

Datasheet

LuxaLight Industrial LED Fixture Transparent IP68 White Full Spectrum 5700K 24.2x16mm (24 Volt, 2835, IP68)

LF-24-5700K-24.2X16-PU

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Product description

The **LuxaLight Industrial LED Fixture Transparent IP68 White Full Spectrum (5700 K)** is a fully encapsulated, polyurethane-moulded LED fixture designed for industrial precision lighting. With **IP68 waterproofing** and **IK10 mechanical strength**, it is resistant to water, dust, and shocks in the harshest conditions. The 5700 K high-CRI spectrum ensures accurate color rendering and uniform illumination, ideal for inspection, imaging, and hygienic industrial environments. Integration with the **MaNima Pollux Industrial System** provides real-time monitoring, pulsing, and automation compatibility.

Key Specifications

Property	Value / Description
Color Temperature	5700 K white, CRI ≥ 95 (full spectrum)
Output	~191,400 lx @ 5 cm; PAR ~2991 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, hygienic wash-down, submerged, harsh zones (–20...+60 °C)

IP68 Moulded Design – Fully Encapsulated Housing

- **IP68 waterproof** – safe for submerged or hygienic wash-down environments
- **IK10 impact resistance** – withstanding vibration and physical stress
- **High-CRI 5700 K output** – reliable color rendering for inspection and vision systems
- **Maintenance-free** – sealed against dust, moisture, and chemicals
- **Durable construction** – designed for food, pharma, and heavy-duty industrial use
- **Long-term reliability** – polyurethane encapsulation protects electronics from corrosion

Applications

- **Food & Pharmaceutical Inspection** – bright, accurate illumination for defect detection under wash-down conditions
- **Machine Vision & Quality Control** – stable, high-CRI light for automated inspection and recognition systems
- **Hyperspectral & Line Scan Imaging** – precise white light source for high-speed cameras and spectral analysis
- **Industrial Wash-Down & Process Zones** – withstands cleaning cycles in hygienic production areas
- **Underwater & Closed-System Installations** – durable fixture for tanks, reservoirs, and submerged environments

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

Benefits for Engineers

- **IP68 polyurethane housing** – waterproof, dustproof, and maintenance-free
- **5700 K full-spectrum light** – high CRI ensures reliable color accuracy
- **Rugged industrial build** – impact-resistant and corrosion-proof
- **Modular scalability** – available in lengths up to 3 m

- **Automation-ready** – seamless integration with Pollux, PLC, and SCADA systems
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Integration with MaNima Pollux Industrial System

- Real-time NTC temperature monitoring
- Pulsing/strobing for adjustable intensity
- Thermal overload protection for continuous use
- PLC/SCADA compatibility
- **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	5700 K	
Beam angle	120 °	
Measurement results		
CRI (Object size: 1 piece)	93	
CCT (Object size: 1 piece)	6873 K	
Illuminance (Lux) (Object size: 1 piece)		24V
	5cm	203600 lx
	10cm	68830 lx
	15cm	35050 lx
	20cm	21440 lx
	25cm	14260 lx
	30cm	10560 lx
Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)		24V
	5cm	3223.76 umol/m2
	10cm	1090.22 umol/m2
	15cm	555.06 umol/m2
	20cm	339.49 umol/m2
	25cm	225.59 umol/m2
	30cm	167.05 umol/m2
Peak wavelength (Object size: 1 piece)	455 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	6.95 W/sqm
	10cm	2.34 W/sqm
	15cm	1.18 W/sqm
	20cm	0.72 W/sqm
	25cm	0.47 W/sqm
	30cm	0.35 W/sqm

Total irradiance
(Object size: 1 piece)

