

# Datasheet

## **LuxaLight Industrial LED Fixture Transparent cover Near Infrared 860nm 24.2x16mm (24 Volt, 2835, IP64)**

**LF-24-860-24.2X16-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 an **860nm 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 control, and more.

The fixture is constructed with a robust **aluminum housing**, ensuring efficient heat dissipation and long-lasting performance. The **transparent cover** provides protection against dust and moisture (IP64), making the fixture safe and operational in various environments.

### Key Features:

- **860nm Near-Infrared (NIR) Wavelength:** The **860nm wavelength** is ideal for industrial applications requiring **near-infrared light**, enhancing processes like material curing, photochemical reactions, and quality control.
- **Aluminum Fixture:** The durable aluminum housing ensures optimal heat dissipation, contributing to stable and long-term operation.
- **Transparent Cover (IP64):** The fixture is equipped with a transparent cover that offers protection against dust and moisture (IP64). This makes it suitable for industrial applications where exposure to environmental factors may occur, but full 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), significantly increasing the 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:** **860nm near-infrared light** is widely used in the curing process of coatings, adhesives, and materials that respond to infrared radiation, accelerating the curing process in production environments.
- **Photochemical Processes:** The **860nm wavelength** can be used in industrial and scientific environments where specific photochemical reactions are required. It speeds up reactions in laboratories or production lines.
- **Quality Control & Inspection:** **860nm NIR** is ideal for inspecting materials or products for defects or irregularities in industrial settings, enhancing quality control.
- **Food Processing & Sterilization:** The fixture is used in food production for sterilization and pasteurization, improving food safety and processing efficiency through consistent near-infrared radiation.
- **Non-UV Material Curing & Drying:** The **860nm 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.
- **Natural & Artificial Drying:** The **860nm wavelength** helps dry a wide range of materials, such as paper, textiles, and wood, by accelerating moisture evaporation without damaging the product.
- **Metal & Material Processing:** **860nm NIR** is applied to enhance the properties of coatings or accelerate the curing of certain materials, improving processing times in manufacturing.

### 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 boosting productivity in industrial applications.
- **Real-Time Temperature Monitoring for Consistent Performance:** Continuous temperature monitoring with the NTC sensor ensures the fixture stays within the optimal temperature range, preventing overheating and maintaining consistent performance.
- **Durability in Industrial Environments:** The **aluminum housing** provides excellent durability and heat dissipation, while the **transparent cover (IP64)** offers reliable protection against dust and moisture in various industrial environments.
- **Efficiency and Reliability:** The fixture is designed for efficient and reliable performance, making it ideal for industrial applications that require continuous operation, such as curing, drying, and quality control.

## 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	860 nm
Beam angle	120 °

### Measurement results

Irradiance	Value	Measuring distance
	375 W/m <sup>2</sup>	50 mm
	204 W/m <sup>2</sup>	75 mm
	131 W/m <sup>2</sup>	100 mm
	40,8 W/m <sup>2</sup>	200 mm
	19,7 W/m <sup>2</sup>	300 mm
	12,4 W/m <sup>2</sup>	400 mm
	8,2 W/m <sup>2</sup>	600 mm

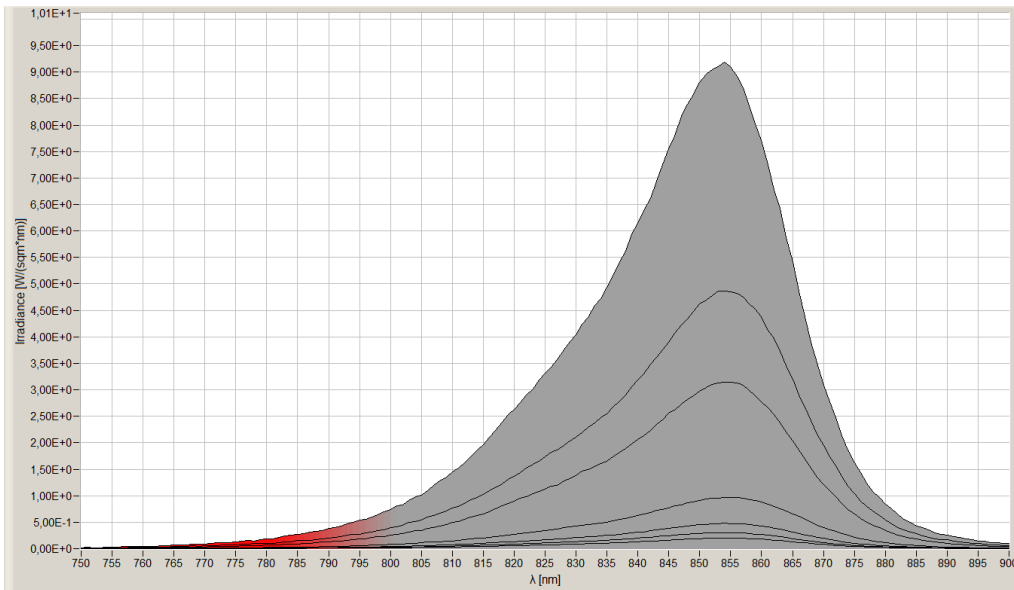
- By combining Pulse Mode with Real-Time Monitoring, the efficiency of LED systems can be increased, resulting in higher output.
- We have the expertise and equipment to perform measurements tailored to the specific requirements of the application.

### 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
<b>Environmental</b>	
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64
<b>Directives - standards - certificates</b>	
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

## Measurement results



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