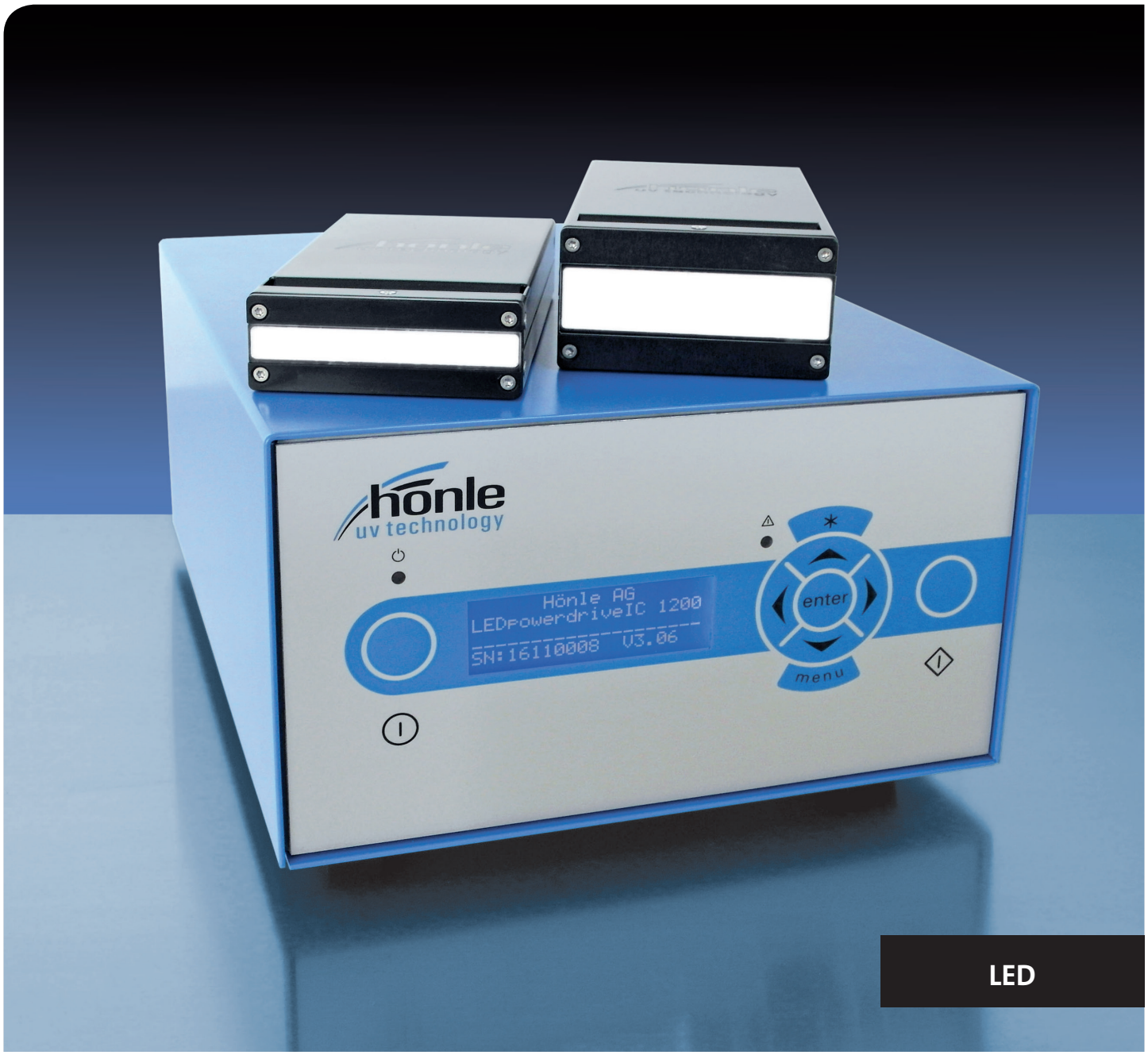
hönle group

hönle uv technology



LED

LED Powerline AC/IC & LED powerdrive IC

Max. irradiation intensity: up to 8.000 mW/cm²

Wavelength: 365, 385, 395 und 405 nm

Air cooled

System-Features

- **LED Powerline AC/IC 410** up to **4.000 mW/cm²**
- **LED Powerline AC/IC 820** up to **8.000 mW/cm²**
- Small dimensions
- Low weight
- Different wavelengths available

Advantages

- Low temperature load
- No heating phase
- Stackable without gap
- IC (Integrated Controller)
- Plug & Play with 48 V or optional with LED power-drive IC

LED Powerline AC/IC

LED Powerline AC/IC is an air cooled high-performance UV LED array for intermediate curing (pinning), final curing for printing applications as well as curing of varnishes or UV-reactive adhesives and pottings.

LED Powerline AC/IC is available in wavelengths of **365/385/395/405 nm** +/- 10 nm. This variety allows to adjust the wavelength perfectly to any application.

Integrated air-cooling guarantees a reliable continuous operation over the whole ambient temperature area, without depending on huge external heat exchangers.

For **larger irradiation widths**, LED Powerlines are stackable **without gap** to any lengths.

