evotron

A-82x82-IR860-W-DIF-S

Infrared LED area lighting
for industrial image processing

860 nm

Made in GERMANY © evotron 2026-11

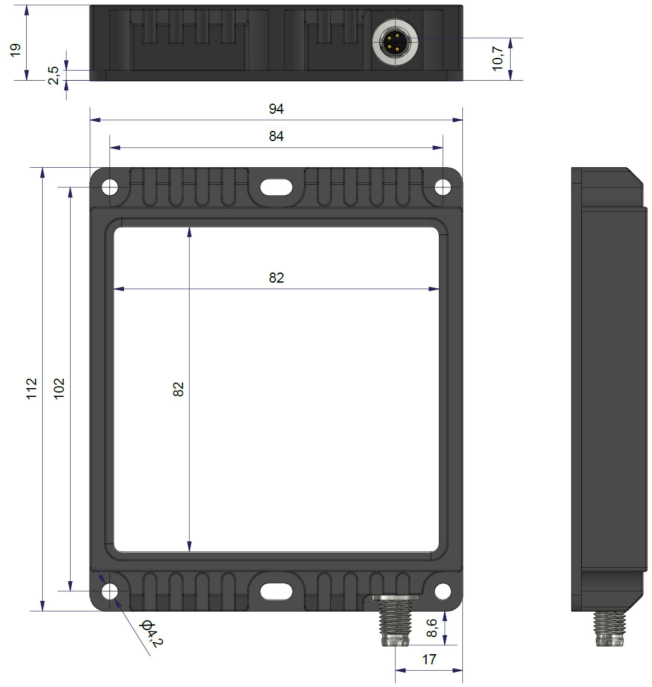
Overview of functions

- Bright, diffuse infrared LED area lighting
- Uniform, shadow-free illumination
- Continuous operation with high light output
- Strobe operation with high overcurrent
- Flat profile – compact footprint
- Plug & Play – automatic configuration
- Patented lumiSENS® technology
- Stable illumination parameters over time
- Automatic LED brightness calibration
- LED temperature monitoring
- Active LED service life monitoring
- Communication of current process data
- Active reverse polarity protection, integrated ESD protection
- High reliability, long service life

Applications:

- Surface inspection with diffuse incident light
- inspection of transparent materials
- Material identification and sortingt
- Print and Label Inspection

Dimensions



all dimensions in mm

CE

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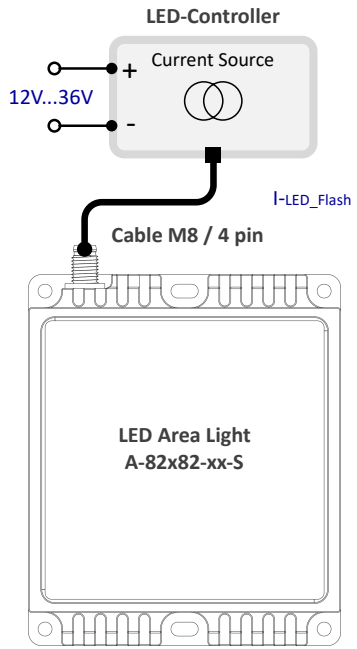
Disposal

This product is RoHS compliant. The product can be returned to the manufacturer for proper disposal.

The product itself must not be disposed of with household waste.

