

Datasheet

LuxaLight Industrial LED Fixture Transparent IP68 Near Infrared 960nm 24.2x16mm (24 Volt, 2835, IP68)

LF-24-960-24.2x16-PU

Version: 2025-03-28.1

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 is especially effective for enhancing industrial processes like material curing, photochemical reactions, and quality control.
- **Transparent PU Coating:** The fixture is fully encapsulated in a transparent polyurethane (PU) coating, offering exceptional protection against moisture, dust, and other environmental factors. The transparent coating allows for optimal light transmission while safeguarding internal components.
- **IP68 Waterproof:** The PU coating ensures the fixture is fully waterproof according to the highest standard (IP68), making it suitable for use in outdoor and wet environments where exposure to water is common.
- **IK10 Impact Resistance:** The high mechanical strength of **IK10** ensures the fixture is resistant to physical impact, making it ideal for industrial environments that require robust and durable lighting solutions.
- **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 in industrial applications for curing coatings, adhesives, and materials that react to infrared radiation. It accelerates the curing process and improves efficiency 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 industrial environments, boosting efficiency.
- **Quality Control & Inspection:** **960nm NIR** is used in quality control applications where it helps scan and inspect products in industrial production lines. It can detect material irregularities, such as defects or incomplete coatings.
- **Food Processing & Sterilization:** The **960nm wavelength** is useful in food production and processing, especially in sterilization and pasteurization processes. The deep penetration of materials ensures even 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 this specific wavelength. It is used in processes such as plastic molding, metalworking, and other industrial curing applications.
- **Natural and Artificial Drying:** The **960nm NIR** wavelength is widely used in drying processes for various materials, such as wood, textiles, and paper. It accelerates drying without causing damage to the product.
- **Material & Metal Processing:** **960nm near-infrared light** is used for treating materials and metals, such as improving the properties of coatings or accelerating the curing of certain metals or alloys.

Benefits:

- **Real-Time Temperature Monitoring for Consistent Performance:** The NTC sensor, combined with the MaNima Pollux Industry System, provides continuous temperature monitoring, helping maintain optimal operating temperature and prevent overheating, which extends LED lifespan and improves efficiency.
- **Superior Environmental Protection:** The fully encapsulated PU coating ensures the fixture is **IP68 waterproof**, making it suitable for outdoor and wet environments. It also provides **IK10 impact resistance**, ensuring the fixture can withstand physical impact, ideal for robust industrial environments.
- **Industrial Durability:** The aluminum housing offers durability and excellent heat dissipation, while the PU coating provides protection against moisture, dust, and other environmental factors, ensuring long-lasting performance even in harsh environments.

Technical specifications

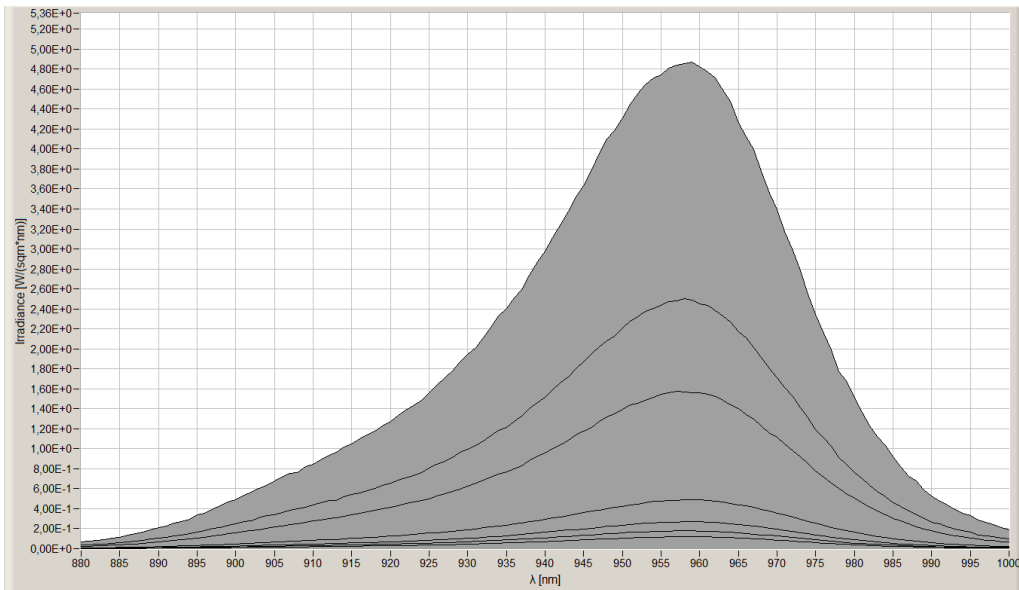
General																	
Brand	LuxaLight																
Application	Hyper - spectral Imaging Machine Vision																
LED type	2835																
Material	Aluminum																
Dimensions	220 × 24,2 × 16 mm																
Mounting	Surface mounted																
Cover type	Polyurethane																
LEDs per piece	108.00																
Lighting																	
Wave length	960nm																
Beam angle	120 °																
Measurement results																	
Irradiance	<table border="1"> <thead> <tr> <th>Value</th> <th>Measuring distance</th> </tr> </thead> <tbody> <tr> <td>228 W/m²</td> <td>50 mm</td> </tr> <tr> <td>116 W/m²</td> <td>75 mm</td> </tr> <tr> <td>73,6 W/m²</td> <td>100 mm</td> </tr> <tr> <td>22,8 W/m²</td> <td>200 mm</td> </tr> <tr> <td>12,6 W/m²</td> <td>300 mm</td> </tr> <tr> <td>8,2 W/m²</td> <td>400 mm</td> </tr> <tr> <td>5,5 W/m²</td> <td>600 mm</td> </tr> </tbody> </table>	Value	Measuring distance	228 W/m ²	50 mm	116 W/m ²	75 mm	73,6 W/m ²	100 mm	22,8 W/m ²	200 mm	12,6 W/m ²	300 mm	8,2 W/m ²	400 mm	5,5 W/m ²	600 mm
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<ul style="list-style-type: none"> • 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	<table border="1"> <thead> <tr> <th>Symbol</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>V+</td> <td>V+</td> </tr> <tr> <td>GND</td> <td>Ground</td> </tr> <tr> <td>NTC</td> <td>NTC sensor</td> </tr> <tr> <td>NTC_GND</td> <td>NTC ground</td> </tr> </tbody> </table>	Symbol	Function	V+	V+	GND	Ground	NTC	NTC sensor	NTC_GND	NTC ground						
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NTC parameters	Resistance: 5000 Ohm Beta value: 3950																
Environmental																	

Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 68

Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results



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