

Datasheet

LuxaLight Industrial LED Fixture Transparent IP68 Neutral White Full Spectrum 4200K 24.2x16mm (24 Volt, 2835, IP68)

LF-24-4200K-24.2X16-PU

Version: 2025-08-26.1

Product description

The **LuxaLight Industrial LED Fixture Transparent IP68 Neutral White (Full Spectrum, 4200K)** is a fully encapsulated, polyurethane-moulded LED fixture designed for the most demanding industrial environments. With **IP68-rated housing** and IK10 robustness, it offers waterproof, dustproof, and impact-resistant performance. The neutral white spectrum delivers excellent color rendering and high PAR flux, making it suitable for horticulture, inspection, and industrial lighting systems. Seamless integration with the **MaNima Pollux Industrial System** provides precision control, thermal protection, and automation compatibility.

Key Specifications

Property	Value / Description
Color Temperature	4200K neutral-white, full spectrum (including peaks at ~450 nm and ~650–675 nm)
PAR Output	~2726 $\mu\text{mol}/\text{m}^2/\text{s}$ @ 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** – safe for submerged and wash-down industrial environments
- **IK10 impact resistance** – protection against vibration, shock, and physical stress
- **Uniform neutral-white output** – consistent light with high CRI for industrial use
- **Maintenance-free operation** – sealed against dust, moisture, and chemical exposure
- **Extended reliability** – designed for heavy-duty applications in food, pharma, and manufacturing
- **Durable design** – polyurethane encapsulation ensures long service life in extreme conditions

Applications

- **Horticulture & Vertical Farming** – full-spectrum light supports photosynthesis and plant growth in humid or wash-down grow systems
- **Industrial Task & Work Lighting** – bright, color-accurate illumination for production lines, machines, and maintenance areas exposed to dust or water
- **Industrial Process & Wash-Down Zones** – IP68 ensures hygienic and safe operation in food and pharmaceutical production facilities
- **Underwater & Closed-System Installations** – robust lighting for tanks, reservoirs, and submerged process systems
- **Quality Inspection & Machine Vision** – high CRI output guarantees accurate visual inspection and reliable machine vision in demanding 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** – accurate color rendering with high PAR performance
 - **Industrial-grade durability** – resistant to vibration, impact, and harsh environments
 - **Reliable long-term performance** – protected against moisture, corrosion, and contaminants
 - **Modular & scalable design** – flexible lengths up to 3 m
 - **Automation-ready** – fully compatible with Pollux, PLC, and SCADA systems
-

Integration with MaNima Pollux Industrial System

- Real-time NTC temperature monitoring
- Pulsing/strobing for controllable irradiance and output
- Thermal overload protection for continuous operation
- 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	4200 K	
Beam angle	120 °	
Measurement results		
CRI (Object size: 1 piece)	91	
CCT (Object size: 1 piece)	4203 K	
Illuminance (Lux) (Object size: 1 piece)		24V
	5cm	291500 lx
	10cm	94720 lx
	15cm	46430 lx
	20cm	27930 lx
	25cm	18430 lx
	30cm	13610 lx
Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)		24V
	5cm	4450.5 umol/m2
	10cm	1447.28 umol/m2
	15cm	710.57 umol/m2
	20cm	427.74 umol/m2
	25cm	282.49 umol/m2
	30cm	208.43 umol/m2
Peak wavelength (Object size: 1 piece)	452 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	5.44 W/sqm
	10cm	1.81 W/sqm
	15cm	0.91 W/sqm
	20cm	0.55 W/sqm
	25cm	0.36 W/sqm
	30cm	0.27 W/sqm

Total irradiance
(Object size: 1 piece)

	24V
5cm	1000 W/sqm
10cm	325.1 W/sqm
15cm	159.6 W/sqm
20cm	95.89 W/sqm
25cm	63.35 W/sqm
30cm	46.68 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
----------------	--

