



LED

## bluepoint LED eco

LED point source with Process FLOW Control

Max. irradiation intensity: up to 20.000 mW/cm<sup>2</sup>

Wavelength: 365, 385 and 405 nm

### System-Features

- LED power output separately adjustable
- Clean room compatible
- Processing of temperature sensitive materials
- Entry of complete program sequences
- Signal input for safe switch-off

### Advantages

- Reduction of maintenance costs
- Extremely long service life
- Intelligent power control
- Compact size
- Excellent cost performance ratio

**bluepoint LED eco**

**bluepoint LED eco** has been developed for all applications requiring a **most intensive UV irradiation**. Thanks to its high intensity and the possibility to program complete process sequences, **shortest cycle and machine throughput times** can be realized especially in fully automated production lines. Likewise, bluepoint LED eco can be used in the laboratory for manual irradiation.

The typical **service life of a LED is longer than 20,000 hours\***. LEDs can be switched on and off as often as necessary, they do not require a warm-up or cooling phase. The emitted wavelengths are 365/385/405 nm +/- 10 nm. It is thus possible to adapt the intensity to any application in question.

Up to four LED heads can be connected to the very compact control unit which can emit **different wavelengths**. Each LED head can be **activated separately**. bluepoint LED eco autonomously recognizes the type of LED head and adapts all parameters automatically.



LED control unit

## Applications

bluepoint spot sources are appropriate for various applications like:

- Bonding, fixing or encapsulating of components in the electronic, optical or medical-technical sector
- Fluorescence stimulation for materials testing; suitable for automatic image processing
- High-intensive UV irradiation in the chemical, biological and pharmaceutical sector
- UV irradiation for different applications in a clean room

## LED Control

The irradiation time can be adjusted separately for each LED head in the range between 0.01 and 9999 seconds. The alternative is a continuous operation. With a very long non-stop irradiation with high LED-intensities, an additional passive cooling of the heads may be necessary.

For each LED head, the main information, like operating state, temperature or irradiation time, is shown on the display. The **electric LED power output can also be adjusted between 10% and 100%, in 1%-steps.**

The unit registers the LED operating hours as well as LED temperatures and switches off the unit in the event of a fault. The operating state of each LED is indicated by bright signal lamps which can be read easily even at longer distances.

bluepoint LED eco offers different modes of power control:

- In the standard power-mode a value between 10% and 100% is forced.
- The ConstPower-mode allows an almost constant optical output. In this mode the irradiation intensity is kept constant over a broad temperature range.
- For a short time irradiation with longer breaks between separate irradiation cycles, the optical output can be maximized in the PeakPower mode.

- The Step-mode allows individual irradiation sequences, just as the customer requires. Thereby, a sequence is created out of a maximum of four steps (time/power).

## Process FLOW Control

With bluepoint LED eco, **complete process sequences can be programmed**. They can be entered through the control system or by transferring a text file compiled on PC. The following sequences can be programmed:

- Exposure series with different intensities
- Activation of external handling components
- Holding times
- Conditional commanding depending on external control signals

## Interfaces

bluepoint LED eco has the following interfaces:

- PLC inputs: 4x LED on (can optionally be assigned to one or more LEDs)
- PLC outputs: 4x status LED with selectable function (LED on, LED off, LED error, LED warning)
- 24 V digital output with selectable function (unit on, unit error; LED on etc.)
- RS 232 interface for programming the operating parameters, for operating the unit with PLC or PC, for transferring program sequences or for downloading the update of the operating software
- Release safety circuit
- Signal input for safe LED switch-off according to current safety guidelines

## Accessories

The functional range of the bluepoint LED can be extended by using optional accessories:

- Adapter for 90° beam deflection for the use in constricted room
- Extension cable in different lengths
- Adapter for the operation of up to four foot switches
- Adapter for the simultaneous operation of two control units with one foot switch



LED head

## Technical data

LED service life	> 20.000 hours*
Max. UVA intensity	up to 20.000 mW/cm <sup>2</sup> **
Adjustment range of timer	0,01 – 9999 sec or continuous operation
Wavelengths	365, 385, 405 nm +/-10 nm
Power supply	20 V – 28 V DC or power pack
Max. input current	3,5 A
Dimensions (H x W x D)	65 x 160 x 130 mm
Weight	approx. 0,5 kg

\* typical lifetime under specified operating conditions

\*\* depending on the LED head used, measured with Hönle UV meter with LED sensor

## More Hönle LED-Units

Water cooled type

Air cooled type



### LED Spot W

The LED Spot W allows an extremely high UV intensity output - and requires only a very small amount of space.



### LED Powerline LC

Maximal length depends on application (lengths variable in 40 mm-steps).

The LED Powerline LC is available in the wavelengths 365/385/395/405 nm.



### LED Powerline Focus

Almost distance-independent high intensity due to focusing optics.



### jetCURE LED

Modularly control- and changeable (grid 41 mm) as well as continuously adjustable. Available in two versions which differ in their cooling air duct.



### LED Powerline AC/IC

Air cooled high-performance UV LED array optional with LED powerdrive IC.



