

UV-LED LedControl S / 5S / 16S



LEDControl 5S

LEDControl S

The use of ultraviolet-curing adhesives and compounds is constantly increasing. With the LedControl S UV LED controller, you remain flexible for future requirements.

Due to the modular design, one UV LED lamp, up to five or even up to 16 UV LED lamps with different wavelengths can be operated and individually adjusted with one LEDControl S.

For applications such as bonding, potting or fluorescence excitation, the wavelengths 365, 385, 395, 405 and 450 nm are available. With the variety of wavelengths, you remain particularly flexible and can upgrade and change over at any time. With several UV LED lamps, the irradiation can also be ideally homogenized to achieve the best possible uniformity.

With the intelligent UV LED control, the power of the ultraviolet LED lamps can be individually adjusted between 2% and 100%. A timer for irradiation times between 0.01 s and 9999 s is already integrated. Continuous operation or externally triggered operation are also available as options.

The LEDControl S works either as 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. Additional digital and analog PLC inputs are also available as an option.

The very high irradiances of up to 39,000 mW/cm² distinguish the UV-LED spots and allow extremely short process times. For this purpose, the UV-LED is focused at the desired working distance.

With the UV-LED series L we offer air-cooled high-power LED modules for the LedControl. The SFL series is water-cooled and available with even higher power.

APPLICATIONS

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

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)
	305 x 358 x 145 mm (S,5-16S)
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.)	100 W - 2000 W
Mains	100 - 240 V, 50/60 Hz

UV-LED-LAMPS SERIES L AND SFL



UV-LED-LAMPS SPOT P



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.

Example commands:

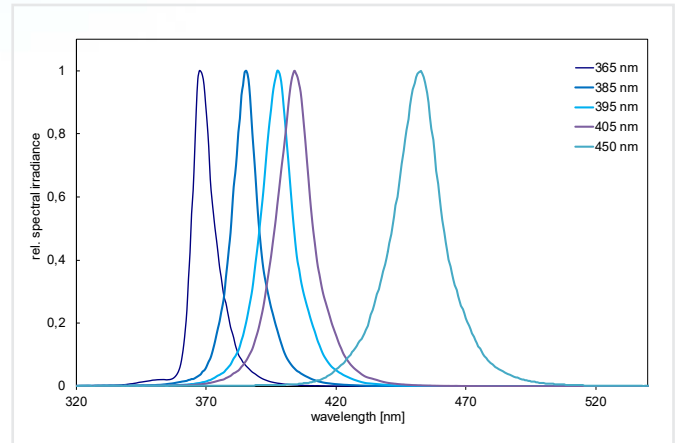
- LAnzahlICH? Request number of channels
- LAnzahlICH? Request connected channels
- LSelect: 0 1 !? Set active channels
- LPowerSet: 000.0 033.7!? Set power
- LTriggerOnOff: 11!? Set trigger input active
- LFirmware? Request firmware version



programming software

LED-LAMP COMMON TECHNICAL DATA

Wavelength	365, 385, 395, 405 o. 450nm
Emission, peak tolerance	+/- 5 nm
Emission, FWHM	10 - 20 nm
Lifetime	20.000 h, typical
Classification	risk group 3 according DIN EN 62471:2009-03
Operating temperature	5 to 40 °C
Storage temperature	-10 to 60 °C
Humidity	< 80%, non-condensing



Typical UV-LED-lamp spectra

PART NUMBERS

LEDCONTROL S	8606 10B1
LEDCONTROL 5S	8606 10B5
LEDCONTROL 16S	8606 10B16
UV-LED Series L xxx nm	see sep. data sheet
UV-LED Series SFL xxx nm	see sep. data sheet
UV-LED Spot P xxx nm	see sep. data sheet

Programming interface RS485	860609-RS485 *
Programming interface RS232	860609-RS232 *
Programming interface USB	860609-USB *
Test and control software	860609-SW
SPS-Schnittstellenoption (I/O)	860609-CP
Power monitoring option	860609-PM

* Includes Interface option (I/O)

SCOPE OF DELIVERY

LedControl S, mains cable, manual. Remote sample software for immediate testing if supplied with pro-

gramming interface. Please specify LED type, wavelength, optics if applicable and options.

POWER MONITORING

Optionally, the LED module power can be monitored.

Thus, failures can be detected quickly and online.

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 irradi-

ating 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.