall angle for LEDControl	860609-WA
Interface option (I/O)	860609-CP
Programming interface RS485	860609-RS485 *
Programming interface RS232	860609-RS232 *
Programming interface USB	860609-USB *
Test and control software	860609-SW
Power monitoring option	860609-PM
UV-LED Spot P	860608
UV-LED Spot P short	860608SH
Foot switch	860611
UV safety goggles	918800
Additional optic	860605
Clamping mount	860604k
Cooling mount	860605c
Cable, each add m	86060X-m

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 other personal safety equipment depending on exposure. Avoid irradiating skin or eyes directly! UV irradiance in the spot is several hundred times higher than that of sunlight!

SCOPE OF DELIVERY

LedControl S, UVLED Spot with optic, mains cable, manual

Remote example software for instant testing, if ordered with programming option

Please specify wavelength, optics and options.

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.

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



POWER MONITORING

Optionally, the LED module power can be monitored. Thus, failures can be detected quickly and online.