### LED Spot 40 IC

The LED Spot 40 IC was developed for all applications requiring a compact flood unit with high intensities.



### LED Spot 100 IC / 100 HP IC & LED Spot 200 HP IC

The light-emitting aperture has a size of about 100 x 100 or 200 x 50 mm.

For bigger irradiation fields, several LED Spots can be arranged modularly.

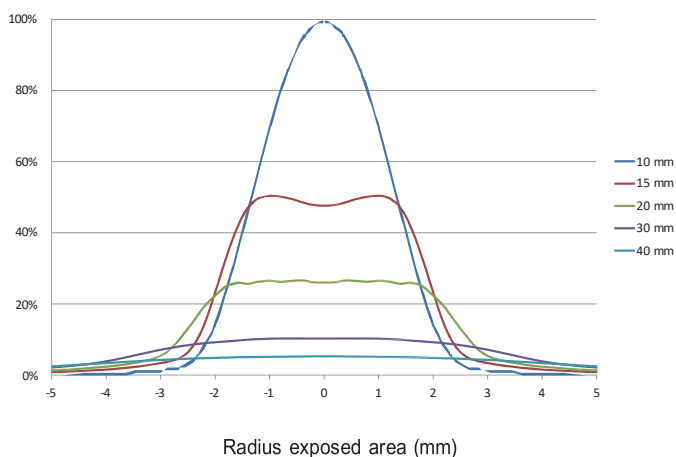


### LED Power Pen 2.0

This handy LED point source is available in the wavelengths 365 nm and 405 nm. Depending on the wavelength it is able to generate UVA-intensities of either 10.000 mW/cm<sup>2</sup> or 16.000 mW/cm<sup>2</sup>.

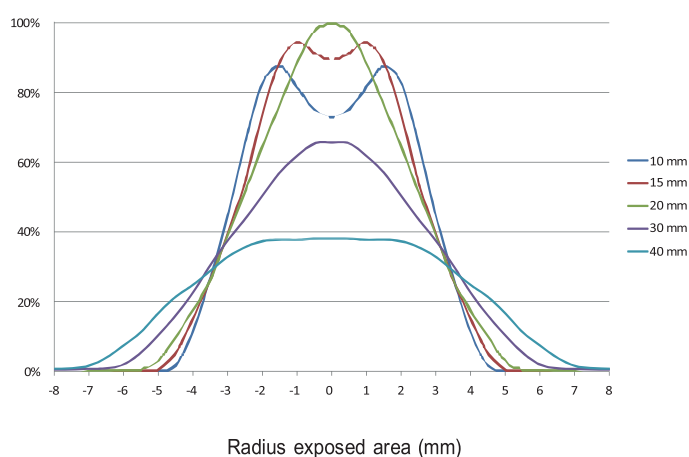
## Lens types for bluepoint LED head HP

Optic 3



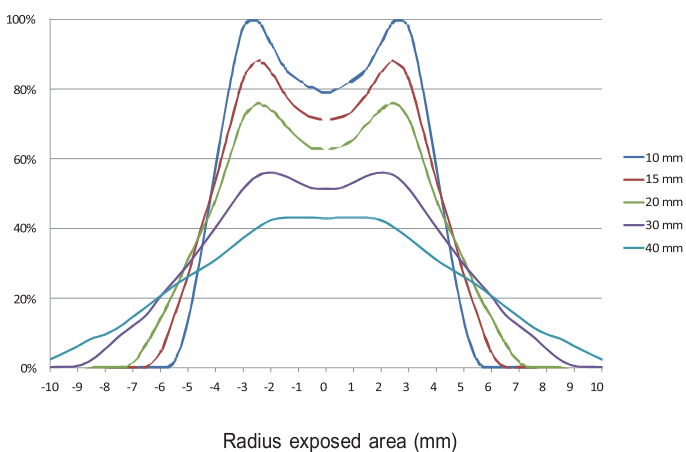
Wavelength (nm)	365	385	405
Intensity* (mW/cm <sup>2</sup> ) at 100%	14000	20000	20000
Working distance (mm)	10		
Full-width at half maximum (mm)	3		

Optic 7



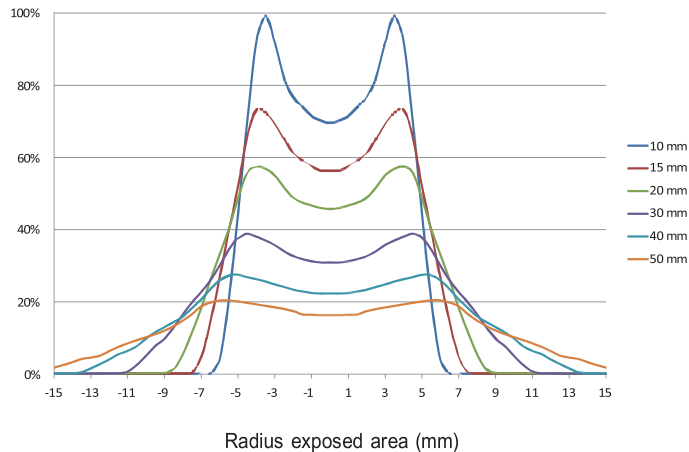
Wavelength (nm)	365	385	405
Intensity* (mW/cm <sup>2</sup> ) at 100%	4000	4800	3800
Working distance (mm)	10		
Full-width at half maximum (mm)	7		

