

Datasheet

LuxaLight Industrial LED Fixture Transparent cover Near Infrared 960nm 24.2x16mm (24 Volt, 2835, IP64)

LF-24-960-24.2X16-TC

Version: 2025-08-26.3

Product description

The **LuxaLight Industrial LED Fixture Transparent Cover Near-Infrared 960 nm (24.2 × 16 mm)** is designed for industrial environments where robust, precise and high-intensity NIR illumination is required. Its **modular design** (220 mm to 3000 mm), transparent **PMMA cover** optimized for 960 nm transmission, and compatibility with the **MaNima Pollux Industrial System** make it a versatile solution for curing, drying, inspection and process monitoring.

Specifications

Property	Value / Description
Wavelength	960 nm near-infrared (measured peak ~958 nm)
Optical Output	High radiant intensity tailored for NIR industrial processes
Cover	Transparent PMMA cover optimized for efficient 960 nm transmission
PCB Protection	Industrial-grade silicone coating (dust, moisture, chemical resistance)
Environmental Protection	IP64 – dust-tight and splash-water resistant
Thermal Monitoring	Integrated NTC sensor, controllable via MaNima Pollux Industrial System
Pulsing/Strobing	Supported when integrated with MaNima Pollux Industrial System
Design	Modular and scalable, from 220 mm to 3000 mm
Dimensions	24.2 × 16 mm (fixture profile)
Environment	Suitable for heavy-duty industrial conditions (dust, vibration, moisture)

Applications

- **Material curing & drying** – adhesives, coatings, composites using deep NIR
- **Photochemical processes** – enhancing specific chemical reaction rates
- **Quality control & inspection** – subsurface defect detection, coating validation
- **Food processing** – drying and process monitoring in industrial food lines
- **Machine vision** – NIR imaging for sorting and inspection in automation
- **Process monitoring** – NIR illumination for inline sensing and feedback

Also applicable for advanced R&D photonic applications.

Benefits for Engineers

- **Efficiency:** Pulsing + real-time monitoring improves throughput safely
- **Reliability:** Thermal feedback stabilizes output and protects lifetime

- **Durability:** Robust PMMA + IP64 rating for harsh industrial environments
- **Scalability:** Modular design adapts up to 3000 mm lengths
- **Integration ready:** Plug-and-play with Pollux and industrial automation

Integration with MaNima Pollux Industrial System

- Real-time thermal monitoring via NTC sensor
- Pulsing/strobing for higher peak output
- Prevents overheating during extended use
- Compatible with PLC/SCADA automation
- **Open API (UDP-based)** for custom integration

Technical specifications

General															
Brand	LuxaLight														
Application	Hyper - spectral Imaging Machine Vision														
LED type	2835														
Material	Aluminum														
Dimensions	220 × 24,2 × 16 mm														
Mounting	Surface mounted														
Warranty	5 years														
Cover type	PMMA transparent														
LEDs per piece	108.00														
Lifetime	70000 hours														
Lighting															
Wave length	960 nm														
Beam angle	120 °														
Measurement results															
Peak wavelength (Object size: 1 piece)	963 nm														
Peak irradiance (Object size: 1 piece)	<table> <tr> <th></th><th>24V</th></tr> <tr> <td>5cm</td><td>6.30352 W/sqm</td></tr> <tr> <td>10cm</td><td>2.34626 W/sqm</td></tr> <tr> <td>15cm</td><td>1.2149 W/sqm</td></tr> <tr> <td>20cm</td><td>0.747176 W/sqm</td></tr> <tr> <td>25cm</td><td>0.499372 W/sqm</td></tr> <tr> <td>30cm</td><td>0.374971 W/sqm</td></tr> </table>		24V	5cm	6.30352 W/sqm	10cm	2.34626 W/sqm	15cm	1.2149 W/sqm	20cm	0.747176 W/sqm	25cm	0.499372 W/sqm	30cm	0.374971 W/sqm
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• By combining Pulse Mode with Real-Time Monitoring, the efficiency of LED systems can be increased, resulting in higher output. • We have the expertise and equipment to perform measurements tailored to the specific requirements of the application.															
Electronics															
Working voltage	24V														
Current per piece	1.25 A / piece														
Power consumption per piece	30.00 W / piece														
PCB material	Aluminium														

