

Datasheet

LuxaLight Industrial LED Fixture Transparent IP68 Far Red 735nm 24.2x16mm (24 Volt, 2835, IP68)

LF-24-735-24.2x16-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, such as material curing, biological research, and more. With a **735nm** deep red wavelength, this LED fixture provides a reliable and efficient solution for processes that benefit from deep red light, such as plant growth stimulation, tissue regeneration, and more.

Key Features:

- **735nm Deep Red Wavelength:** The 735nm wavelength is ideal for applications requiring deep red light, such as horticulture, biological research, and specific industrial processes. It helps promote plant growth, tissue regeneration, and therapeutic applications.
- **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 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.

Applications:

- **Horticulture & Agriculture:** The **735nm** wavelength is highly effective in promoting plant growth, especially in encouraging blooming and fruiting. This makes it ideal for use in greenhouses and other agricultural applications where plant health and growth are critical.
- **Biological Research:** In scientific and medical applications, **735nm** light can be used for processes such as promoting tissue regeneration, cell cultivation, and photobiomodulation therapy (PBM), which can aid in pain relief and wound healing.
- **Medical Therapy:** **735nm** deep red light is used in phototherapy treatments for skin healing, anti-aging treatments, and muscle recovery, stimulating cells and tissues with the benefits of red light.
- **Food Industry:** The **735nm** wavelength can be used for applications such as stimulating growth in food production environments or in the pasteurization process of certain foods.
- **Industrial Material Curing (Non-UV):** The deep red light is used for curing coatings and materials that react to red wavelengths, ensuring effective and rapid curing processes in industrial settings.
- **Cosmetic Industry:** The fixture is ideal for applications in the cosmetic industry, where red light is used for skin treatments such as reducing wrinkles, improving skin tone, and promoting collagen production.

Benefits:

- **High Radiation Intensity:** The ability to pulse with the MaNima Pollux Industry System allows for a significant increase in radiation intensity, resulting in faster reactions and higher productivity.
- **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. This extends the lifespan of the LED and enhances efficiency.
- **Superior Environmental Protection:** The fully encapsulated PU coating ensures the fixture is IP68 water-resistant, making it suitable for outdoor and wet environments. It also provides IK10 impact resistance, ensuring the fixture can withstand harsh industrial conditions.
- **Industrial Durability:** The aluminum housing provides durability and excellent heat dissipation, while the PU coating protects against moisture, dust, and other environmental factors, making the fixture ideal for harsh industrial environments.

Technical specifications

General

Brand	LuxaLight
Application	Barcode Scanning 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	735nm
Beam angle	120 °

Measurement results

PPFD	Value	Measuring distance
	1662 µmol/m ²	50 mm
874 µmol/m ²	75 mm	
541 µmol/m ²	100 mm	
180 µmol/m ²	200 mm	
88 µmol/m ²	300 mm	
61 µmol/m ²	400 mm	
42 µmol/m ²	600 mm	

Irradiance	Value	Measuring distance
	331 W/m ²	50 mm
173,9 W/m ²	75 mm	
108,1 W/m ²	100 mm	
36,8 W/m ²	200 mm	
17,3 W/m ²	300 mm	
11,8 W/m ²	400 mm	
8,1 W/m ²	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

