Datasheet

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

LF-24-960-24.2X16-OC

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Product description

The **LuxaLight Industrial LED Fixture** is designed for intensive industrial applications requiring high radiation intensity for a wide range of processes. With a **960nm near-infrared (NIR)** wavelength, this LED fixture provides a reliable and efficient solution for industrial processes that benefit from **near-infrared light**, 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 **opal cover** provides protection against dust and moisture (IP64), ensuring that the fixture remains safe and operational in a variety of environments.

Key Features:

- **960nm Near-Infrared Wavelength:** The **960nm wavelength** is ideal for industrial applications requiring **near-infrared light**, enhancing processes such as material curing, photochemical reactions, and quality inspection.
- **Opal Cover (IP64):** The fixture features an **opal cover** offering protection against dust and moisture (IP64), making it suitable for industrial applications where exposure to environmental factors is possible, but full waterproofing (IP68) is not required.
- **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 light** 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 light** 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 **opal 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 opal
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

• 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

Environmental

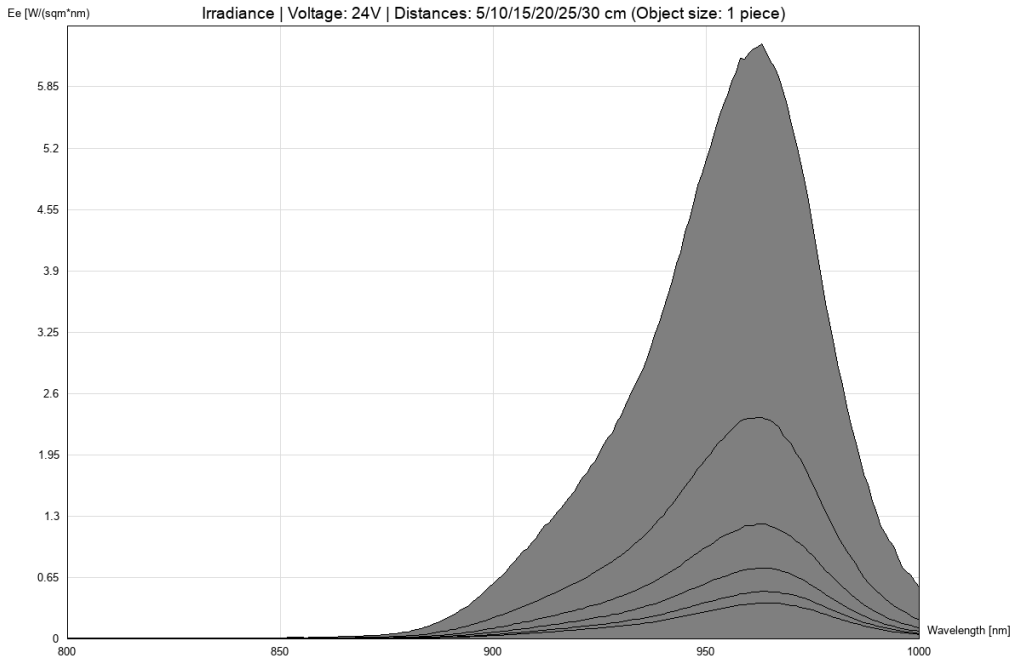
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 800-nir (24V)



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