WEEE-Reg.-Nr. DE85473784

Installation



Technical Data

Light Colour, Wavelength	Infrared, 860 nm
Dimension Luminous Area (W, B)	82 mm x 82 mm
Beam angle	diffuse light
Optical Material	Glas
Housing Dimensions (H x Wx L)	94 mm x 112 mm 19 mm
Housing Material	Aluminium / PA12
Weight	207 g
Protection Rating	IP 64
Protecting Class	III, Savety Extra Low Voltage (SELV)
Risk Group (DIN EN 62471)	Free Group
Thermal Protection T_{MAX}	85 °C
Connector	M8 - male, 4 pin

Continuous Operation	Min	Nom	Max
LED Current @ 25 °C, free convection	0 A	1.8 A	1.8 A
LED Forward Voltage	0 V	12.4 V	13.6 V
Power Consumption	0 W	22.3 W	24.5 W

Flash Operation	Min	Nom	Max
LED Current - @ 25 °C, free convection	0 A	-	10.0 A
LED Forward Voltage	0 V	-	16.0 V
Power Consumption	0 W	-	160.0 W

Intended Use

This LED lighting is intended exclusively for use in industrial automation and machine vision applications.

The permissible environmental conditions for the transport, installation, and operation of the lighting must be observed.

Safety notice

Installation, assembly, and commissioning must be carried out by trained specialist personnel.

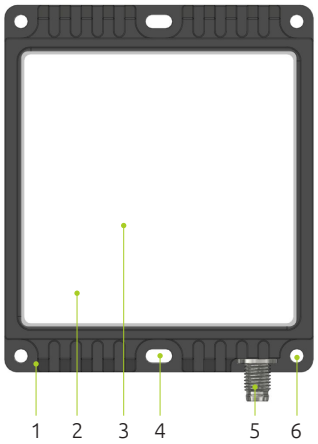
Risk of glare

Severe glare can lead to temporary impairment of vision, which can result in irritation, impairment, or accidents. **Wear safety glasses!**

Risk of burns from hot surfaces

During operation, the light unit can reach a housing temperature above 55°C. Do not cover or touch the lighting while it is in operation.

Overview of functions



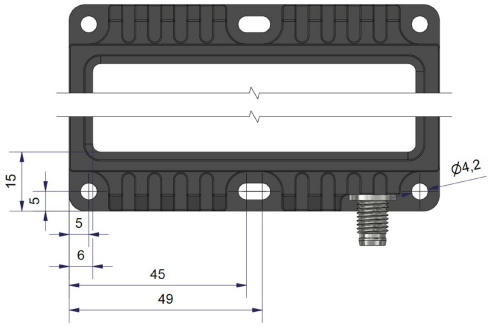
1	Aluminum housing
2	Cover – impact-resistant Gorilla Glass®
3	Homogeneous LED light field
4	Mounting slots for 2 x M4 screws
5	M8 round connector - 4 pin
6	Mounting holes for 4 x M4 screws

Mounting

Mounting options

The aluminum frame of the panel light is equipped with four symmetrically arranged mounting holes and two elongated mounting slots.

M4 screws in accordance with DIN 6912 A2 are recommended for mounting.

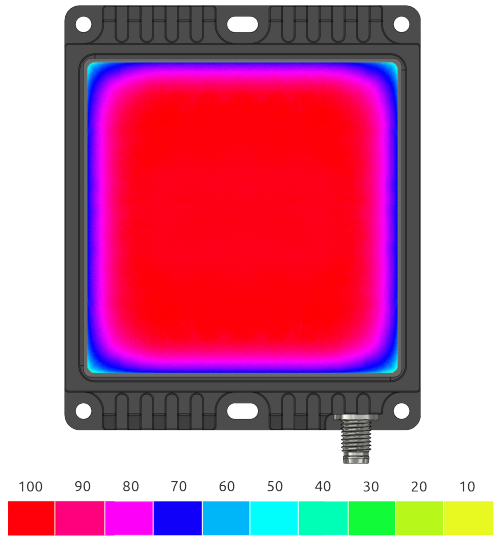


When mounting and fastening the housing frame, bending and reaction forces should be avoided.

