

Datasheet

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

LF-24-660-24.2X16-OC

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Product description

The **LuxaLight Industrial LED Fixture Opaline Cover Deep Red 660 nm** is a robust industrial fixture built into a 24.2 × 16 mm aluminum profile with a **PMMA opaline cover**. The opaline optic ensures **diffuse, uniform deep red illumination**, making it suitable for industrial processes where controlled, glare-free light is essential. With **IP64 protection, 24 V DC (~30 W)**, and an integrated **NTC sensor**, it is optimized for indoor and sheltered industrial applications. Integration with the **MaNima Pollux Industrial System** provides pulsing control, real-time temperature monitoring, and automation compatibility.

Key Specifications

Property	Value / Description
Wavelength	660 nm (deep red, chlorophyll absorption peak)
Output	High radiant flux; uniform through opaline cover
Cover	PMMA opaline (diffuse, glare-reduced)
LED Type / Protection	2835 LEDs; IP64 dust- and splashproof
Beam Angle	120° (diffused by opaline cover)
Voltage / Power	24 V DC (~30 W per fixture)
Thermal Monitoring	Integrated NTC sensor, compatible with Pollux
Design	Modular & scalable, 220–3000 mm
Dimensions	24.2 × 16 mm profile fixture
Operating Environment	Indoor/sheltered industrial (–20...+60 °C)

Opaline Cover – Engineering Notes

- **Diffuse deep red output** for uniform coverage without hotspots
- Optimized for **industrial lighting, horticulture, and machine vision**
- **Non-moulded IP64 design** – dust- and splash-resistant, not for immersion
- Aluminum profile ensures **efficient heat dissipation and durability**

Applications

- **Horticulture & Controlled Agriculture** – 660 nm deep red is critical for photosynthesis, boosting flowering and fruiting in vertical farms and greenhouses
- **Photobiomodulation & Medical Devices** – supports therapeutic applications such as skin rejuvenation, wound healing, and biostimulation
- **Industrial Quality Inspection & Machine Vision** – enhances visibility of coatings, pigments, and defects; opaline cover ensures even illumination with minimal glare
- **Material Testing & Photochemical Aging** – enables accelerated aging studies and photochemical activation in industrial and lab setups
- **Medical & Lab Diagnostics** – widely used in diagnostic devices such as oximeters due to absorption at this wavelength

Also applicable in optical bonding and advanced R&D environments.

Benefits for Engineers

- **Uniform deep red output** – smooth, glare-free illumination
- **IP64 protection** – dust- and splash-resistant

- **Modular, scalable design** – lengths up to 3 m available
 - **NTC temperature monitoring** – improves reliability and safety
 - **Automation-ready** – fully compatible with Pollux, PLC, and SCADA
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Integration with MaNima Pollux System

- Real-time NTC temperature monitoring
- Pulsing/strobing for irradiance control
- Thermal overload protection
- PLC/SCADA compatibility
- **Open API (UDP-based)** for automation

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

Lighting

Wave length	660 nm
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Measurement results

Illuminance (Lux)
(Object size: 1 piece)

	24V
5cm	21314.2 lx
10cm	8231.8 lx
15cm	4182.26 lx
20cm	2561.18 lx
25cm	1721.41 lx
30cm	1305.87 lx

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

	24V
5cm	1863.89 umol/m2
10cm	696.16 umol/m2
15cm	355.12 umol/m2
20cm	221.26 umol/m2
25cm	149.03 umol/m2
30cm	112.91 umol/m2

Peak wavelength
(Object size: 1 piece)

662 nm

Peak irradiance
(Object size: 1 piece)

	24V
5cm	13.96 W/sqm
10cm	5.19 W/sqm
15cm	2.64 W/sqm
20cm	1.61 W/sqm
25cm	1.1 W/sqm
30cm	0.83 W/sqm

Total irradiance

(Object size: 1 piece)

	24V
5cm	345.98 W/sqm
10cm	134.85 W/sqm
15cm	68.94 W/sqm
20cm	42.73 W/sqm
25cm	28.42 W/sqm
30cm	21.67 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
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Environmental

