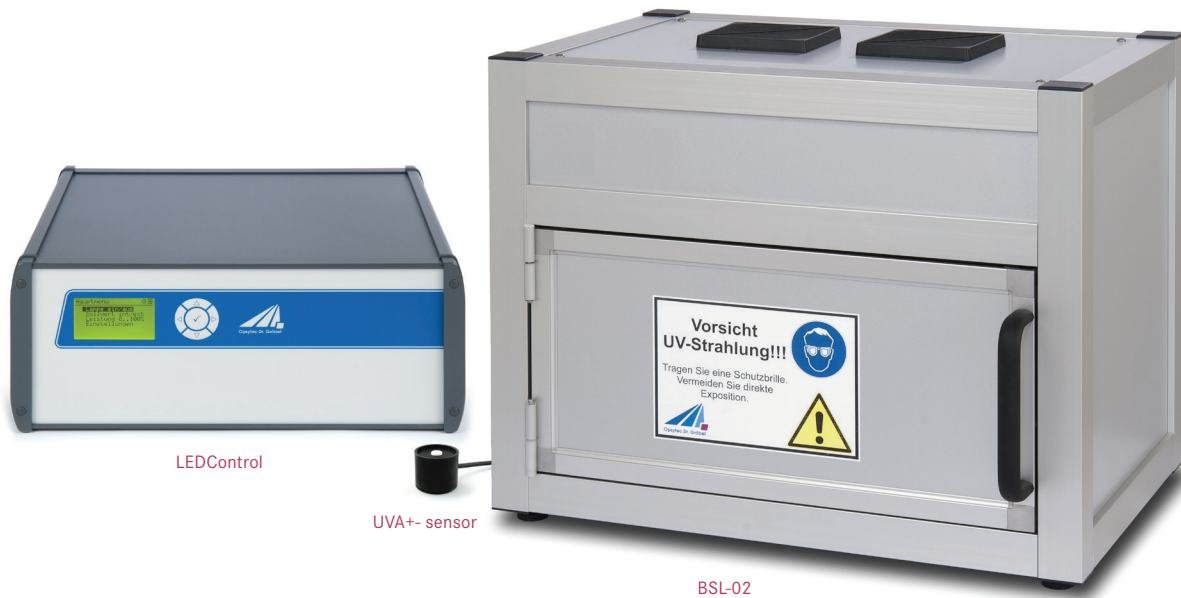


## UV-LED chamber BSL-02



With the UV LED chamber BSL-02, we offer you a versatile irradiance chamber on a basis of high quality UV LEDs. The most common UV curing adhesives can be applied, due to the high irradiance of 400 mW/cm<sup>2</sup>.

Compared to our irradiance chambers of the series BS, the series BSL-02 offers the 40-fold irradiance. In addition, the high irradiance allows for very short exposure times.

With the typical UV LED characteristics like „Instant-Start“, the dimmability and the long service life, the BSL-02 is ideal for laboratory tests and the manual production.

The irradiance is adjustable from 2% to 100%. The integrated timer controls the irradiance precisely. For even better results, we recommend one of our calibrated UVA+ sensors. The dose control is already integrated in the LEDControl. By means of an optional sensor, the LEDControl measures the irradiance continuously, and stops the irradiance at the set target dose.

For different applications, wavelengths of 365 nm, 385 nm, 395 nm, 405 nm and 450 nm are available.

Optionally, two wavelengths can be controlled separately. That way, the irradiance chamber can be optimal customized for the requirements of the photoinitiator. We offer the BSL-02 in two versions:

0 to 400 mW/cm<sup>2</sup> (Version HO)

0 to 200 mW/cm<sup>2</sup> (Version ECO)

Due to the low heat input of the UV-LEDs and the temperature of approximately 40° in the sample chamber, thermal damages of the samples are minimized. Because of the high homogeneity of the irradiance, the samples can be placed in any position.

