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## bluepoint LED

UV point source with Process FLOW Control

Max. irradiation intensity: up to 16.000 mW/cm<sup>2</sup>

Wavelength: 365, 385 and 405 nm

### System-Features

- Clean room capable
- Processing of temperature-sensitive materials
- LED power output separately adjustable
- Entry of complete program sequences

### Advantages

- Reduction of maintenance costs
- Extremely long service life
- Low temperature load
- Intelligent power control

## bluepoint LED

**bluepoint LED** 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, e.g. exposure series with different intensities and holding times, it is possible to realise **shortest cycle and machine throughput times** especially in fully automated production lines.

The typical **service life of a LED is longer than 20,000 hours\***. The 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 operating unit whereby the diodes can emit **different wavelengths**. Each LED can be **activated separately**. bluepoint recognises autonomously the type of LED and automatically adapts the parameters.



## Applications

bluepoint spot sources are appropriate for various applications like:

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

## Lamp activation

The irradiation time can be adjusted for each LED head separately in range between 0.1 and 999.9 seconds. The alternative is a continuous operation. With a very long non-stop irradiation, an additional passive cooling of the heads may be necessary.

The **electric lamp power output can also be adjusted between 10% and 100% in 1%-steps** (depending on the LED head). The unit registers the LED operating hours as well as the unit's operating hours.

Due to the application bluepoint LED offers different modes of power control. In the standard power-mode a value between 10% and 100% is forced, according to which the LED capacity gets adjusted.

The ConstPower mode allows an almost constant optical output. In this mode the intensity of irradiation 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 maximised in the PeakPower mode.

## Interfaces

bluepoint LED has the following interfaces:

- PLC inputs: 4x LED on, start „Process FLOW Control“ (PFC), inquiry input for PFC, start calibration through PLC
- PLC outputs: 4x status LED (LED on, LED off, LED error, LED warning), 1x status unit (unit on, unit error, PFC is running, ...)
- Dry contact with selectable function (cf. PLC outputs)
- 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
- Foot switch
- Release safety circuit
- Signal „Radiation on“
- Safety code in order to protect the unit against unauthorised use

## Process FLOW Control

With bluepoint LED, **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

## Further features

All parameter settings can be filed in six memory locations and reloaded when needed. The language for the menu texts can be selected between German, English, French or Italian.

## Advantages of the LED technology

LEDs do not emit IR radiation. Thanks to the inferior temperature load of the substrate, even temperature-sensitive materials can be irradiated. The different spectra available guarantee a safe and fast curing. As LEDs do not require a heating phase, LED heads can be switched on and off without any problems: they are immediately ready for operation.

Moreover, the following features characterise bluepoint LED:

- Large and clear display with all relevant information
- Intelligent power control (for each LED head separately)
- Temperature compensation of the LED
- Entry of complete program sequences

## Technical Data bluepoint LED

|                           |                                    |
|---------------------------|------------------------------------|
| LED service life          | > 20.000 hours*                    |
| Max. UVA intensity        | up to 16.000 mW/cm <sup>2</sup> ** |
| Adjustment range of timer | 0,1 – 999,9 sec or continuous op.  |
| Wavelengths               | 365, 385, 405 nm                   |
| Power supply              | 90 V – 264 V<br>47 Hz – 63 Hz      |
| Max. input current        | 1,5 A                              |
| Power input               | 120 W                              |
| Dimensions (H x W x D)    | 146 x 236 x 151 mm                 |
| Weight                    | approx. 3 kg                       |

\* typical lifetime under specified operating conditions

\*\* measured with Hönle UV meter with LED sensor



LED head



**hönle**group

Drying



aladin

eleco-efd

eltosch grafix

hönle

panacol

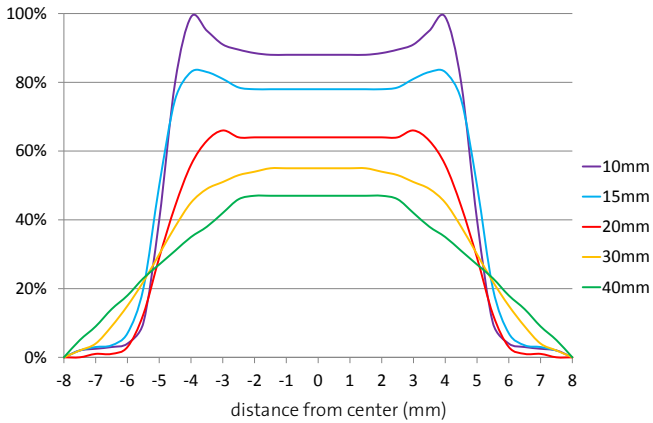
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raesch