Optic 10



Wavelength (nm)	365	385	405
Intensity* (mW/cm <sup>2</sup> ) at 100%	2000	2600	2400
Working distance (mm)	20		
Full-width at half maximum (mm)	10		

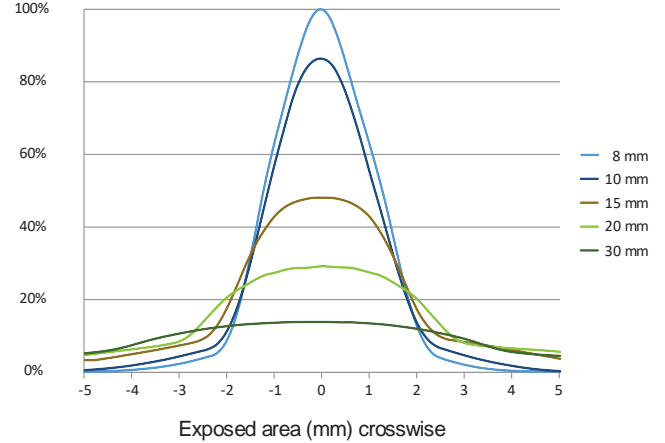
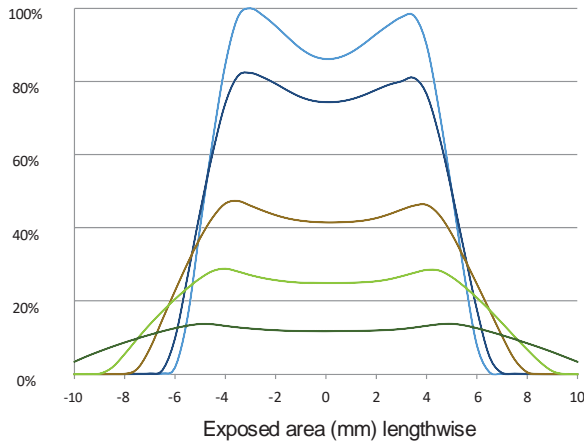
Optic 20



Wavelength (nm)	365	385	405
Intensity* (mW/cm <sup>2</sup> ) at 100%	1450	1850	1650
Working distance (mm)	40		
Full-width at half maximum (mm)	20		

\*measured with a Hönle UV meter and LED light guide sensor L2

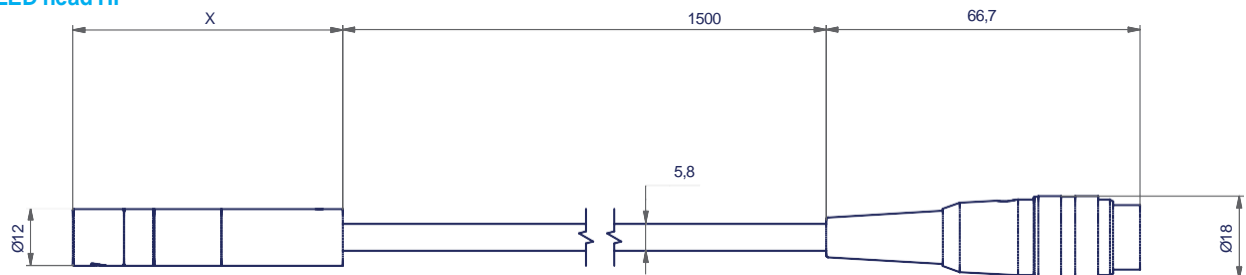
## Optic 10x2 (rectangular)



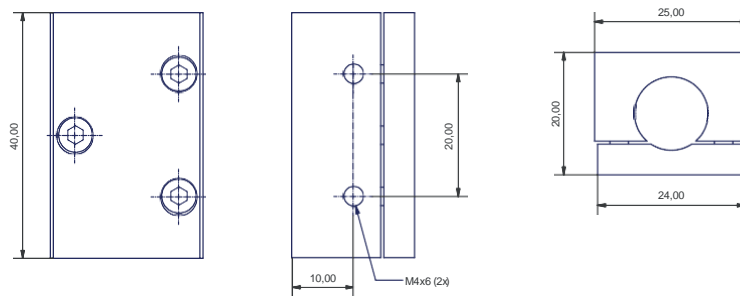
Wavelength (nm)	365	385	405
Intensity* (mW/cm <sup>2</sup> ) at 100%	4500	7000	7000
Working distance (mm)	8		
half-width, crosswise (mm)	2.5		
half-width, lengthwise (mm)	10		

\*measured with a Höhle UV meter and LED light guide sensor L2

## Drawing LED head HP



## Mounting adapter LED head HP



Lens type	Length LED head HP (x) in mm
Optic 3	55.9
Optic 7	57.3
Optic 10	54.5
Optic 20	52.5
Optic 10x2	55.4