

## Datasheet

### **LuxaLight Industrial LED Fixture Transparent IP68 Deep Red 660nm 24.2x16mm (24 Volt, 2835, IP68)**

**LF-24-660-24.2x16-PU**

**Version: 2025-08-26.1**

## Product description

The **LuxaLight Industrial LED Fixture Transparent IP68 Deep Red 660 nm (24.2 × 16 mm, 2835 LEDs)** is a fully encapsulated LED fixture engineered for heavy-duty industrial, agricultural, and medical use. With a **polyurethane moulded housing (IP68)**, it combines powerful deep-red emission with mechanical robustness and long-term reliability. Seamless integration with the **MaNima Pollux Industrial System** ensures controlled, stable output and compatibility with modern automation.

## Key Specifications

Property	Value / Description
Wavelength	660 nm deep red (measured peak ~660 nm)
Illuminance / Output	~54 800 lx @ 5 cm; PPF <sub>D</sub> ~2250 μmol/m <sup>2</sup> /s @ 5 cm
Cover	Fully moulded transparent <b>polyurethane encapsulation</b>
LED Type / Protection	2835 LEDs; IP68 encapsulated (dust- and waterproof)
Beam Angle	120°
Voltage / Power	24 V DC, ~30 W per fixture
Thermal Monitoring	Integrated NTC sensor, controllable via MaNima Pollux
Design	Modular & scalable, 220–3000 mm
Dimensions	24.2 × 16 mm fixture profile
Operating Environment	Outdoor, submerged, industrial, or hygienic settings (–20...+60 °C)

## IP68 Moulded Design – Fully Encapsulated Housing

This fixture is **completely encapsulated in transparent polyurethane**, delivering:

- **IP68 waterproofing** – ready for submerged, humid, and wash-down areas
- **IK10 robustness** – protection against vibration, impact, and mechanical stress
- **Consistent illumination** – glare-free, stable deep-red output through encapsulation
- **Maintenance-free operation** – sealed against dust, moisture, and corrosion
- **Extended service life** – protection from chemicals, humidity, and environmental stress
- **Reliable for extremes** – marine, outdoor, food & pharma, and heavy industry

## Applications

- **Photobiomodulation & Therapy in Harsh Conditions** – deep-red light for tissue regeneration and skin treatment, even in wet or exposed environments
- **Horticulture & Plant Growth** – stimulates flowering and fruiting in humid greenhouses or hydroponic systems
- **Aquaculture & Marine Monitoring** – submerged lighting for aquatic systems and marine biology setups
- **Food & Pharmaceutical Processing** – IP68 design supports use in hygienic zones and wash-down production environments
- **Industrial Machine Vision & Inspection** – red contrast lighting for reflective surfaces in damp, dusty, or chemical facilities
- **Warning & Signal Lighting** – durable red warning or status lighting for outdoor and hazardous areas

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

## Benefits for Engineers

- **IP68 sealed PU housing** – waterproof, dustproof, and hygienic
  - **IK10 impact resistance** – robust against physical stress
  - **Consistent deep-red emission** – uniform and reliable output
  - **Long service life** – resistant to corrosion, moisture, and chemicals
  - **Scalable modular design** – flexible lengths up to 3 meters
  - **Automation-ready** – Pollux, PLC, and SCADA compatible
- 

## Integration with MaNima Pollux Industrial System

- Real-time NTC temperature monitoring
- Pulsing/strobing for enhanced irradiance
- Thermal overload protection for continuous use
- PLC/SCADA compatibility
- **Open API (UDP-based)** for advanced 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	Polyurethane	
LEDs per piece	108.00	
Lighting		
Wave length	660nm	
Beam angle	120 °	
Measurement results		
Illuminance (Lux) (Object size: 1 piece)	<b>24V</b>	
	10cm	12930 lx
	15cm	6369 lx
	20cm	3812 lx
	25cm	2521 lx
	30cm	1850 lx
Total PPFd umol/m2 (PAR 400-700nm) (Object size: 1 piece)	<b>24V</b>	
	10cm	1103.44 umol/m2
	15cm	538.733 umol/m2
	20cm	324.594 umol/m2
	25cm	214.236 umol/m2
	30cm	157.834 umol/m2
Peak wavelength (Object size: 1 piece)	661 nm	
	<ul style="list-style-type: none"> <li>• By combining Pulse Mode with Real-Time Monitoring, the efficiency of LED systems can be increased, resulting in higher output.</li> <li>• We have the expertise and equipment to perform measurements tailored to the specific requirements of the application.</li> </ul>	
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
----------------	--