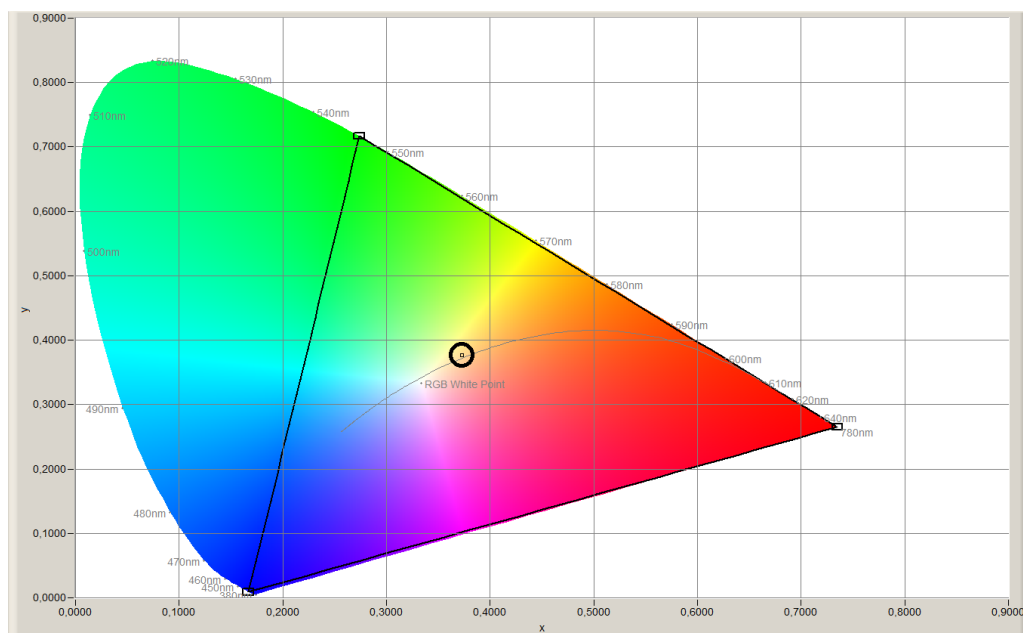
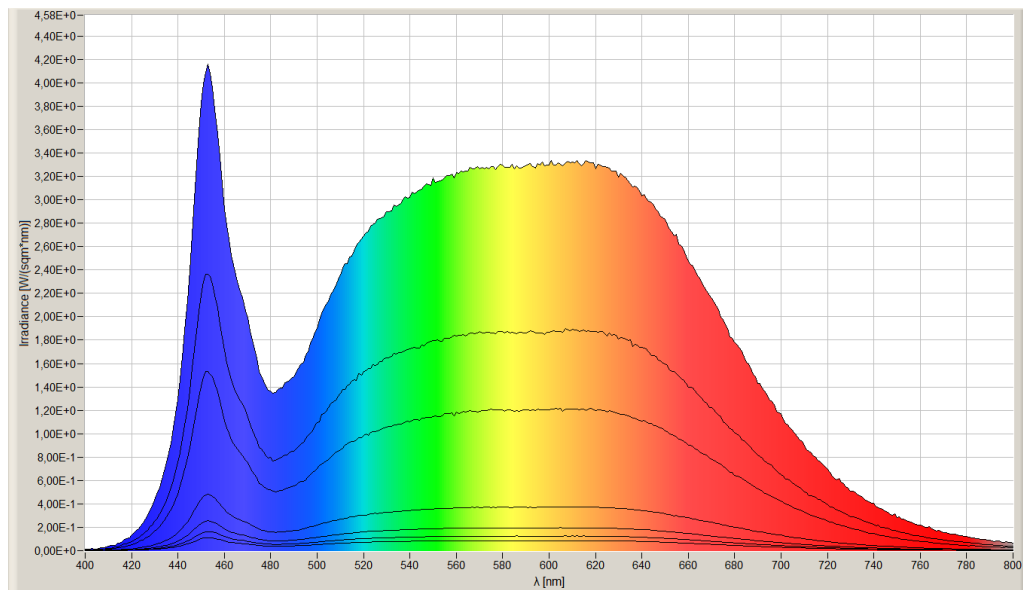
Environmental