Environmental

Operating temperature -20 ~ +60 °C

Storage temperature -40 ~ +80 °C

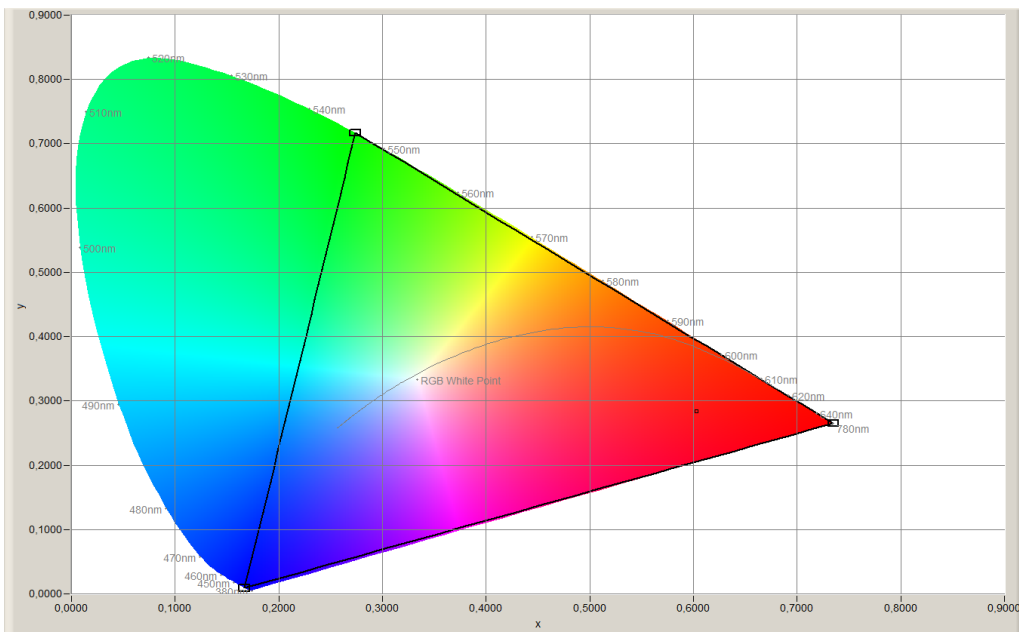
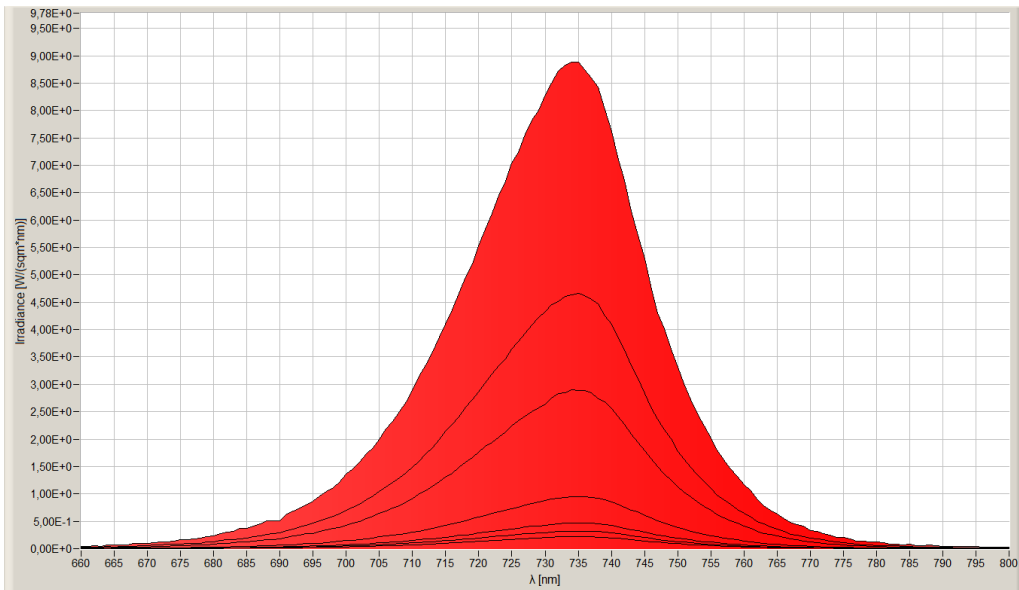
IP class IP 68

Directives - standards - certificates

Directives RoHS
 CE

Safety standards EN60598-1
 EN62031
 IEC62471

Measurement results



While LuxaLight has made every reasonable effort to ensure the accuracy of the information in this brochure, LuxaLight does not guarantee that it is error - free, nor does LuxaLight make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. LuxaLight reserves the right to make any adjustments to the information contained herein at any time without notice. LuxaLight expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalogue are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult LuxaLight for the latest dimensions and design specifications.