The power supply and control of the LED Powerline AC/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**
- Driving and monitoring of each LED segment
- Monitoring of 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

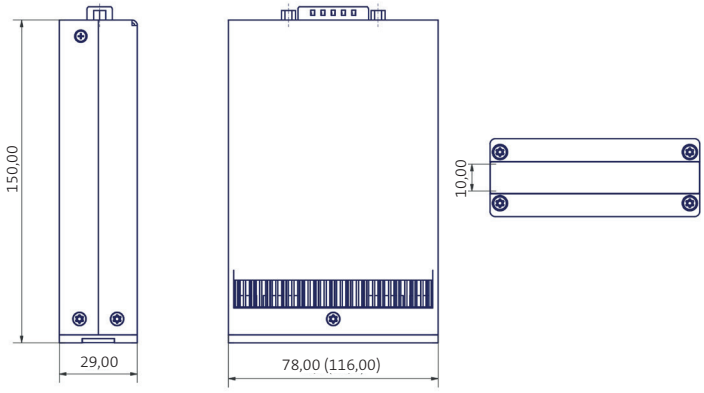
Applications

The LED Powerline AC/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 LED Powerline AC/IC 410

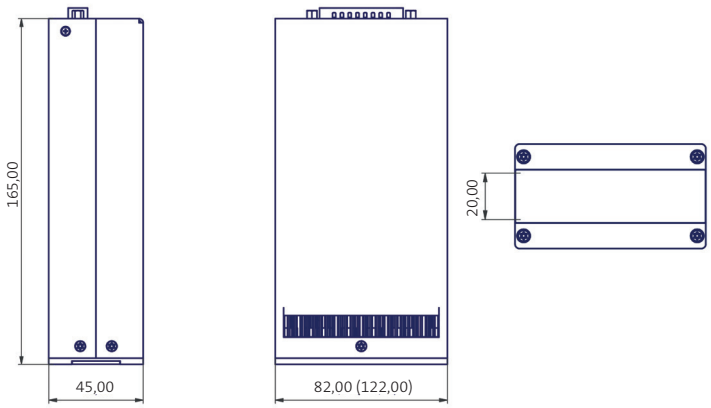
Irradiated area / output window in mm:	78 x 10 or 116 x 10			
Dimensions in mm:	78 x 29 x 150 or 116 x 29 x 150			
Wavelength in nm	365	385	395	405
Typ. intensity in mW/cm² *	2.000	4.000	4.000	4.000
Cooling	air cooling			



Technical data LED Powerline AC/IC 820

Irradiated area / output window in mm:	82 x 20 or 122 x 20			
Dimensions in mm:	82 x 45 x 165 or 122 x 45 x 165			
Wavelength in nm	365	385	395	405
Typ. intensity in mW/cm² *	3.000	8.000	8.000	8.000
Cooling	air cooling			

* measured with Hönle LED sensors for UV meter



LED powerdrive IC

LED powerdrive IC (Integrated Controller)

The LED powerdrive IC allows the independent operation of up to 3 LED Powerline AC/IC. Two versions are available:

- the **LED powerdrive IC 400** can drive one LED Powerline AC/IC 820 or alternatively up to three Powerlines AC/IC 410.
- the **LED powerdrive IC 1200** can drive three LED Powerline AC/IC 820 or alternatively up to three Powerlines AC/IC 410.

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 2 % 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 µs in case of external activation)

Special features

- Monitoring of LED segments regarding short-circuit, interruption and excess temperature
- auto recognition of connected LED Powerline AC/IC

Interfaces

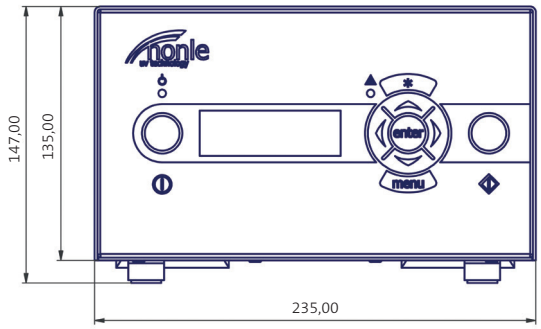
The LED powerdrive IC has the following interfaces:

- Analog preselected target value 0,2V - 10V ≙ 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

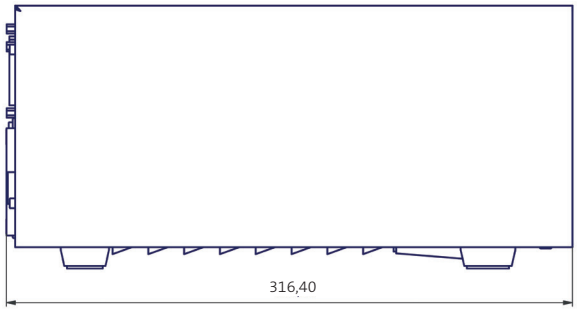
Advantages of the LED technology

LEDs do not emit IR radiation. Even temperature-sensitive materials can be irradiated. The different spectra guarantee safe and fast curing. 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.** The typical service life of a LED is longer than **20.000 hours****.

** typical lifetime under specified operating conditions



Front view



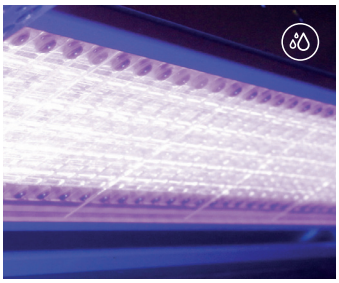
Side view

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
The high-performance array is modularly controll- and changeable (grid 82 mm) as well as continuously adjustable.

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

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

LED Spot 100 IC / HP IC
The square light-emitting aperture has a size of about 100 mm x 100 mm. For bigger irradiation fields, several LED Spots 100 can be connected without gaps.

LED Power Pen 2.0
This handy LED point source is available in the wavelengths 365 nm and 405 nm. Depending on the wavelenght it is able to generate UVA-intensities of either 10.000 mW/cm² or 16.000 mW/cm².

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Operating parameters depend on production characteristics and may differ from the foregoing information.
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