

Datasheet

LuxaLight Industrial LED Fixture Transparent IP68 Neutral White Full Spectrum 4800K 24.2x16mm (24 Volt, 2835, IP68)

LF-24-4800K-24.2X16-PU

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Product description

The **LuxaLight Industrial LED Fixture Transparent IP68 Neutral White Full Spectrum (4800 K)** is a fully encapsulated, polyurethane-moulded LED fixture built for demanding industrial environments. Its **IP68-rated housing** and **IK10 impact resistance** ensure waterproof, dustproof, and shock-resistant performance. The balanced neutral-white spectrum, combining 4200 K and 5700 K LEDs, delivers high PAR output and excellent color rendering. This makes it ideal for industrial horticulture, inspection, and hygienic production zones. Seamless integration with the **MaNima Pollux Industrial System** enables precision control, real-time thermal monitoring, and automation readiness.

Key Specifications

Property	Value / Description
Color Temperature	4800 K neutral white (combination of 4200 K & 5700 K LEDs)
PAR Output	~4328 µmol/m²/s @ 5 cm
Cover	Fully moulded transparent polyurethane encapsulation
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	Industrial, submerged, hygienic zones, marine (–20...+60 °C)

IP68 Moulded Design – Fully Encapsulated Housing

- **IP68 waterproofing** – suitable for submerged and wash-down industrial environments
- **IK10 robustness** – resistant to vibration, impact, and mechanical stress
- **Stable neutral-white output** – high CRI for consistent and accurate illumination
- **Maintenance-free** – sealed against dust, moisture, and chemical exposure
- **Extended durability** – electronics protected for long-term reliability in food, pharma, horticulture, and marine industries
- **Engineered for harsh conditions** – suitable for heavy-duty industrial operations

Applications

- **Industrial Task & Work Lighting** – robust neutral-white illumination for machinery, assembly, and maintenance in dusty, wet, or wash-down areas
- **Horticulture & Vertical Farming** – full-spectrum light with high PAR for reliable plant growth, suitable for high-humidity or continuously cleaned environments
- **Industrial Process & Wash-Down Zones** – IP68 encapsulation ensures hygienic and safe operation in food and pharmaceutical production lines
- **Underwater & Closed-System Installations** – durable fixture for reservoirs, tanks, and submerged process systems
- **Quality Inspection & Machine Vision** – high CRI output provides accurate inspection results under harsh industrial conditions

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

Benefits for Engineers

- **IP68 polyurethane housing** – waterproof, dustproof, maintenance-free
 - **Neutral-white, full-spectrum output** – high PAR and accurate color rendering
 - **Industrial-grade durability** – resistant to impact, corrosion, and harsh environments
 - **Reliable long-term performance** – sealed against dust, moisture, and contaminants
 - **Modular & scalable design** – lengths available up to 3 m
 - **Automation-ready** – fully compatible with Pollux, PLC, and SCADA systems
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Integration with MaNima Pollux Industrial System

- Real-time NTC temperature monitoring
- Pulsing/strobing for controllable irradiance
- Thermal overload protection for continuous operation
- PLC/SCADA integration
- **Open API (UDP-based)** for advanced automation

Technical specifications

General		
Brand	LuxaLight	
Application	Food Inspection (Agro-Food) Hyper - spectral Imaging Line Scan Cameras 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		
Color temperature	4800 K	
Beam angle	120 °	
Measurement results		
CRI (Object size: 1 piece)	93	
CCT (Object size: 1 piece)	4739 K	
Illuminance (Lux) (Object size: 1 piece)		24V
	5cm	279800 lx
	10cm	92910 lx
	15cm	45840 lx
	20cm	27440 lx
	25cm	18040 lx
	30cm	13330 lx
Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)		24V
	5cm	4328.16 umol/m2
	10cm	1442.5 umol/m2
	15cm	712.82 umol/m2
	20cm	426.98 umol/m2
	25cm	280.7 umol/m2
	30cm	207.4 umol/m2
Peak wavelength (Object size: 1 piece)	453 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	5.94 W/sqm
	10cm	2.04 W/sqm
	15cm	1.02 W/sqm
	20cm	0.61 W/sqm
	25cm	0.4 W/sqm
	30cm	0.3 W/sqm

Total irradiance

(Object size: 1 piece)

