

Datasheet

LuxaLight Infrared LED-strip 850nm Protected (24 Volt, 140 LEDs, 2835, IP64)

LS24IR140X2835850PLX

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Product description

The LuxaLight NIR LED Strip 850 nm delivers strong invisible near-infrared radiation for industrial applications such as machine vision, security, and biometrics. With 140 high-quality 2835 LEDs per meter and IP64-rated silicone protection, it is designed for continuous use in demanding environments. Its flexible design (10 m reels, cuttable every 50 mm) allows seamless integration into camera setups, production lines, and laboratory systems.

An optional NTC sensor can be added for thermal monitoring via the MaNima Pollux Industrial System.

Key Specifications

Property	Value / Description
Wavelength	Near-Infrared 850 nm
Irradiance (5 cm)	45 W/m ² (total)
Beam Angle	120°
LED Specifications	140 LEDs/m, 2835 SMD
Dimensions	10 m per reel; cuttable every 50 mm; width 10 mm; height 4 mm
Power & Consumption	24 V DC; ±1 A/m; ±24 W/m
Protection	IP64 – silicone coating, dust- and splash-resistant
Thermal Monitoring	Optional via external NTC sensor (Pollux-compatible)
Mounting	3M VHB-4905 tape
Operating Temp.	–20 °C ... +60 °C (storage –40 °C ... +80 °C)
Standards	RoHS, CE, EN60598-1, EN62031, IEC62471

Applications

- Machine vision & sensor technology – invisible NIR enhances contrast and detection performance.
- Security & night vision – supports cameras and surveillance without visible light.
- Process control & quality assurance – detection of defects, moisture, and material variations.
- Biometrics & medical technology – applicable in facial recognition, iris scanning, and NIR imaging.
- R&D and laboratory setups – spectroscopy, testing, and experiments using 850 nm radiation.

Also applicable in R&D and specialized lighting setups.

Benefits for Engineers

- Stable NIR output with uniform 120° beam spread
- Flexible modular design, cuttable every 50 mm
- Robust IP64 protection for industrial-grade use
- Optional NTC sensor for thermal monitoring and control
- Simple integration into 24 V systems
- Reliable performance for continuous operation

Integration with MaNima Pollux Industrial System

- Real-time thermal monitoring via optional NTC sensor
- Pulse and strobe modes for flexible NIR output
- Automatic thermal protection for long-term reliability
- Seamless PLC/SCADA integration
- Open UDP API for advanced control and logging

Technical specifications

General		
Brand	LuxaLight	
LEDs / meter	140	
LED type	2835	
Length per reel	10 m	
Length per segment	50 mm	
LED strip width	10.00 mm	
LED strip thickness	4.00 mm	
PCB color	White	
Mantle material	Silicon	
Dimensions	10.000 × 10 × 4 mm	
Mounting	3M tape VHB4905	
Warranty	5 years	
Lifetime	70000 hours	
Lighting		
Wave length	850 nm	
Beam angle	120 °	
Measurement results		
Peak wavelength (Object size: 1 piece)	851 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	1.1 W/sqm
	10cm	0.37 W/sqm
	15cm	0.2 W/sqm
	20cm	0.12 W/sqm
	25cm	0.08 W/sqm
	30cm	0.06 W/sqm
Total irradiance (Object size: 1 piece)		24V
	5cm	45.37 W/sqm
	10cm	15.26 W/sqm
	15cm	8.34 W/sqm
	20cm	5.16 W/sqm
	25cm	3.39 W/sqm
	30cm	2.52 W/sqm
Electronics		
Working voltage	24V	
Current / meter	1.00 A / meter	
Power consumption per meter	24.00 W / meter	
PCB material	Copper	

