

# Datasheet

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

**LF-24-960-24.2X16-POL**

**Version: 2025-07-10.2**

## Product description

The **LuxaLight Industrial LED Fixture** is designed for intensive industrial applications that require high radiation intensity for a wide range of processes. With a **960nm near-infrared (NIR) radiation**, this LED fixture provides a reliable and efficient solution for industrial processes that benefit from **near-infrared radiation**, such as material curing, quality inspection, and more.

The fixture is made from a **durable aluminum housing**, ensuring efficient heat dissipation and long-lasting performance. The **polarized cover** offers protection against dust and moisture (IP64) and provides the flexibility to choose the radiation beam angle between **30°, 60°, 90°, or 120°**, depending on your specific application needs.

### Key Features:

- **960nm Near-Infrared Radiation:** The **960nm wavelength** is ideal for industrial applications requiring **near-infrared radiation**, enhancing processes such as material curing, photochemical reactions, and quality inspection.
- **Polarized Cover (IP64):** The fixture features a **polarized cover** providing protection against dust and moisture (IP64), and offers a choice of radiation beam angle: **30°, 60°, 90°, or 120°**, depending on the application.
- **Aluminum Housing:** The durable **aluminum housing** ensures optimal heat dissipation, contributing to stable and long-term operation.
- **24V Power Supply:** The fixture operates on a reliable 24V power supply, ensuring stable and consistent performance, ideal for demanding industrial applications.
- **Integration with MaNima Pollux Industry Pulsing (Strobing):** The LED fixture supports integration with the MaNima Pollux Industry System for pulsing (strobing), significantly increasing radiation intensity. This feature enables faster reactions and enhanced efficiency in industrial processes.
- **Real-Time Temperature Monitoring via NTC Sensor:** The integrated NTC sensor allows continuous temperature measurement and adjustment via the MaNima Pollux Industry System. This helps maintain the optimal operating temperature for maximum radiation output and consistent performance.

### Industrial Applications:

- **Material Curing & Hardening:** **960nm near-infrared radiation** is commonly used in the curing process of coatings, adhesives, and materials that respond to infrared radiation, accelerating curing times in production environments.
- **Photochemical Processes:** The **960nm wavelength** can be used in industrial and scientific environments where specific photochemical reactions are required, accelerating reactions in laboratories or production lines.
- **Quality Control & Inspection:** **960nm NIR** is ideal for inspecting materials or products for defects or irregularities in industrial environments, improving quality control.
- **Food Processing & Sterilization:** The fixture is used in food production for sterilization and pasteurization, enhancing food safety and processing efficiency by delivering consistent near-infrared radiation.
- **Non-UV Material Curing & Hardening:** The **960nm radiation** is used for curing various materials that do not require UV light but benefit from NIR wavelengths, such as plastics, rubbers, and other composite materials, speeding up the curing process.
- **Natural & Artificial Drying:** The **960nm wavelength** helps dry a wide range of materials such as paper, textiles, and wood, by accelerating moisture evaporation without damaging the product. This is especially useful in printing and textile industries.
- **Metal & Material Processing:** **960nm NIR** is applied to improve the properties of coatings or accelerate the curing of certain materials, reducing processing times in manufacturing and enhancing efficiency.

### Benefits:

- **High Radiation Intensity for Faster Processes:** The fixture can pulse with the MaNima Pollux Industry System to increase radiation intensity, reducing processing time and increasing productivity in industrial applications.
- **Real-Time Temperature Monitoring for Consistent Performance:** Continuous temperature monitoring with the integrated NTC sensor helps maintain optimal operating temperatures, preventing overheating and ensuring a longer lifespan for the fixture.
- **Industrial Durability:** The **aluminum housing** provides a robust and durable construction, capable of withstanding the challenges of harsh industrial environments, while the **polarized cover** ensures protection against dust and moisture, increasing the fixture's reliability.
- **Efficiency & Speed:** The LED fixture delivers efficient performance, with quick and reliable operation contributing to increased productivity and processing efficiency, essential for industrial production systems.