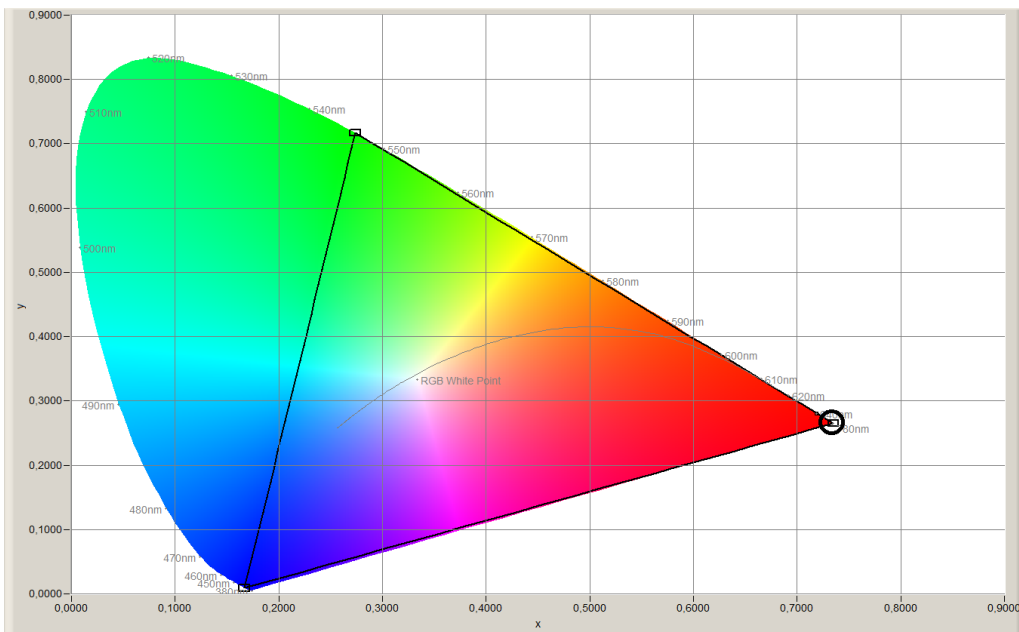
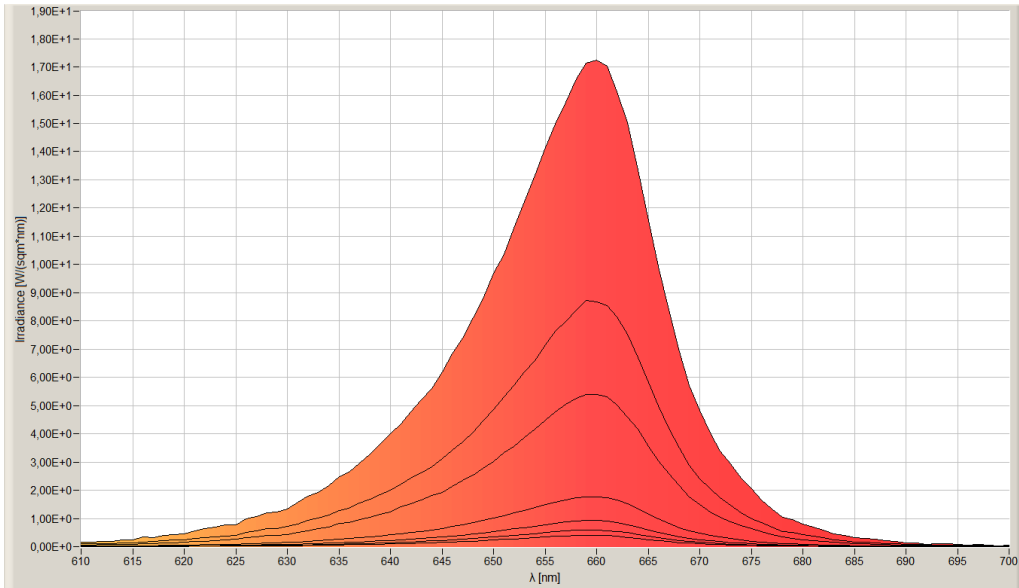
**Environmental**

