Datasheet

LuxaLight Industrial LED Fixture Opaline cover Deep Red 660nm 24.2x16mm (24 Volt, 2835, IP64)

LF-24-660-24.2X16-OC

Version: 2025-07-10.2

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Product description

Industrial installations are often exposed to extreme environmental conditions, such as low and high temperatures. In environments where temperatures range from, for example, -25°C to +40°C or even higher, it is essential to closely monitor the temperature of the 660 nm LED installation. The 660 nm LED engines, specifically designed for applications that require precise light production in the red spectrum, are equipped with a standard modular aluminum heatsink. This heatsink allows for flexibility in both the length and mounting options, as well as the cover design, making it customizable to suit various industrial applications. This modular design ensures that the installation can be optimized to meet the specific needs of each application. It is crucial to keep the operating temperature of these LED engines within safe limits to ensure optimal performance and prevent overheating.

The 660 nm LED engine finds application in several industries and technologies. For example, in the medical field, it is used for applications such as phototherapy, where 660 nm light can contribute to wound healing and pain relief. It is also used in agriculture, for plant lighting and stimulating plant growth, where the specific wavelength of 660 nm can effectively contribute to the photosynthesis process. In the industrial sector, 660 nm light is also used for marking, inspection, and photodetection, where it enhances the contrast between materials for better visibility.

The LED engines are equipped with an NTC sensor (Negative Temperature Coefficient), which measures the temperature of the LED in real time. These sensors ensure that the LED engine functions correctly, even under extreme environmental conditions. When the temperature is too high or too low, it can negatively affect the performance of the LED engine and shorten its lifespan.

In combination with the MaNima Pollux industrial driver, the NTC sensor can provide real-time data, allowing the system to immediately respond to temperature changes. The Pollux driver is capable of monitoring the temperature of both the 660 nm LED engine and the housing. Based on these measured temperature values, the Pollux driver can automatically reduce the maximum output voltage and/or current, ensuring the LED engine always stays within safe operating temperatures. This prevents overheating, which would be harmful to the LED and its performance.

Thanks to the integration of 660 nm LED engines and the MaNima Pollux driver, industrial applications can now rely on reliable temperature management. This provides the necessary protection against overheating, extends the lifespan of the LED installations, and ensures that the performance of the LED remains consistent even in environments with extreme temperature fluctuations.

Thus, the MaNima Pollux driver ensures that the 660 nm LED engines always operate within optimal temperature limits, which is essential for applications that depend on precise LED radiation in the red spectrum for medical treatments, plant lighting, industrial inspection, or other light technology processes. By regulating output current and voltage based on real-time temperature measurements, companies can improve both the reliability and energy efficiency of their LED systems.

In combination with the **MaNima Pollux Industry**, it is possible to significantly increase the output of the LED Fixture. For more information about the MaNima System **click here**.

The LuxaLight Industrial LED Fixture Transparent cover Deep Red 660nm is a **modular product**, which setup can be configured. Go to: **LuxaLight industrial LED Fixtures** for more information.

If a higher impact or water resistance is required, it is possible to have this product **moulded**. For more information about LED moulding, **click here**.

For more information about LED solutions in the industry see: Horticulture, Machine Vision, Curing, Disinfection, Signalling en Traffic Systems.

Underneath a table with the different possible lengths and finishes for this fixture.

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	PMMA opal
LEDs per piece	108.00

Measurement results

Illuminance (Lux)
(Object size: 1 piece)

	24V
5cm	26980 lx
10cm	10420 lx
15cm	5294 lx
20cm	3242 lx
25cm	2179 lx
30cm	1653 lx

Total PPFD umol/m2 (PAR 400-700nm)
(Object size: 1 piece)

	24V
5cm	2485.19 umol/m2
10cm	928.214 umol/m2
15cm	473.499 umol/m2
20cm	295.018 umol/m2
25cm	198.704 umol/m2
30cm	150.551 umol/m2

Peak wavelength
(Object size: 1 piece)

662 nm

• 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

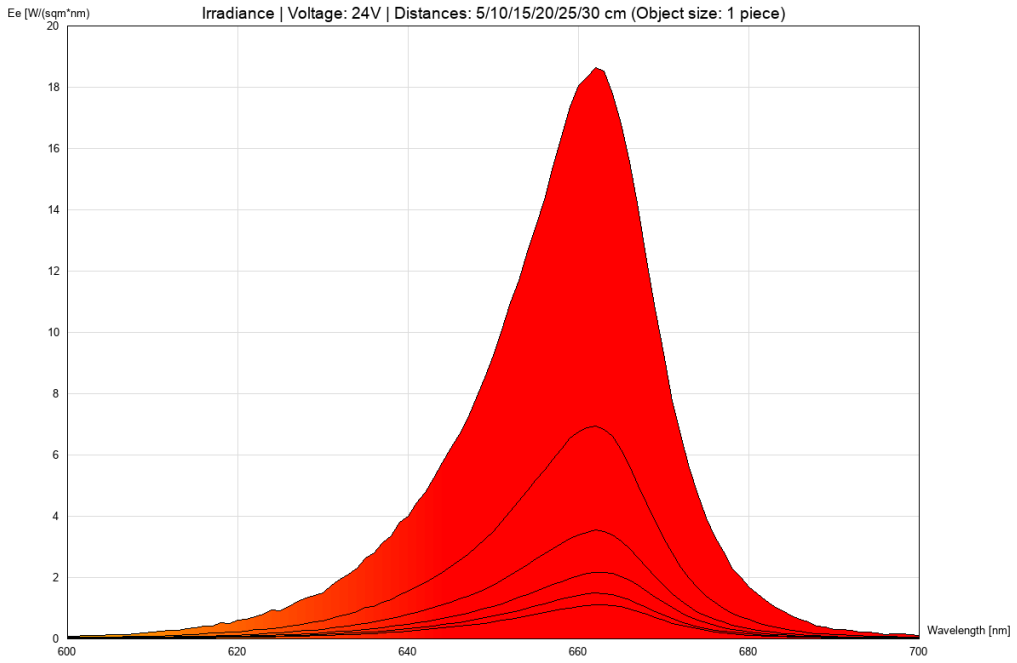
Pinout

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
Directives - standards - certificates	
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 600-700-red (24V)



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