## 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	
Cover type	PMMA Polarised transparent	
LEDs per piece	108.00	
Lighting		
Wave length	960nm	
Beam angle	120 °	
Measurement results		
Peak wavelength (Object size: 1 piece)	963 nm	
Peak irradiance (Object size: 1 piece)		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
Total irradiance (Object size: 1 piece)		24V
	5cm	314 W/sqm
	10cm	117.3 W/sqm
	15cm	60.46 W/sqm
	20cm	37.4 W/sqm
	25cm	25.03 W/sqm
	30cm	18.88 W/sqm
<ul style="list-style-type: none"><li>• By combining Pulse Mode with Real-Time Monitoring, the efficiency of LED systems can be increased, resulting in higher output.</li><li>• We have the expertise and equipment to perform measurements tailored to the specific requirements of the application.</li></ul>		
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

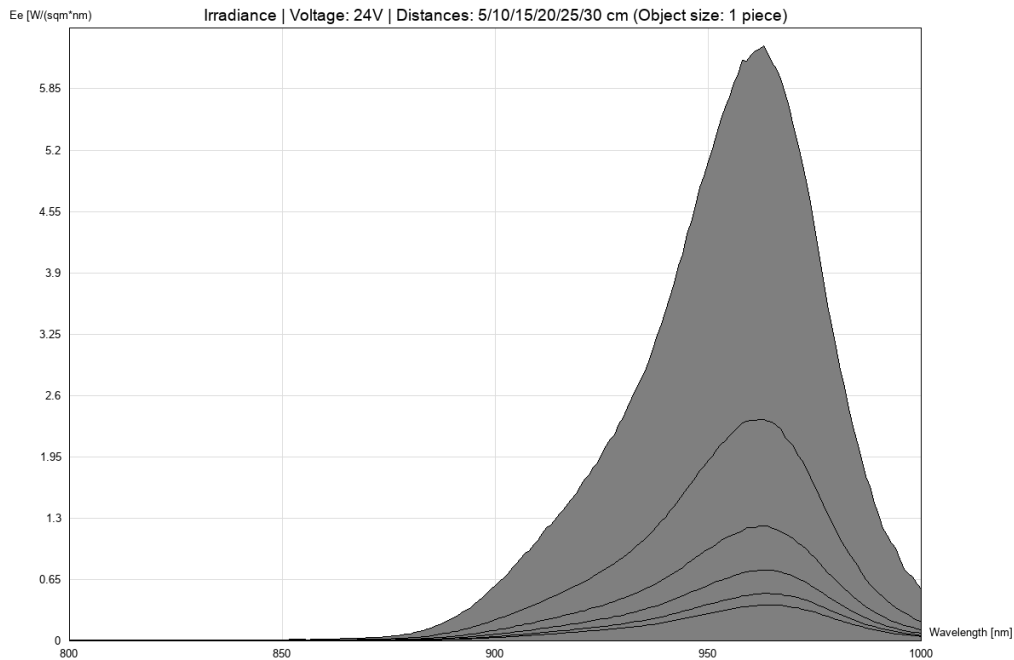
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

## Directives - standards - certificates

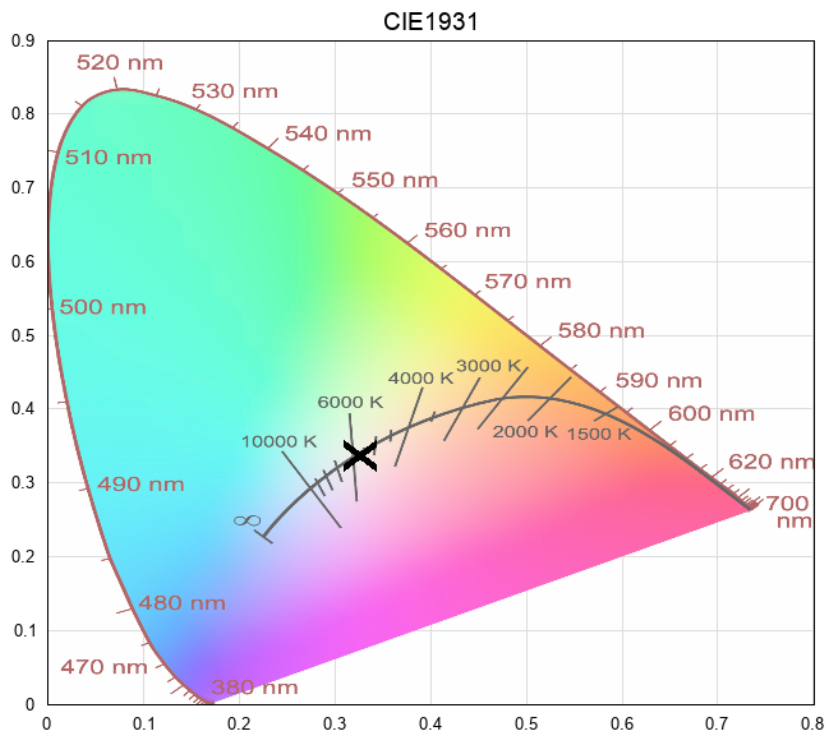
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

## Measurement results

### irradiance - 800-nir (24V)



## cie1931



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