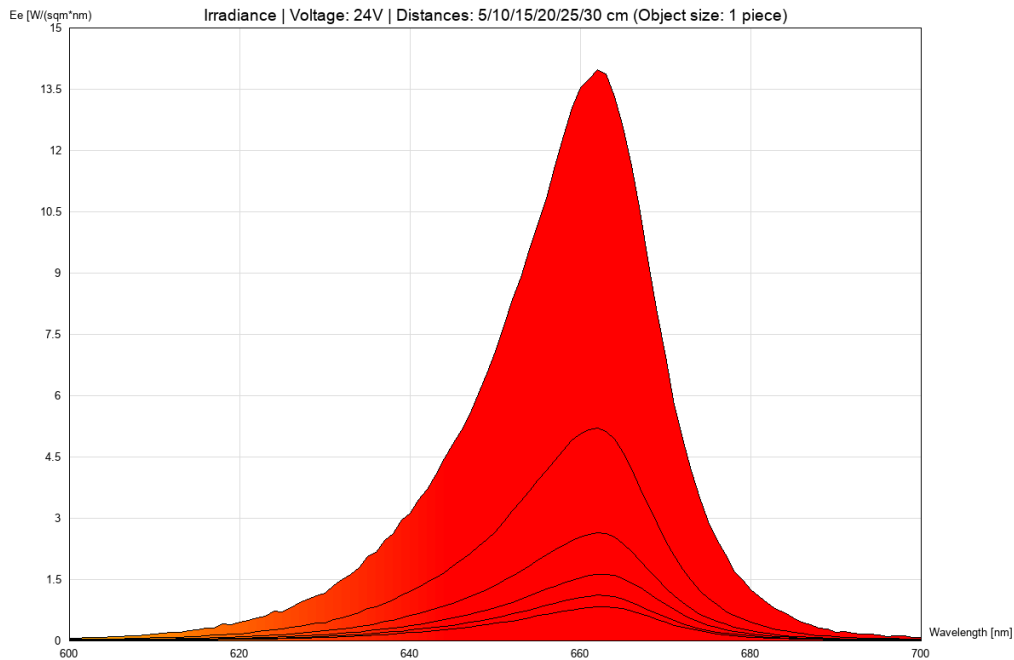
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C

Directives - standards - certificates

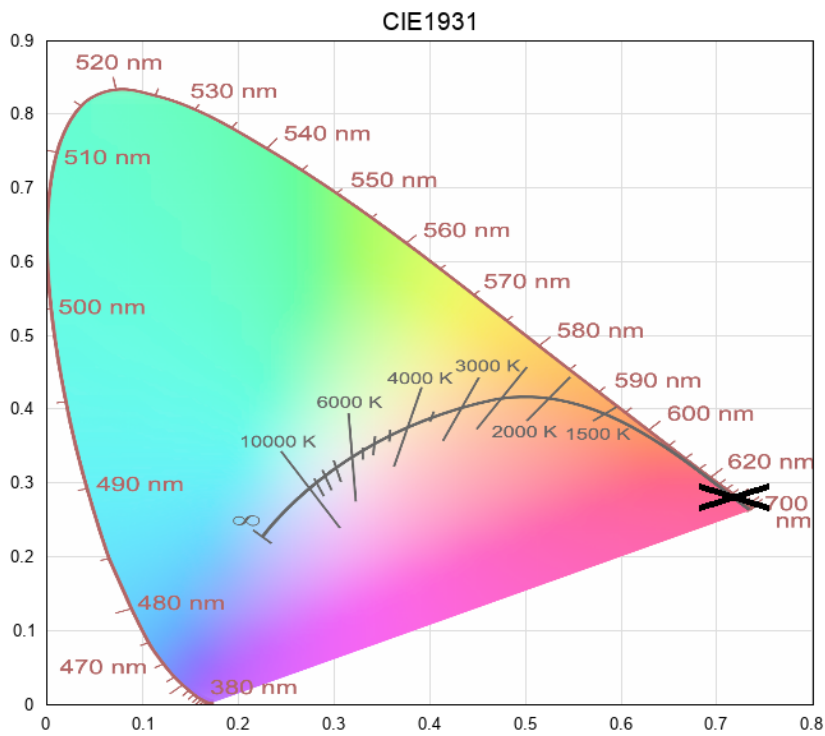
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 600-700-red (24V)



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