	24V
5cm	977.8 W/sqm
10cm	326.1 W/sqm
15cm	160.9 W/sqm
20cm	96.27 W/sqm
25cm	63.21 W/sqm
30cm	46.78 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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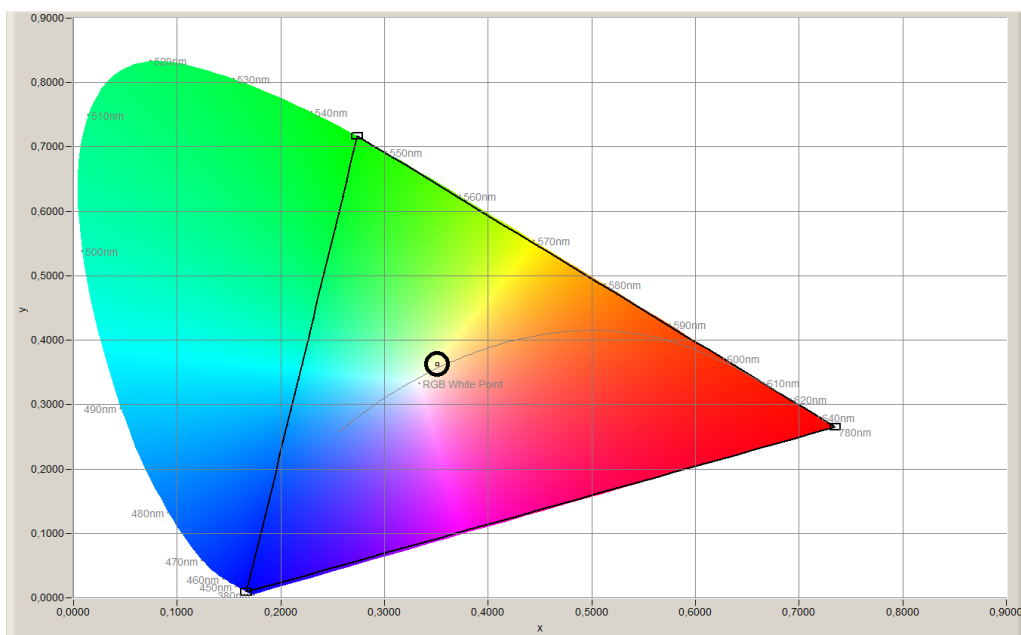
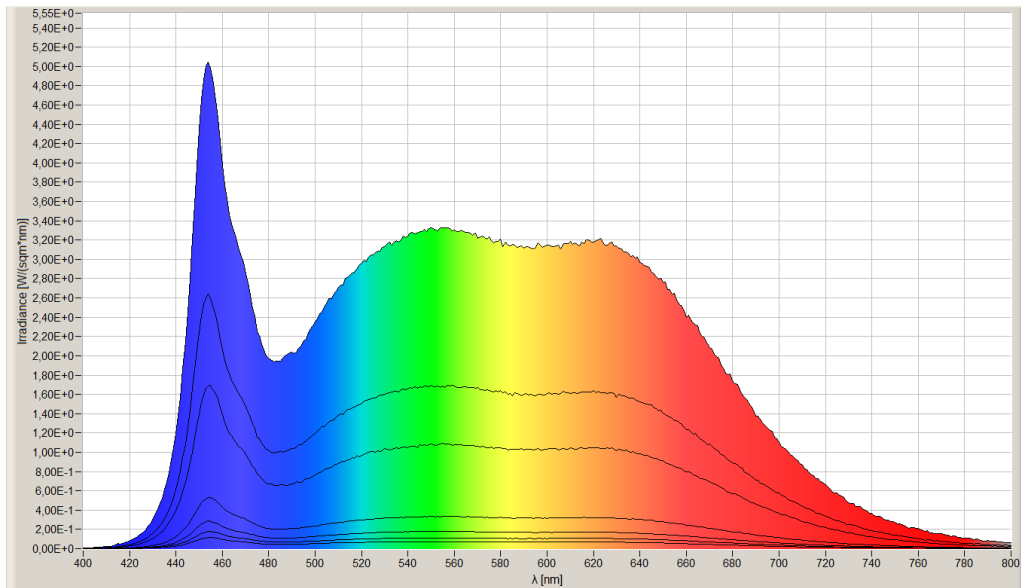
Environmental

