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

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 <u>click here</u>.

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, <u>click here</u>.

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

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

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

Technical specifications

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GND Ground NTC NTC sensor	Pinout	Symbol	Function		
NTC NTC sensor		V+	V+		
		GND	Ground		
NTC_GND NTC ground		NTC	NTC sensor		
		NTC_GND	NTC ground		

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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	

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Measurement results

irradiance - 600-700-red (24V)



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