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

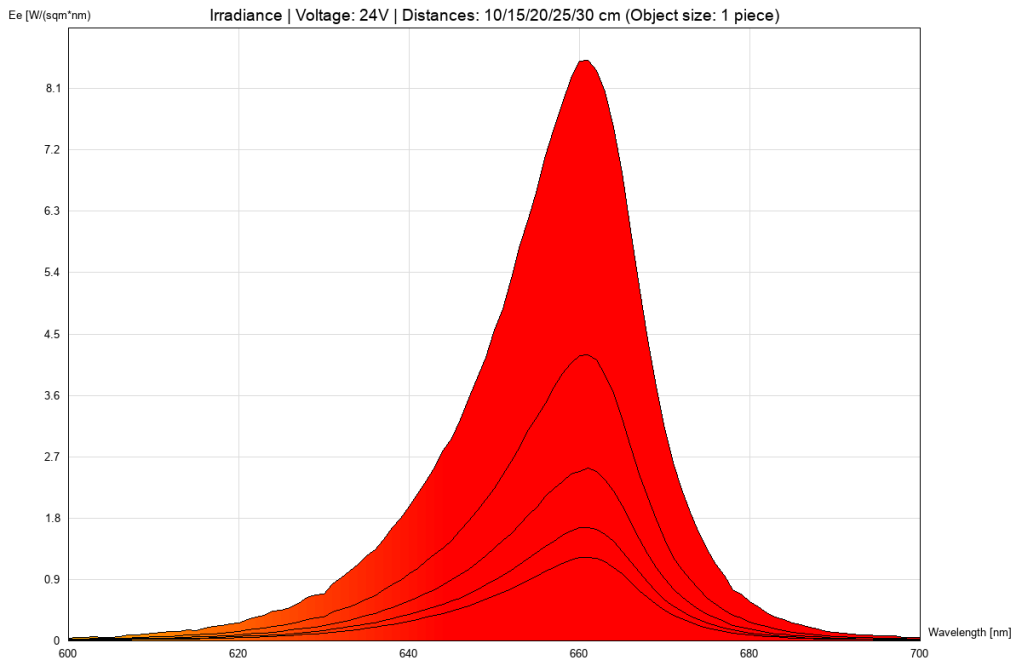
**Directives - standards - certificates**

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

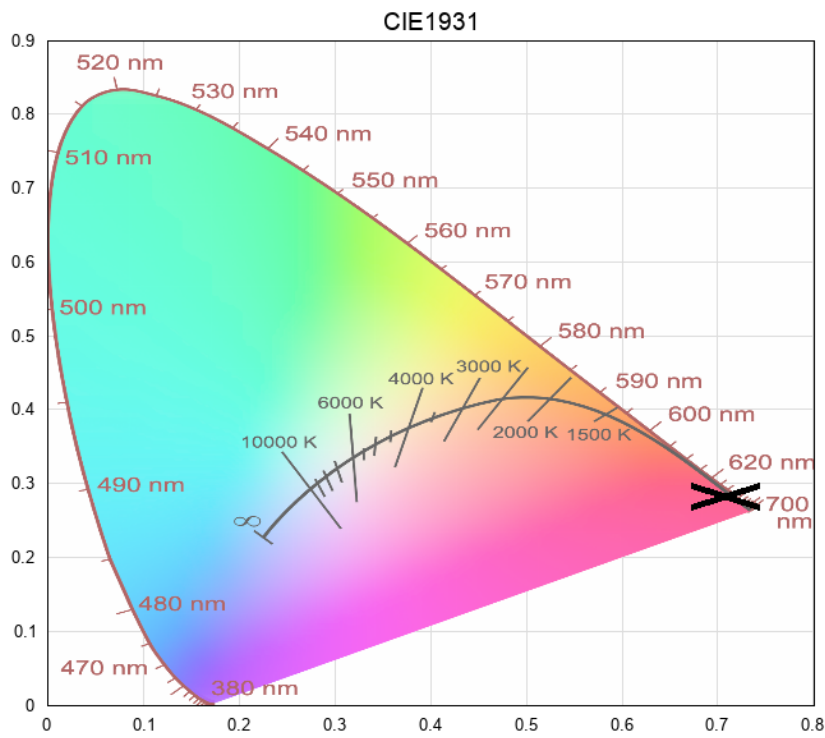
## Measurement results



**irradiance - 600-700-red (24V)**



**cie1931**



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.