# Datasheet

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

### LF-24-860-24.2X16-TC

**Version: 2025-07-10.2**

LuxaLight B.V.
Hastelweg 260B
5652 CN Eindhoven
Nederland

KvK-nummer: 57580561
BTW-nummer: NL852642209B01
IBAN: NL87 INGB 0007 8159 75
BIC/SWIFT code: INGBNL2A

Email: info@luxalight.eu
Website: www.luxalight.eu
Tel.: +31 (0)40 - 202 49 04

## 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<br>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**

Peak wavelength
(Object size: 1 piece)

852 nm

Peak irradiance
(Object size: 1 piece)

| | 24V |
|---|---|
| **5cm** | 8.03401 W/sqm |
| **10cm** | 3.29765 W/sqm |
| **15cm** | 1.6601 W/sqm |
| **20cm** | 1.00985 W/sqm |
| **25cm** | 0.675721 W/sqm |
| **30cm** | 0.502538 W/sqm |

Total irradiance
(Object size: 1 piece)

| | 24V |
|---|---|
| **5cm** | 345.3 W/sqm |
| **10cm** | 139 W/sqm |
| **15cm** | 70.86 W/sqm |
| **20cm** | 43.26 W/sqm |
| **25cm** | 28.72 W/sqm |
| **30cm** | 21.44 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<br>Beta value: 3950 |

## Environmental

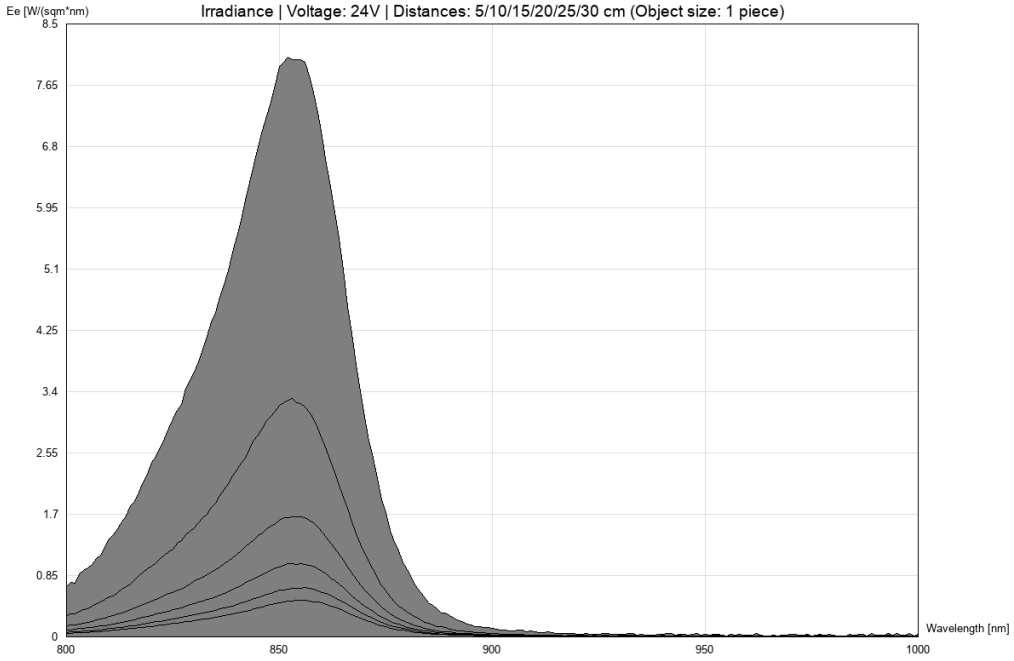
| | |
|---|---|
| Operating temperature | -20 ~ +60 °C |
| Storage temperature | -40 ~ +80 °C |
| IP class | IP 64 |

## Directives - standards - certificates

| | |
|---|---|
| Directives | RoHS<br>CE |
| Safety standards | EN60598-1<br>EN62031<br>IEC62471 |

# Measurement results

## irradiance - 800-nir (24V)



## cie1931