

LED

LED Spot 40 IC, & LED powerdrive IC

Max. irradiation intensity: up to 10,000 mW/cm²

Wavelength: 365, 385, 395, 405 and 460 nm

Air cooled

System features

- Intelligent power control
- 40 mm x 40 mm irradiation area
- Optimized air flow

Advantages

- Low temperature load
- No warm-up phase
- Very compact design
- IC (Integrated Controller) or Plug & Play 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**. The LED assembly, as well as an electronic power control, guarantee a highly intensive and homogenous distribution of light. The recognition of LED-malfunction and a comprehensive monitoring function provide very high process stability. So, especially in fully automated production lines, repeatable results can be realised even in the shortest cycle times.

The typical **service life of a LED is more than 20,000 hours*****. The LED Spot 40 IC can be switched on and off as often as necessary. It does not require a warm-up or cooling phase.

The LED Spot 40 IC is available in the wavelengths 365/385/395/405/ 460 nm +/- 10 nm. This allows to adapt the spectra of the LED Spot to the existing application.

The square light-emitting aperture has a size of about 40 mm x 40 mm at a base of only 55 mm x 50 mm. This compact design allows the integration of this small-sized LED flood unit in even the smallest spaces.

The LED Spot 40 IC was especially designed for applications where the emitted light of a LED point source is just not enough but a standard flood unit would be oversized. For such small areas, the LED Spot 40 IC is the best choice because here it guarantees highest possible intensities. An integrated fan provides adequate cooling for continuous operation. Thanks to an optimized air flow there are no negative impacts on the process.

The power supply and control of the LED Spot 40 IC can be done either by the optionally available LED power drive IC or by an external power supply and PLC signals.

Special features

- **Integrated controller (IC)**
- Driving and monitoring of the LED segment
- Monitoring of the LED segments regarding short-circuit, interruption and excess temperature
- Recording of the operating hours
- Analogue dimming of the segments via a 0-10 V-signal

- Digital PLC interface (LED enable, LED on, LED error)
- Bus control of all modules via RS485 or optional LED powerdrive IC

Applications

The LED Spot 40 IC is appropriate for various applications, such as:

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

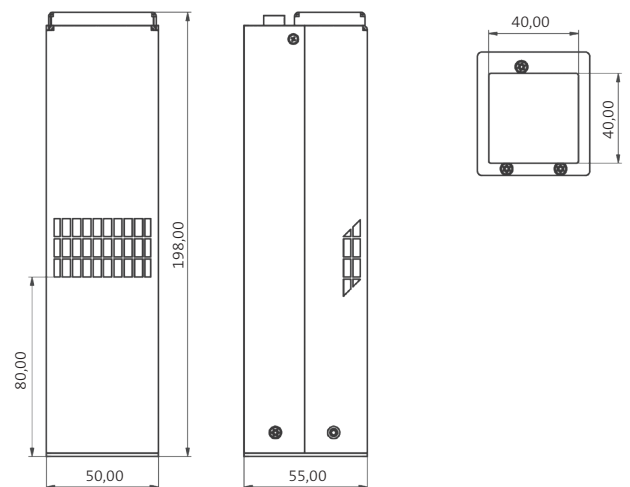
Technical data

Light-emitting aperture in mm:	about 40 x 40
Dimensions in mm: L x W x D	198 x 50 x 55
Wavelengths in nm	365 385 395 405 460
typical intensity in mW/cm ²	3,000* 7,000* 7,000* 7,000* 10,000**
Cooling	Air cooled

* measured with Höhle UV meter and LED surface sensor, distance 0 mm

** measured with Höhle UV meter and VIS surface sensor, distance 0 mm

*** typical lifetime under specified operating conditions



LED powerdrive IC

LED powerdrive IC (Integrated Controller)

The LED powerdrive IC allows the independent operation of up to 3 LED Spot 40 IC. Two versions are available:

- The **LED powerdrive IC 400** can drive two LED Spot 40 IC.
- The **LED powerdrive IC 1200** can drive three LED Spot 40 IC.

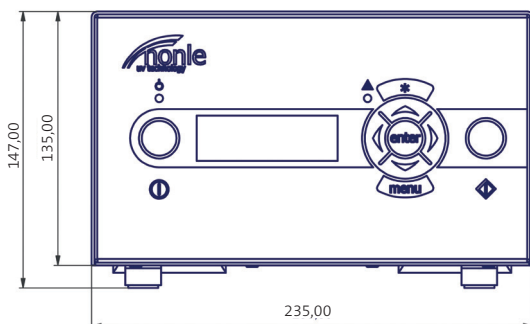
The adjustment of the irradiation time is freely selectable in the ranges of 0,01 - 99,99 sec. or 0,1 - 999,9 sec or 1 - 9999 sec. Alternatively, continuous operation can be chosen.

The operating status and the temperature of the LED segments as well as the irradiation time can be seen on the display at a glance. **The electrical LED power can be adjusted between 10 % and 100 % in 1 %-steps.**

The device is recording the LED operating hours and the service menu gives comprehensive information about the current operation status.

In addition the LED powerdrive IC is characterized by the following features:

- Large and clear display with all relevant information
- Intelligent power control
- Temperature / error control of LED
- Shortest cycle time (0,01 s when set on display / 100 μ s in case of external activation)



Front view

Special features

- Monitoring of LED segments regarding short-circuit, interruption and excess temperature
- Auto recognition of connected LED Spot 40 IC

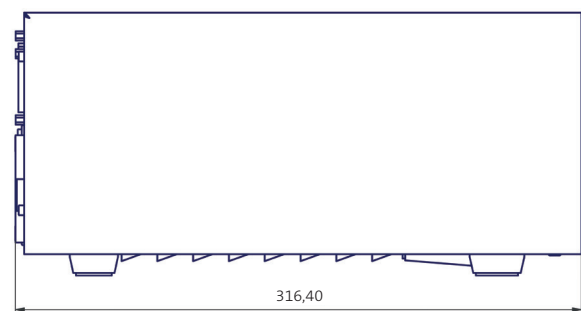
Interfaces

The LED powerdrive IC has the following interfaces:

- Analog preselected target value 0,2V - 10V \pm 2% - 100%
- PLC inputs: LED on, LED enable
- PLC outputs: LED is on, LED is off, LED error, LED warning
- Dry relais contact function (see PLC outputs)
- Foot switch
- LED enable signal
- Option: Fale-safe enable (Performance level e)

Advantages of the LED technology

LEDs do not emit IR radiation. Even temperature-sensitive materials can be irradiated. A wide range of applications are covered by the variety of available wavelengths. As LEDs do not require a warm-up phase, LED heads can be switched on and off without any problems: they are **ready for immediate operation.**



Side view

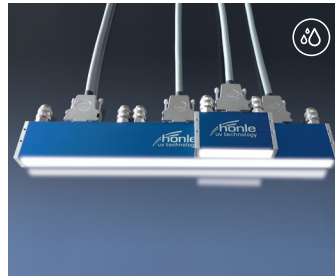
More Hönle LED-Units

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 controll- 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.



bluepoint LED eco

bluepoint LED eco has been developed for all applications requiring a most intensive punctiform UV irradiation.



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/cm² or 16,000 mW/cm².