



Dr. Gröbel
UV-Elektronik GmbH

we apply photonics.

UV LED Spots



Fig. 1: UV LED spot LED-400

The UV LED-400 is a compact, reliable and economic point source for industrial applications. The UV radiation from a high power LED is focussed by special optics onto a 3 mm diameter spot in a distance of 22 mm. The UV spot can be used without light guide even at difficultly accessible locations because of its slim shape and the large working distance. Different spot sizes, line optics and fibre-optic beam-shapers are available for special applications.

The maximum irradiance of 2 W/cm^2 enables short processing times since the UV spot exclusively emits at the highly effective wavelength of 365 nm. The absence of ineffective visible and near infrared radiation reduces heating of the irradiated locations considerably.

The UV spot can be switched very fast and there is no need for a mechanical shutter. The modern controller allows for an exact setting of LED current and irradiation time, and it provides an interface for a PLC system controller.

Applications

- UV curing
- UV bonding
- UV sealing
- Micro curing
- Irradiation of biological samples
- Hairline and leak detection using fluorescence markers
- Fluorescence excitation
- Trace detection

Highlights

- Long lifetime and high power
- Highly efficient UV radiation
- No thermal radiation
- Thermal design for high duty without external cooling
- Protection against overheating
- Remote control
- Safety features according to DIN EN 60825-1

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Technical Data

Spot diameter:	< 3 mm FWHM
Working distance:	22 mm (minimum spot diameter)
Wavelength:	365 +/- 5 nm
Bandwidth:	10 nm
Irradiance:	3 levels selectable
Maximum irradiance:	LED-400: >2000 mW/cm ²
Irradiation time:	0.1 to 999.9 s
Continuous duty:	May require cooling
LED class:	3B
Safety features:	Key switch Overheating protection Remote interrupt
LED display:	Mains Emission Overheating Intensity
Dimensions:	Ø 15 x 80 mm (head)
Controller	130x130x110 mm
Weight:	50 g (head) 1.2 kg (controller)
Mains:	85 to 264 VAC 47 to 63 Hz
Power consumption:	10 W
Operation temp.:	5 to 40 °C
Storage temp.:	-10 to 60 °C
Humidity:	< 80%
Input signals:	Non-condensing Trigger Emission Foot switch Remote interlock
Output signals:	Ready Emission

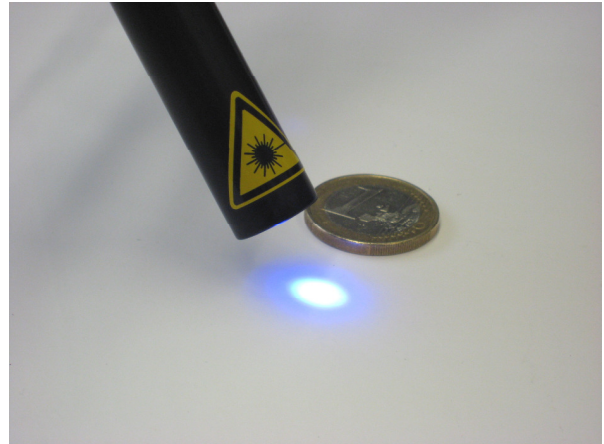


Fig. 2: UV irradiation with LED-400

Part numbers

UV spot LED-400 860601

Accessories

Foot switch 860611
UV safety goggle 918800