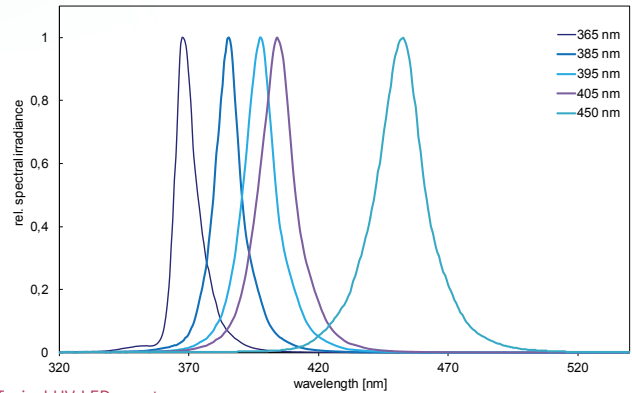
The BSL-02 has compact outer dimensions, but provides sufficient room in the sample chamber. The floor space is 46 x 32 cm and the height is 25 cm. In the completely closed and monitored irradiation chamber, the operating personnel are fully protected from the UV radiation.

### APPLICATIONS

- UV curing and UV bonding
- Sealing and encapsulating
- Laboratory investigation
- Manual bonding

## TECHNICAL DATA

Interior chamber	46 x 32 x 25 cm
Dimensions, chamber	55,5 x 40 x 43 cm
Weight	~ 40 kg
Power consumption	600-1200 W
Mains	100 - 240 V, 50/60 Hz
Operation temperature	10 to 40 °C
Storage temperature	-10 to 60 °C
Humidity	< 80% non-condensing
Cooling	air cooling
Sample temperature	~40 °C +/- 10 °C. Additional heating up by high UV irradiance
Classification	group 0 according DIN EN 12198:2000
Dimensions, LEDControl	305 mm x 358 mm x 145 mm
Measuring range, LEDControl	0-2500 mW/cm <sup>2</sup>
Resolution	12 bit
Display	graphical, 128 x 64 px
Timer	0,01 s to 9999 h
Resolution	0,01 s
Dose control	with optional sensor
Connections	failure out, pot. free
Internal security circuit	Over-temperature, door contact



Typical UV-LED spectra

## SPECIFICATIONS UV-LEDS

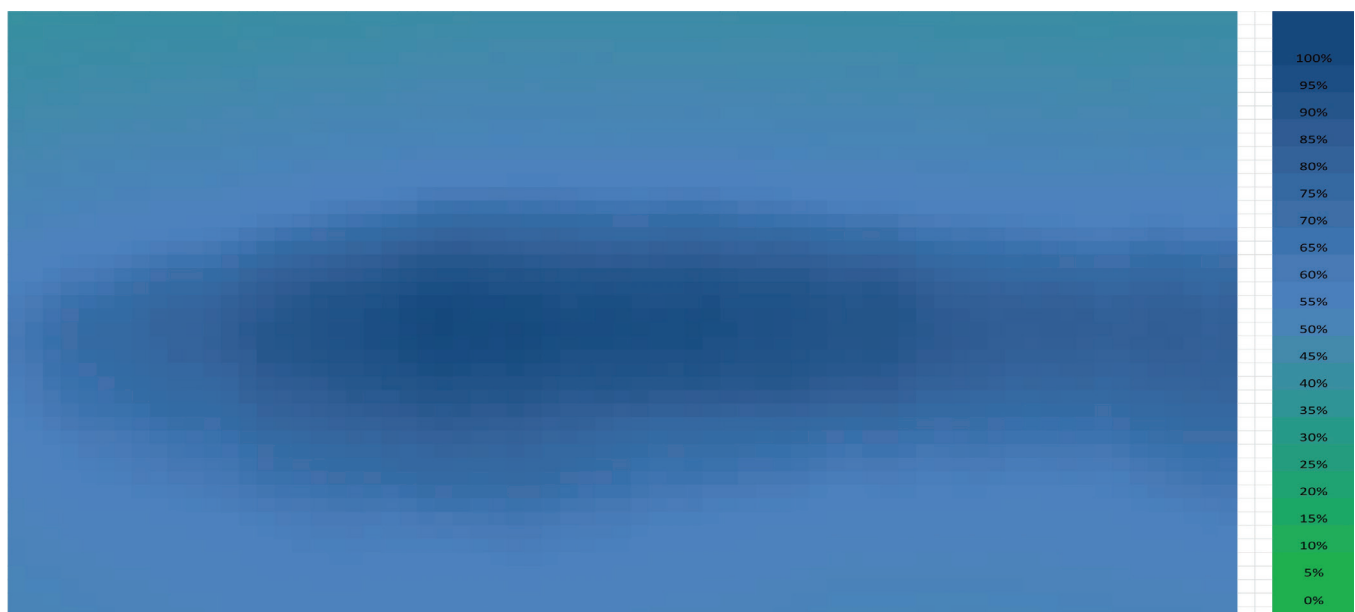
Wavelength	365, 385, 395, 405, 450 nm
Emission, peak tolerance	+/- 5 nm
Emission, FWHM	10 - 20 nm