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

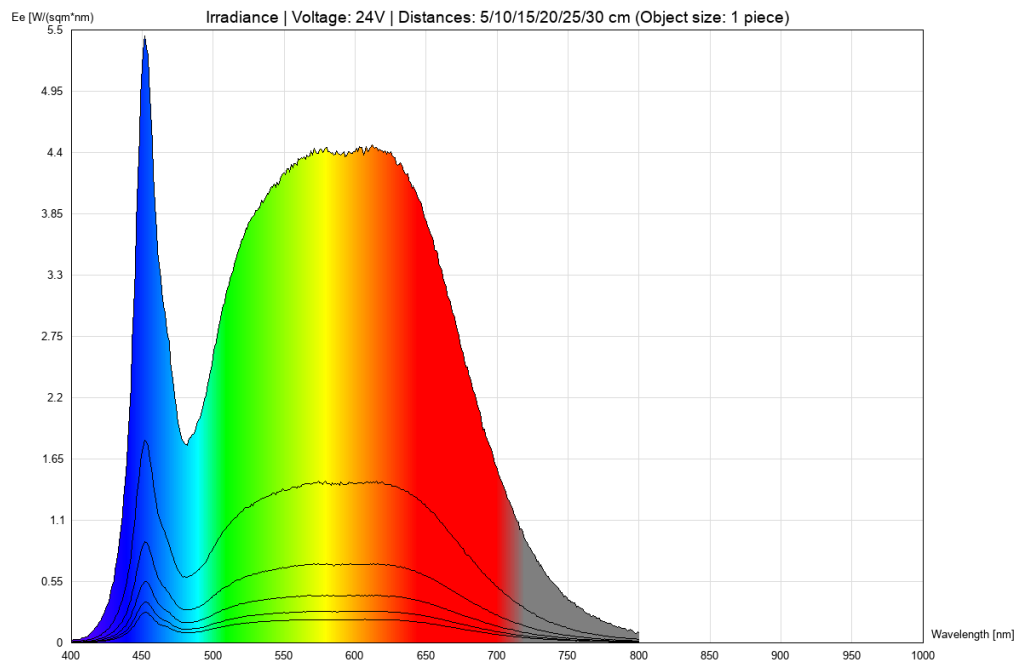
Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

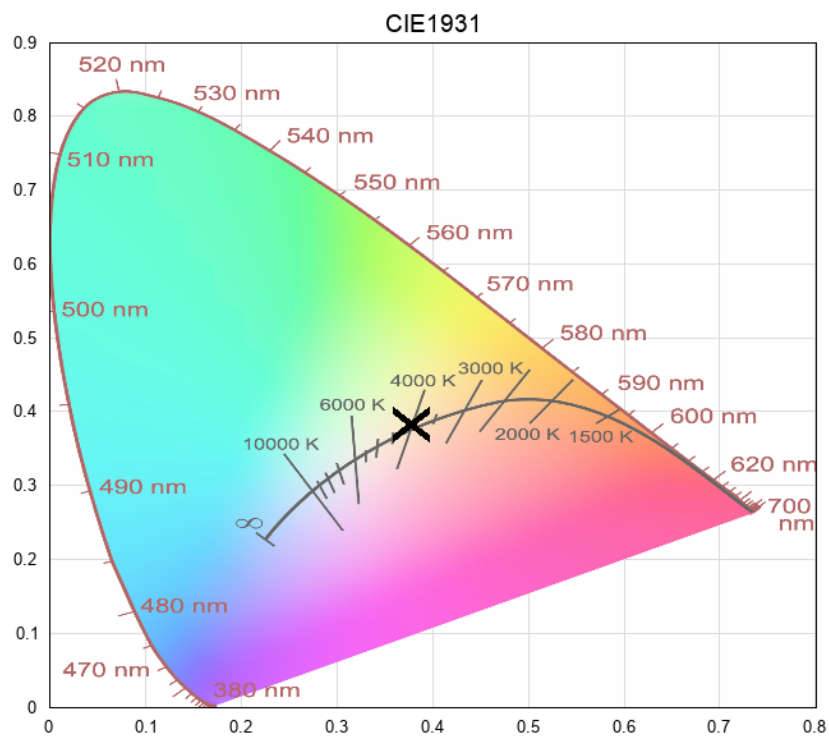
Measurement results



irradiance - full-spectrum (24V)



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.