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

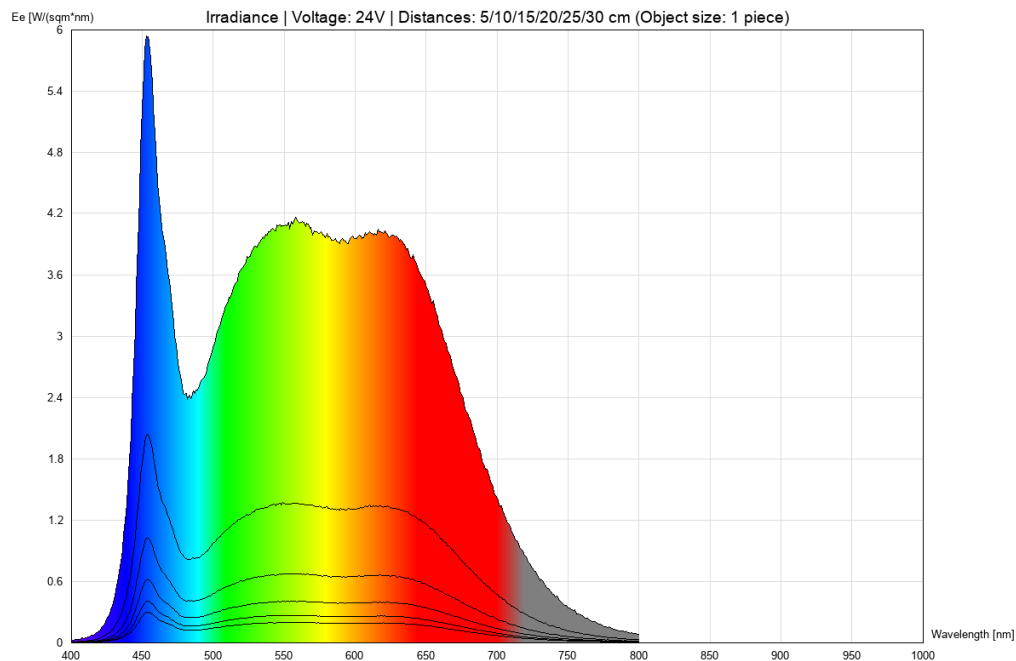
Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

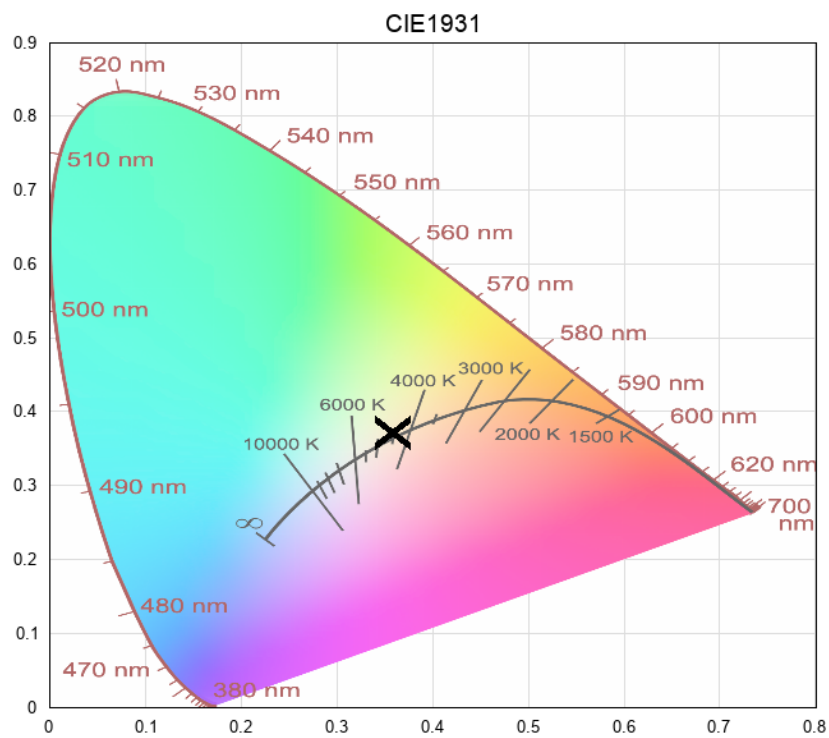
Measurement results



irradiance - full-spectrum (24V)



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