tangent

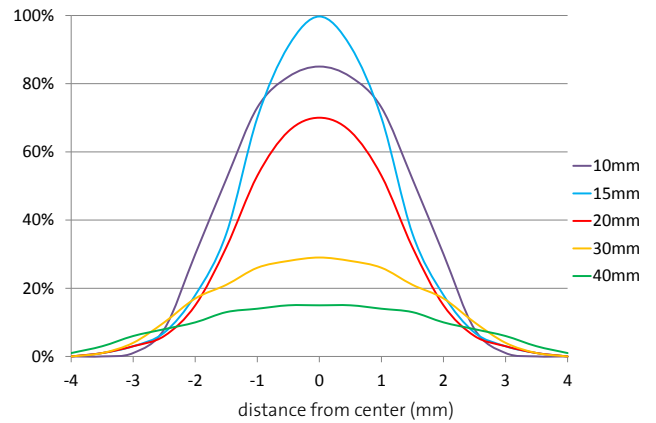
uv-technik speziallampen

### Hönle UV-LED lens type: Optic Flat N



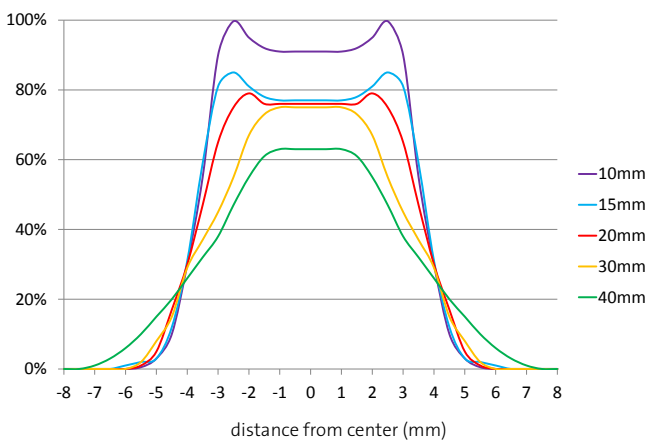
|                          |      |      |      |
|--------------------------|------|------|------|
| Wavelength (nm)          | 365  | 385  | 405  |
| Peak Intensity* (mW/cm²) | 1200 | 1600 | 2400 |
| Focus-distance (mm)      | 10   |      |      |
| Focus-Diameter (mm)      | 10   |      |      |

### Optic 3 N



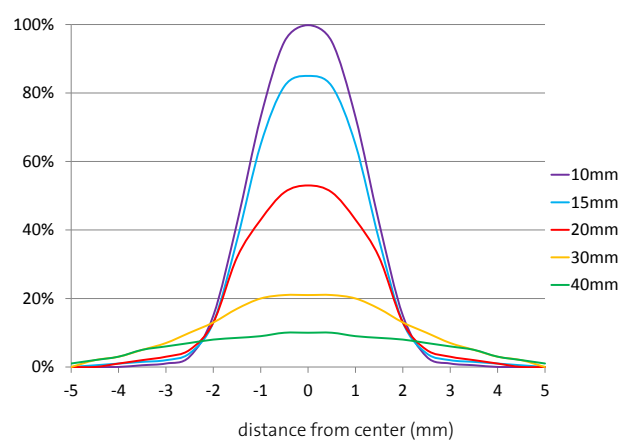
|                          |      |       |       |
|--------------------------|------|-------|-------|
| Wavelength (nm)          | 365  | 385   | 405   |
| Peak Intensity* (mW/cm²) | 7100 | 11000 | 14000 |
| Focus-distance (mm)      | 15   |       |       |
| Focus-Diameter (mm)      | 3    |       |       |