Pinout

Symbol	Function
V+	V+
GND	Ground
NTC	NTC sensor
NTC_GND	NTC ground

NTC parameters	Resistance: 5000 Ohm Beta value: 3950
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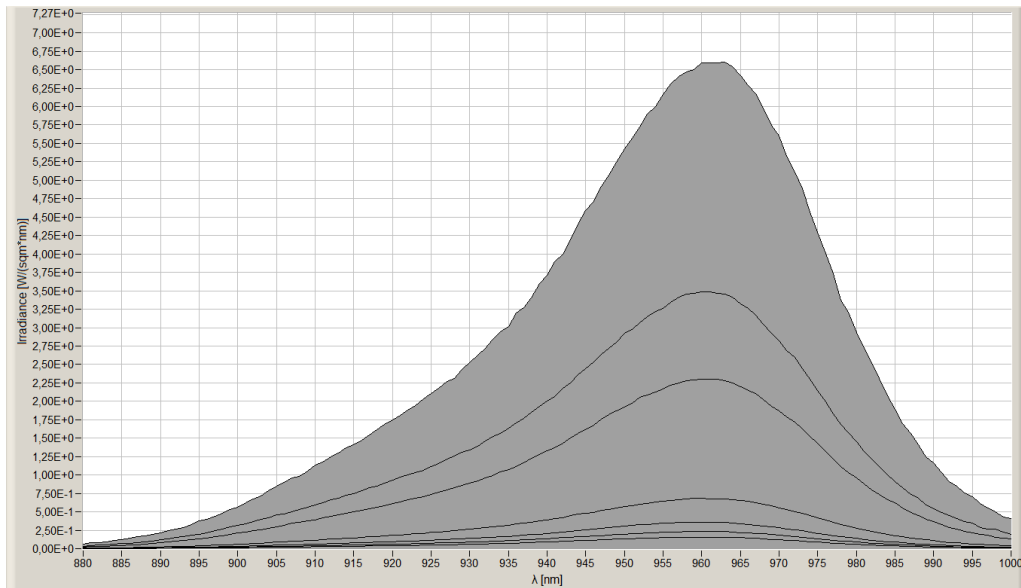
Environmental

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

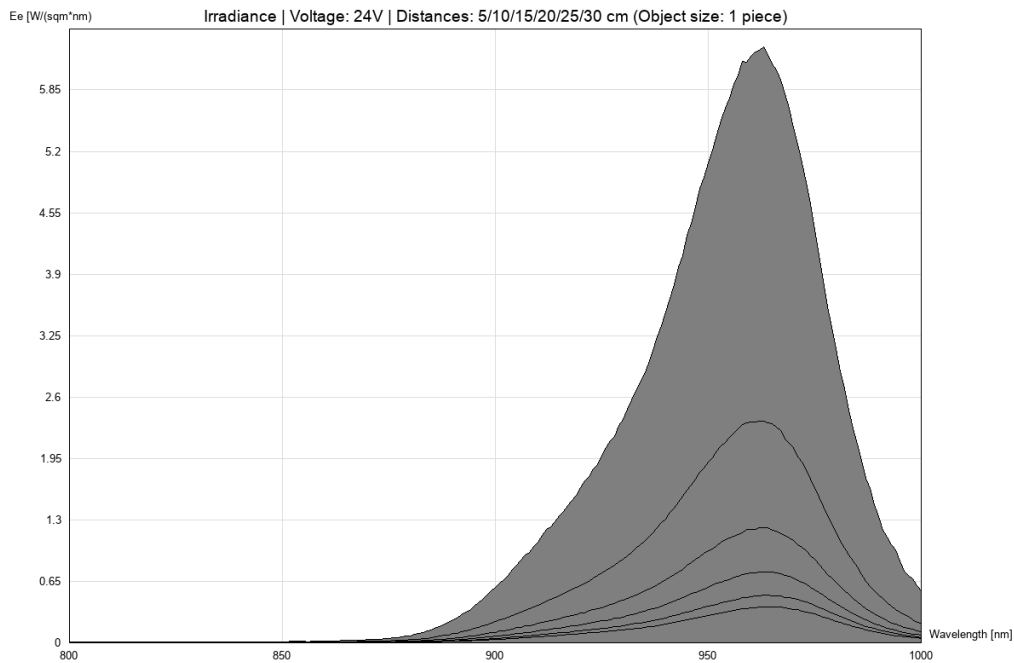
Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

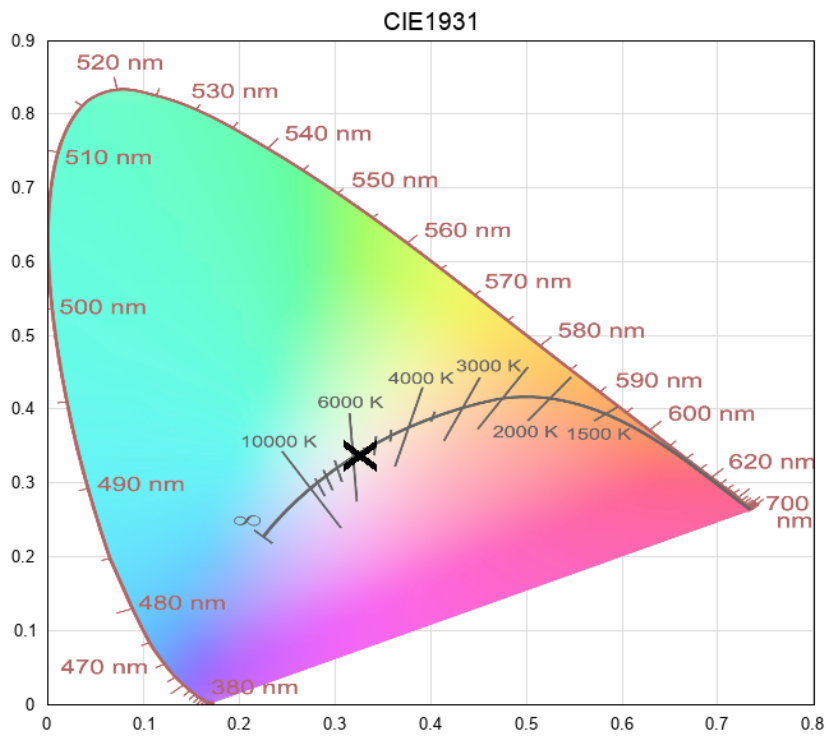
Measurement results



irradiance - 800-nir (24V)



cie1931



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