	24V
5cm	740.6 W/sqm
10cm	250.5 W/sqm
15cm	127.5 W/sqm
20cm	77.55 W/sqm
25cm	51.55 W/sqm
30cm	38.09 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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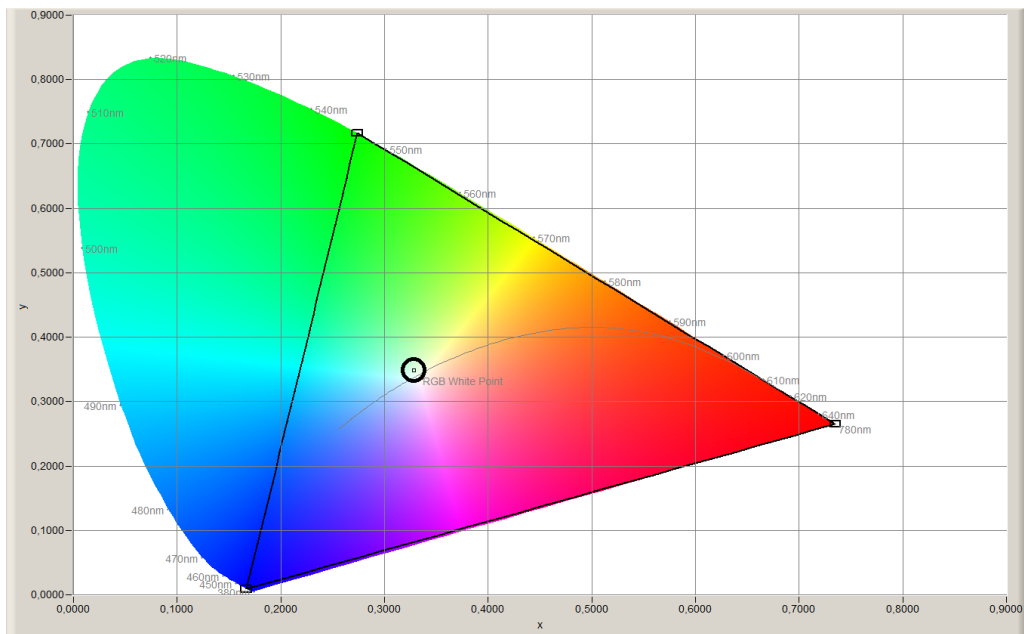
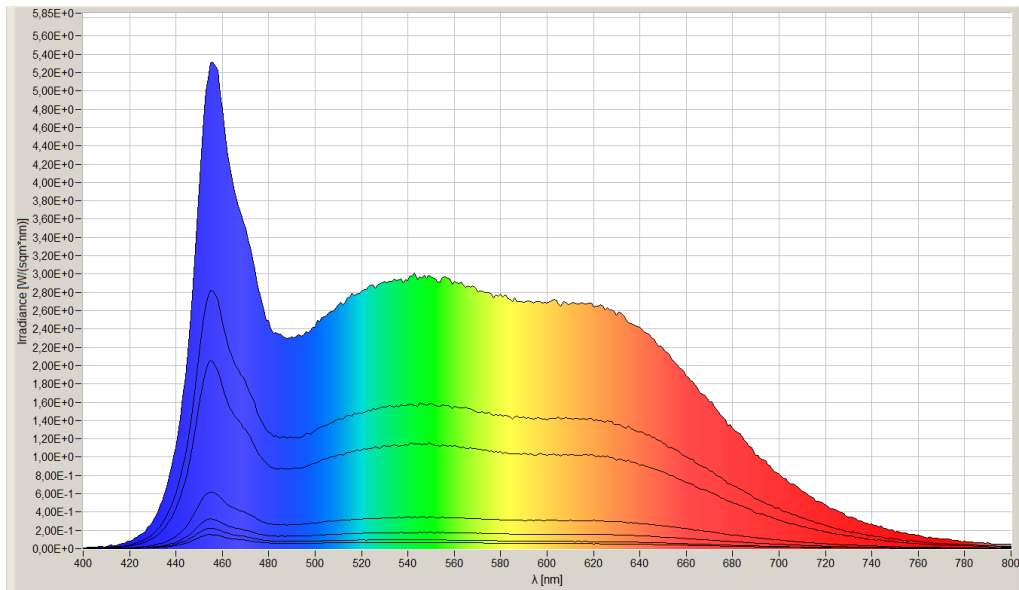
Environmental