### Optic 5 N



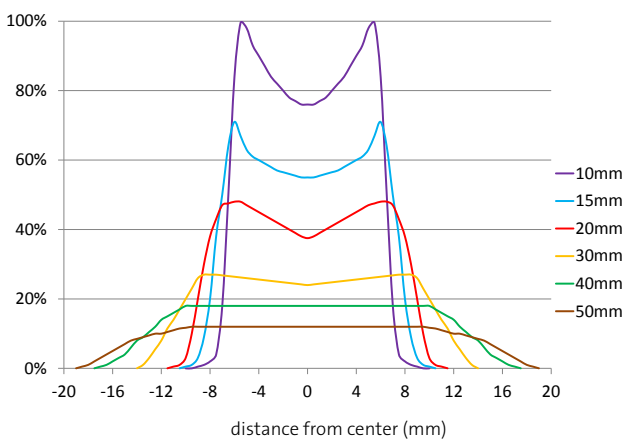
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|--------------------------|------|------|------|
| Wavelength (nm)          | 365  | 385  | 405  |
| Peak Intensity* (mW/cm²) | 1600 | 2100 | 3100 |
| Focus-distance (mm)      | 10   |      |      |
| Focus-Diameter (mm)      | 7    |      |      |

### Optic 6 N



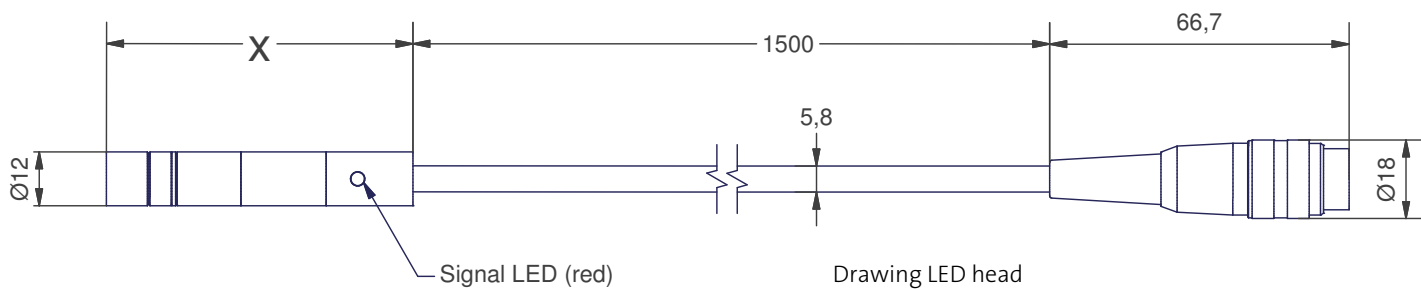
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|--------------------------|------|-------|-------|
| Wavelength (nm)          | 365  | 385   | 405   |
| Peak Intensity* (mW/cm²) | 9100 | 13000 | 16000 |
| Focus-distance (mm)      | 10   |       |       |
| Focus-Diameter (mm)      | 2    |       |       |

### Optic 00 N

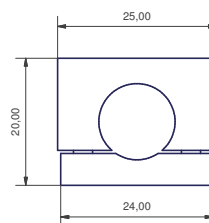
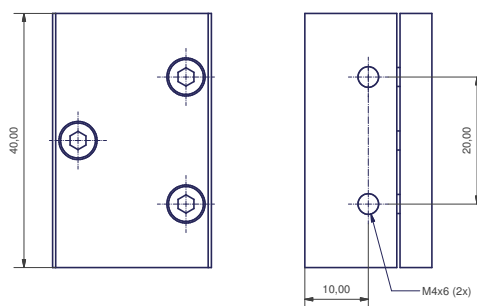


|                          |     |      |      |
|--------------------------|-----|------|------|
| Wavelength (nm)          | 365 | 385  | 405  |
| Peak Intensity* (mW/cm²) | 850 | 1200 | 1650 |
| Focus-distance (mm)      | 10  |      |      |
| Focus-Diameter (mm)      | 12  |      |      |

\*measured with a Hönle UV meter and LED sensor



| Name Lens                  | Total length (x) in mm |
|----------------------------|------------------------|
| Optic Flat N, 3 N, 5 N, 6N | 68,50                  |
| Optic 00 N                 | 62,15                  |



Mounting adapter LED head

## More Hönle LED Units



## hönle group

### Drying