Luminance

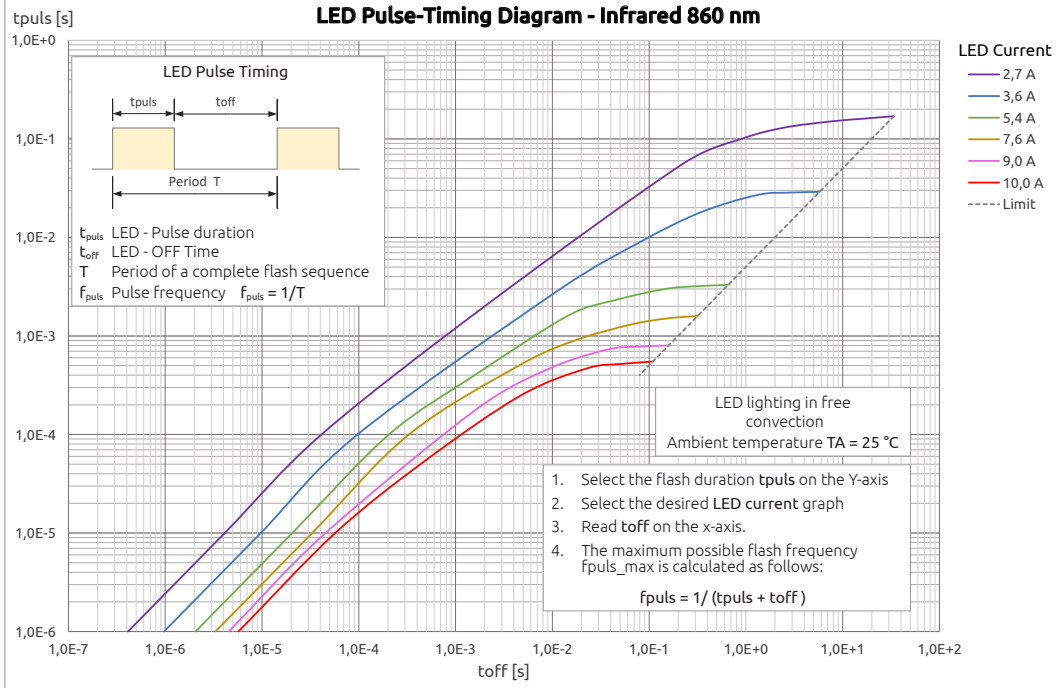
Luminance distribution – LED surface

The active luminous surface is characterized by a very even luminance distribution.



Luminance @ I_{LED} = 540 mA / $T_{Ambient}$ = 25 °C

LED Pulse-Timing Diagram - Infrared 860 nm



Commissioning

Operation with evotron lumiSENS®controller

Plug & Play - The LED controller automatically reads the required configuration data from the LED lighting and adapts adaptively to the lighting parameters. With this optimal setting, the lighting is immediately ready for use.

Active monitoring of the LED power ensures a long service life and reliable operation.

Continuous operation

In continuous operation, the LED lighting can be operated continuously within the specified LED continuous current range.

Flash operation

In flash operation with multiple overcurrent, precise light pulses with very high irradiance and short pulse times of up to 1µs can be generated. This makes the LED lighting ideal for the precise illumination of fast-moving measurement objects.

Configuration via DCConfig app

With the **DCConfig** app[1], you can conveniently adjust settings such as operating mode, brightness, flash timing, and LED color.

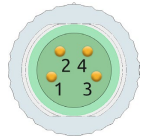
1 The DCConfig app is available for free download on the evotron website.

Connection diagram

The LED lighting must be controlled by a suitable, regulated current source.

Any evotron lumiSENS® lighting controllers or other standard LED controllers with a regulated current output are suitable for operation.

Assignment M8 plug 4-pin



Pin 1	Brown	$+I_{LED}$
Pin 2	White	SD [1]
Pin 3	Blue	$-I_{LED}$
Pin 4	Black	SG [1]

1 Only LED lighting controllers with lumiSENS® Technology use these pins - otherwise please do not connect them.

IMPORTANT NOTE

Only operate the LED lighting on an LED controller with a current output or directly on a current source.