Datasheet

LuxaLight Industrial LED Fixture Transparent IP68 Near Infrared 860nm 24.2x16mm (24 Volt, 2835, IP68)

LF-24-860-24.2x16-PU

Version: 2025-07-11.3

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, such as material curing, biological research, and more. With a **860nm near-infrared (NIR)** wavelength, this LED fixture provides a reliable and efficient solution for processes that benefit from **near-infrared (NIR)** light, such as deep tissue therapy, pain relief, and more.

Key Features:

- **860nm Near-Infrared (NIR) Wavelength:** The **860nm near-infrared wavelength** is ideal for applications requiring **near-infrared light**, which is used for deeper tissue penetration. It is particularly beneficial for applications such as pain management, muscle recovery, wound healing, skin therapy, and industrial processes.
- **Aluminum Fixture:** The durable aluminum housing ensures excellent heat dissipation, contributing to the long-term efficiency and stability of the LED fixture.
- **Transparent PU Coating:** The fixture is fully encapsulated in a transparent polyurethane (PU) coating, providing exceptional protection against moisture, dust, and other environmental factors. The transparent coating ensures optimal light transmission while protecting the internal components.
- **IP68 Water Resistance:** The PU coating ensures the fixture is water-resistant 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 fixture's high mechanical strength of IK10 ensures it is highly resistant to physical impact, making it ideal for industrial environments that require rugged 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), significantly increasing radiation intensity. This feature enables faster reactions and improved efficiency in industrial processes.
- **Real-Time Temperature Monitoring via NTC Sensor:** The integrated NTC sensor provides 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 & Scientific Applications:

- **Material Curing & Drying: 860nm near-infrared light** is used in industrial applications for curing coatings, adhesives, and materials that react to infrared radiation. It accelerates the hardening process, improving efficiency in manufacturing and production environments.
- **Photochemical Processes:** The **860nm wavelength** can be used in scientific and industrial settings where specific photochemical reactions are required. It can enhance the speed of reactions in laboratories or industrial settings, leading to increased efficiency.
- **Food Processing & Sterilization:** The **860nm wavelength** is useful in food production and processing, particularly in sterilization and pasteurization processes. Its deep penetration into materials helps ensure even processing and sterilization.
- **Non-UV Industrial Applications:** The **860nm near-infrared light** can be employed in industries requiring non-UV radiation for materials that respond to this specific wavelength. This is useful in processes such as plastics molding, metal treatment, and other industrial curing applications.
- **Scientific Research: 860nm NIR light** plays a role in biological and chemical research, assisting in studying the properties of materials and substances that absorb infrared radiation, enhancing the accuracy of experimental results.

Benefits:

- **High Radiation Intensity:** The ability to pulse with the MaNima Pollux Industry System allows for a significant increase in radiation intensity, leading to faster reactions and higher productivity in industrial and therapeutic applications.
- **Real-Time Temperature Monitoring for Consistent Performance:** The NTC sensor, combined with the MaNima Pollux Industry System, ensures continuous temperature monitoring, helping to maintain optimal operating conditions and prevent overheating, extending the lifespan of the LED and improving efficiency.
- **Superior Environmental Protection:** The fully encapsulated PU coating ensures the fixture is IP68 water-resistant, making it suitable for use in wet and outdoor environments. It also provides IK10 impact resistance, making it ideal for rugged industrial and medical applications.
- **Industrial Durability:** The aluminum housing offers durability and excellent heat dissipation, while the PU coating protects 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	860nm
Beam angle	120 °

Measurement results	
Peak wavelength (Object size: 1 piece)	800 nm

Peak irradiance
(Object size: 1 piece)

	24V
5cm	0.882438 W/sqm
10cm	0.286063 W/sqm
15cm	0.133812 W/sqm
20cm	0.0798842 W/sqm
25cm	0.0520333 W/sqm
30cm	0.0368467 W/sqm

Total irradiance
(Object size: 1 piece)

	24V
5cm	441 W/sqm
10cm	138.8 W/sqm
15cm	66.22 W/sqm
20cm	39.09 W/sqm
25cm	25.17 W/sqm
30cm	18.35 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

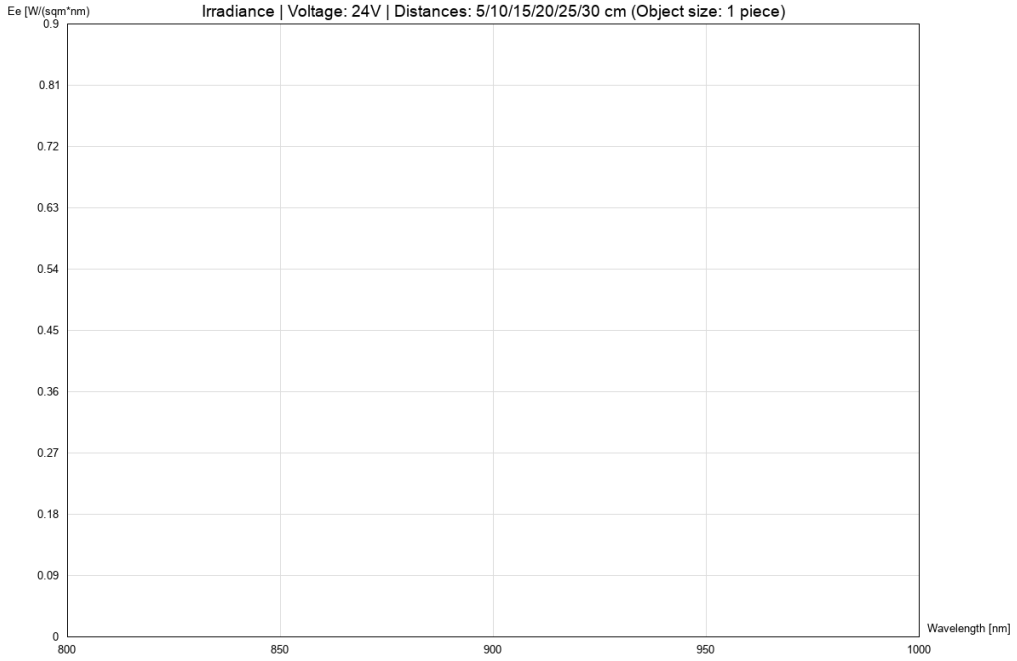
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 68

Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 800-nir (24V)



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

cie1931