Datasheet

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

LF-24-960-24.2X16-TC

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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)** wavelength, this LED fixture offers a reliable and efficient solution for industrial processes benefiting from **near-infrared light**, such as material curing, quality control, and more.

Key Features:

- **960nm Near-Infrared (NIR) Wavelength:** The **960nm near-infrared wavelength** is ideal for industrial applications that require **near-infrared light**. It enhances processes like material curing, photochemical reactions, and quality control.
- **Aluminum Fixture:** The durable aluminum housing allows efficient heat dissipation, ensuring stable and long-lasting performance.
- **Transparent Cover (IP64):** The fixture is equipped with a transparent cover, providing protection against dust and moisture (IP64 rating). This makes it suitable for industrial applications where exposure to environmental factors may occur, but where complete waterproofing (IP68) is not required.
- **Integration with MaNima Pollux Industry Pulsing (Strobing):** The LED fixture supports integration with the MaNima Pollux Industry System for pulsing (strobing), which significantly increases radiation intensity. This feature enables faster reactions and improved efficiency in industrial processes.
- **Real-Time Temperature Monitoring via NTC Sensor:** The integrated NTC sensor ensures continuous temperature measurement and adjustment through the MaNima Pollux Industry System. This helps maintain the optimal operating temperature for maximum radiation output and consistent performance.

Industrial Applications:

- **Material Curing & Drying:** The **960nm near-infrared light** is commonly used for curing coatings, adhesives, and materials that react to infrared radiation, accelerating curing processes in production environments.
- **Photochemical Processes:** The **960nm wavelength** can be utilized in industrial and scientific settings where specific photochemical reactions are required. It can enhance the speed of reactions in laboratories or production lines.
- **Quality Control & Inspection: 960nm NIR** is used for quality control, where it can scan and inspect products in industrial production lines to detect material irregularities or defects.
- **Food Processing & Sterilization:** The **960nm wavelength** is beneficial in food production for sterilization and pasteurization processes. The deep penetration ensures thorough processing and sterilization.
- **Non-UV Industrial Applications:** The **960nm near-infrared light** is suitable for industries that do not require UV radiation but still benefit from infrared wavelengths in processes like plastic molding, metalworking, and curing.
- **Natural and Artificial Drying:** The **960nm NIR** wavelength is applied in drying processes for materials like wood, textiles, and paper, improving efficiency without causing damage to the product.
- **Material & Metal Processing:** The **960nm near-infrared light** can be used to enhance the properties of coatings or speed up the curing of certain materials, improving processing time in manufacturing.

Benefits:

- **High Radiation Intensity:** The ability to pulse with the MaNima Pollux Industry System allows for increased radiation intensity, resulting in faster reactions and higher productivity in industrial applications.
- **Real-Time Temperature Monitoring for Consistent Performance:** The NTC sensor, combined with the MaNima Pollux Industry System, ensures continuous temperature monitoring, helping maintain optimal operating conditions and prevent overheating.
- **Durable and Reliable:** The **aluminum housing** ensures excellent heat dissipation and durability, while the **transparent cover (IP64)** offers protection against dust and moisture, making the fixture suitable for various industrial environments.
- **Efficient Performance:** The fixture delivers efficient performance, ideal for industrial applications that require rapid processing or curing, helping to boost productivity in manufacturing 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
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)

	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

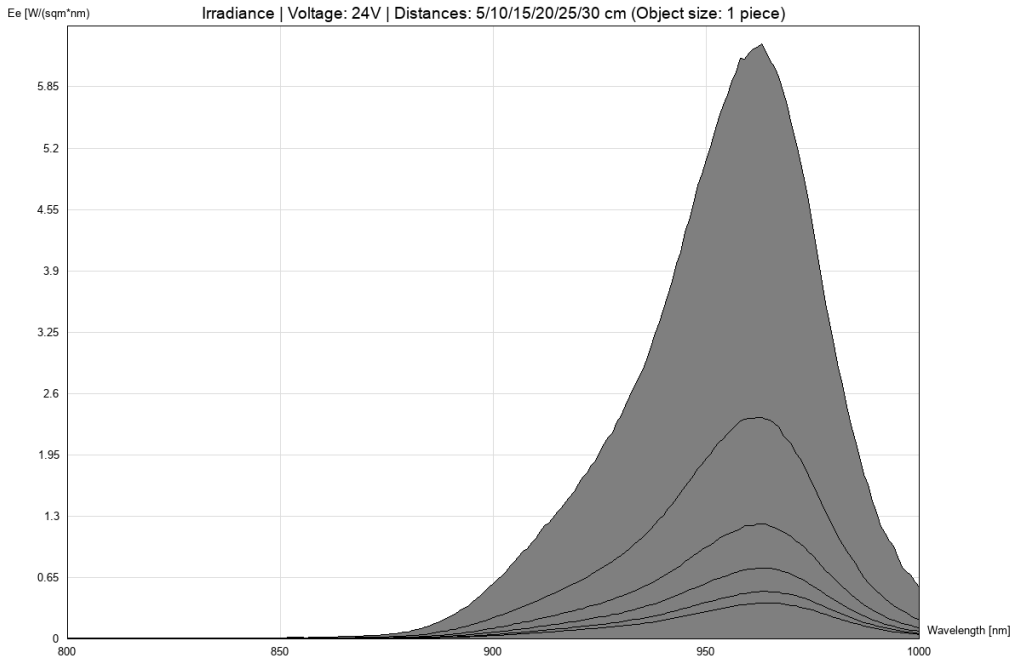
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 800-nir (24V)



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