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

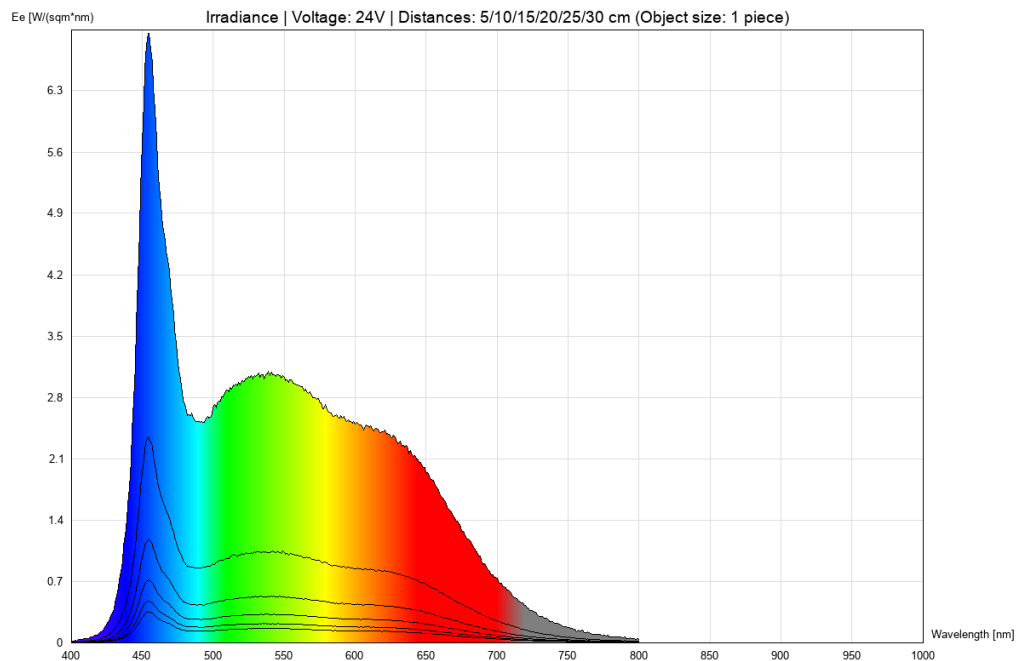
Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

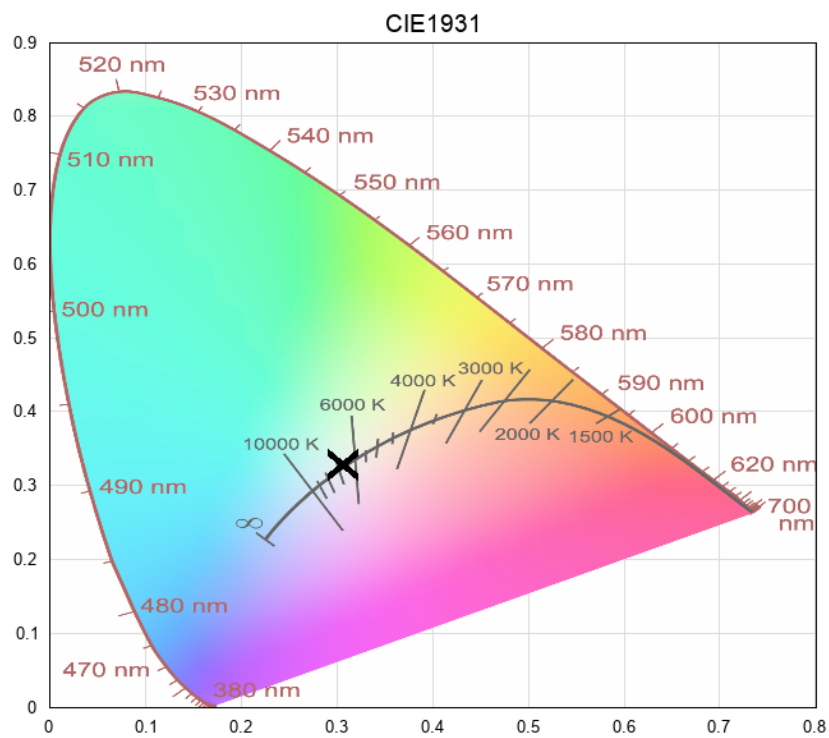
Measurement results



irradiance - full-spectrum (24V)



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