

UV-LED chamber BSL-03



The UV LED chamber BSL-03 is the second largest irradiation chamber in the BSL series. The high irradiance combined with the exact dose control offers a unique reproducibility for perfect results!

Due to the irradiance of up to 220 mW/cm², it is possible to use the most common UV curing adhesives or lacquers. For high irradiances, the UV LED chamber can be ordered completely with one LED wavelength. A particularly flexible application is possible when two separately controllable LED wavelengths are ordered.

Compared with our irradiation chambers of the BS series, the BSL-03 offers an irradiance that is 22 times as high. The high irradiance allows for extremely short exposure times. With the high homogeneity of the irradiation, the samples can also be positioned as needed.

Due to the typical characteristics for UV LEDs, such as "immediate start", the dimmability and the high durability, the BSL-03 is ideally suited for medium-sized laboratory tests and curing of large components.

The integrated timer already controls the irradiation in an exact way.

For even better results, we recommend one of our calibrated UVA+ sensors. As the dose control is already integrated in the control unit LEDControl the irradiance is measured continuously with the UVA+ sensor. Irradiation ends when reaching the target dose.

The wavelengths 365 nm, 385 nm, 395 nm, 405 nm and 450 nm are available for your application.

We offer the BSL-03 in two versions:

0 up to 220 mW/cm² (Version HO)

0 up to 110 mW/cm² (Version ECO)

Due to the little heat input of the UV LEDs and a sample room temperature of ca. 40 °C, thermal damage is minimized.

The sample room has a floor space of 60 x 40 cm and a height of 25 cm. Parts that must be bonded or cured can be positioned easily on the movable sample carrier.

The operating personnel is fully protected from UV radiation in the completely closed and monitored irradiation chamber.

NOTES

The typical irradiances in an interior height of 30 mm are indicated. The irradiance can be increased by the short distance to the light source.

SPECIFICATIONS UV-LEDS

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

IRRADIANCE HO

365 nm	120 mW/cm ²
385 nm, 395 nm, 405 nm	200 mW/cm ²
450 nm	220 mW/cm ²

IRRADIANCE ECO

365 nm	60 mW/cm ²
385 nm, 395 nm, 405 nm	100 mW/cm ²
450 nm	110 mW/cm ²

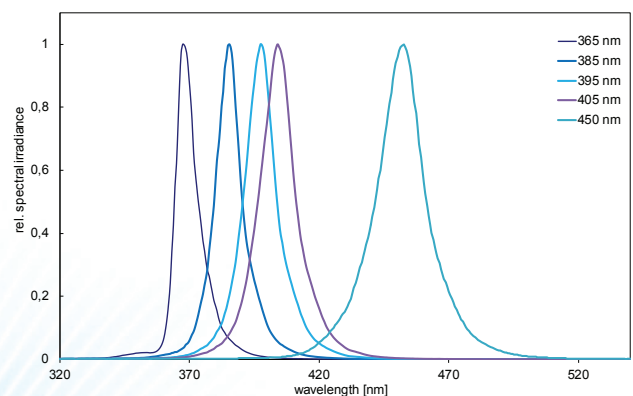
The information corresponds to a complete fitting with LEDs of 365, 385, 395, 405 or 450 nm. In case of two wavelengths, the irradiation chamber is equipped with one LED type per half.

TECHNICAL DATA

Interior chamber	60 x 40 x 25 cm
Dimensions, chamber	77 x 62 x 64 cm
Weight	~ 70 kg
Power consumption	1000 - 2000 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 rage, LEDControl	0-2500 mW/cm ²
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
Internal security circuit	Over-temperature, door contact



BSL-03 (Illustration similarly)



Typical UV-LED spectra

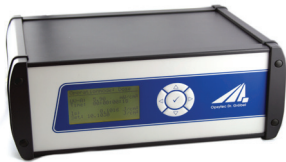
ATTACHMENTS & OPTIONS

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.

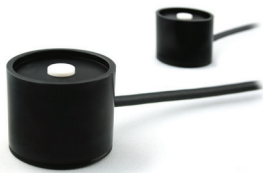


TIMER



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

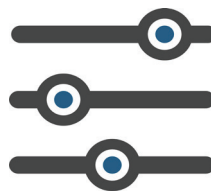


The calibrated radiometer sensors are available for any LED wavelength. The integrated diffuser ensures the required cosine correction. Excellent long-term stability is achieved through

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.

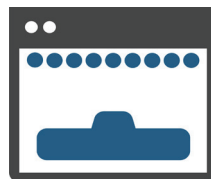
Opsytec Dr. Gröbel GmbH has an accredited calibration laboratory. As an option, calibration according to ISO 17025 with DAkkS calibration certificate is possible. Just ask us!

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 O₂ concentration at gas outlet. Available with top window made of high quality glass for UVA / VIS irradiations.

PART NUMBERS

BSL-03 HO Version	860803L-HO xxx nm
BSL-03 ECO Version	860803L-ECO xxx nm
Option 2. wavelength	860801X2
UVA+ sensor	811045
DAkkS calibrierung	17025
Inert gas box	860803i

SCOPE OF DELIVERY

BSL-03, LEDControl, cable 3 m, manual