Pinout

Symbol	Function
V+	V+
GND	Ground

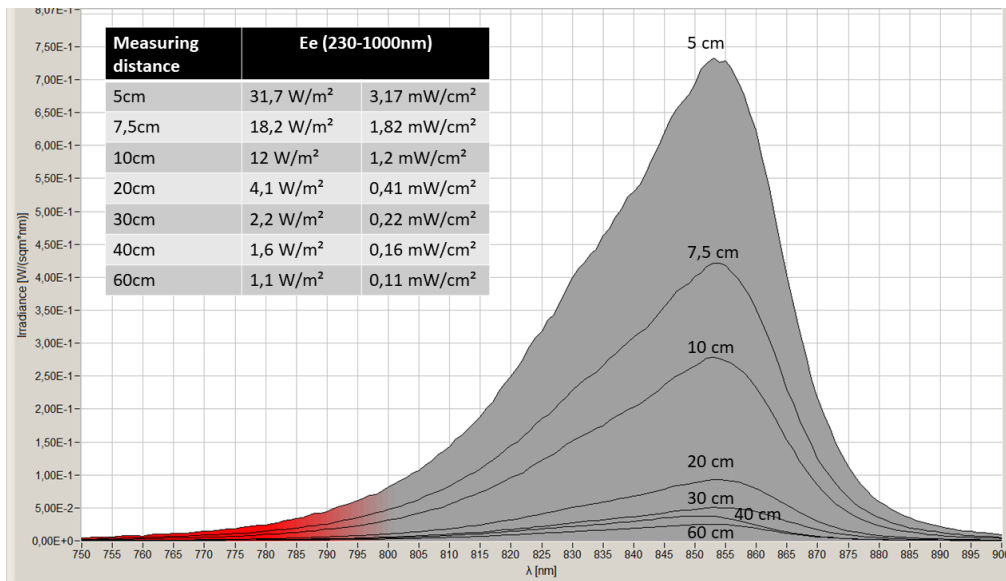
Environmental

Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

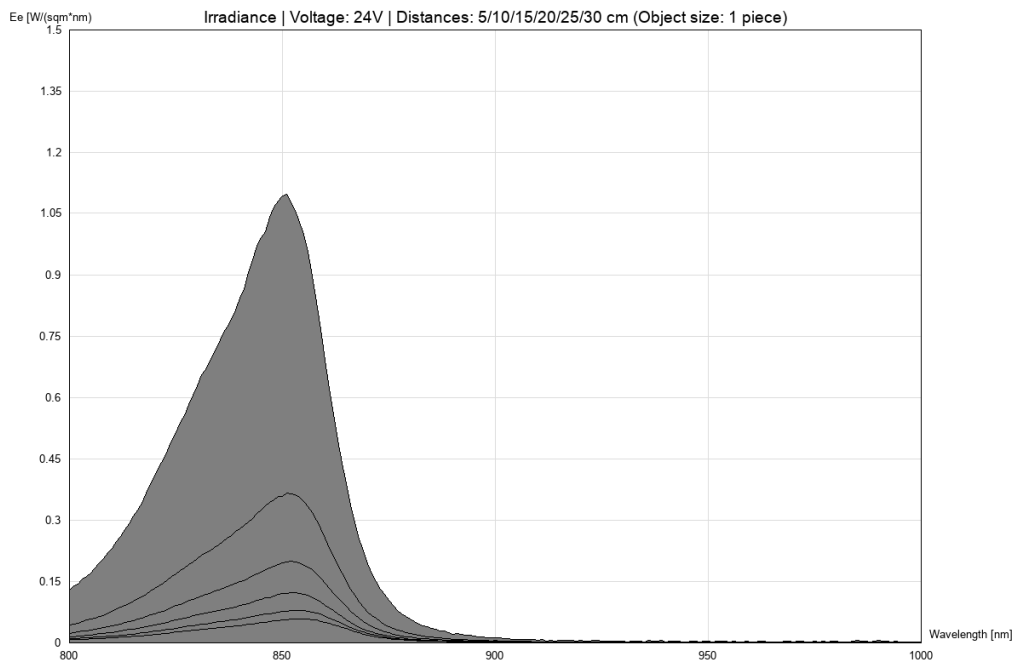
Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

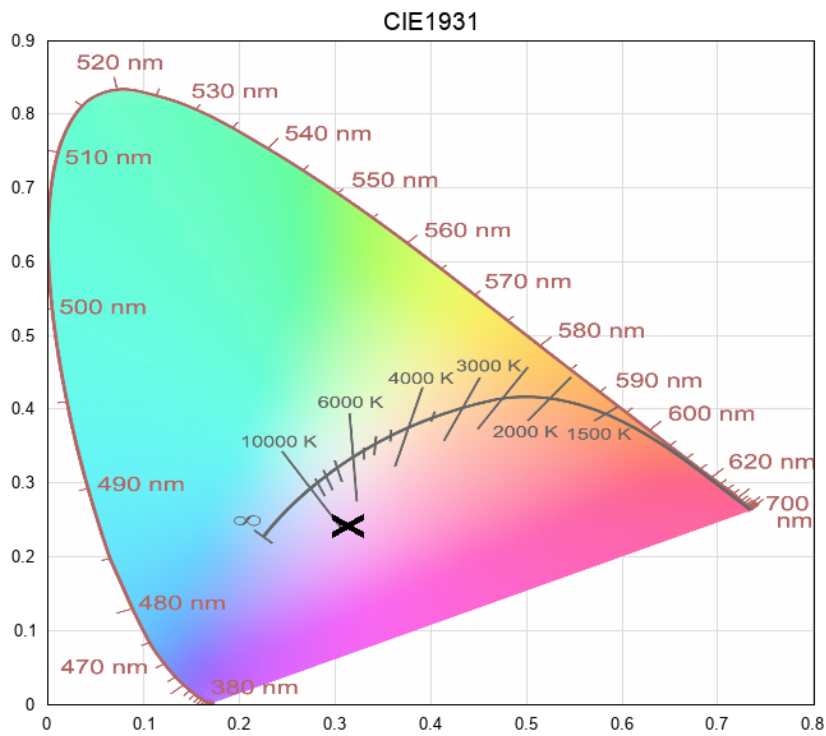
Measurement results



irradiance - 800-nir (24V)



cie1931



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