Datasheet

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

LF-24-960-24.2X16-TC

Version: 2025-02-26.1

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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

Irradiance

Value	Measuring distance
323 W/m2	50 mm
169 W/m2	75 mm
112 W/m2	100 mm
32,8 W/m2	200 mm
17,2 W/m2	300 mm
11,1 W/m2	400 mm
7,4 W/m2	600 mm

Electronics	
Working voltage	24V
Current per piece	1.25 A / piece
Power consumption per piece	30.00 W / piece
PCB material	Aluminium

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

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Measurement results

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