## IRRADIANCE HO

365 nm	200 mW/cm <sup>2</sup>
385 nm, 395 nm, 405 nm	360 mW/cm <sup>2</sup>
450 nm	400 mW/cm <sup>2</sup>

## IRRADIANCE ECO

365 nm	100 mW/cm <sup>2</sup>
385 nm, 395 nm, 405 nm	180 mW/cm <sup>2</sup>
450 nm	200 mW/cm <sup>2</sup>



Uniformity of irradiation

## ATTACHMENTS & OPTIONS

The irradiance chamber is modular expandable and thus optimal for different applications.

We gladly support you with your individual configuration.

### UV-MAT

The LEDcontrol continuously measures the irradiance and stops the irradiation at the set target dose. Irradiation doses can be defined separately for different spectral ranges. A sensor is required for this purpose.

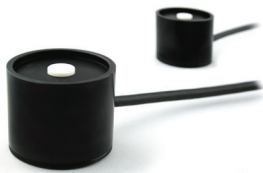


### TIMER



Alternative to the dose control, we offer a settable timer. This timer is suitable for simple irradiances between 0,01 s and 9999 h. Included in the standard system.

### SENSORS & CALIBRATION

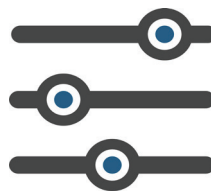


The calibrated radiometer sensors are available for any LED wavelength. The integrated diffuser ensures the required cosine correction. Excellent long-term stability is achieved through

the use of appropriate materials. The sensors are calibrated with traceability to PTB (the German national test authority); after being calibrated, they are supplied with a factory calibration certificate.

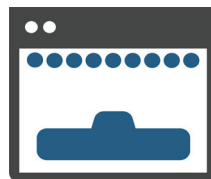
Opsytec Dr. Gröbel GmbH has an accredited calibration laboratory. As an option, calibration according to ISO 17025 with DAkkS calibration certificate is possible. Just ask us!

### DIMMING & SPECTRAL MATCHING



LEDs are available for various applications. As an option, two wavelengths are available. The LEDs can be dimmed from 2-100 %.

### INERT GAS BOX



Working under inert-conditions is possible with our removeable inert gas boxes.

Separate gas inlets and outlets allow the measurement of O<sub>2</sub> concentration at gas outlet. Available with top window made of high quality glass for UVA / VIS irradiations.

### PART NUMBERS

BSL-01 HO Version	860802L-HO xxx nm
BSL-01 ECO Version	860802L-ECO xxx nm
Option 2. wavelength	860801X2
UVA+ sensor	811045
DAkkS calibrierung	17025L
Inert gas box	860801i

### SCOPE OF DELIVERY

BSL-02, LEDControl, cable 3 m, manual