

Datasheet

LuxaLight Industrial LED Fixture Opaline cover Neutral White 4200k 24.2x16mm (24 Volt, 2835, IP64)

LF-24-4200k-24.2X16-OC

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Product description

The **LuxaLight Industrial LED Fixture Opaline Cover Neutral White 4200 K** is a robust industrial fixture built into a 24.2 × 16 mm aluminum profile with a **PMMA opaline cover**. The opaline diffuser ensures **uniform, glare-free illumination**, ideal for applications requiring reliable, neutral white light. With **IP64 protection, 24 V DC (~30 W)**, and an integrated **NTC sensor**, this fixture is optimized for indoor and sheltered industrial environments. Integration with the **MaNima Pollux Industrial System** provides pulsing, real-time temperature monitoring, and automation compatibility.

Key Specifications

Property	Value / Description
Color Temperature	4200 K Neutral White, high CRI
Output	Bright, uniform luminous flux; diffuse 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 neutral white output** – smooth, glare-free illumination
- Balanced 4200 K spectrum ideal for technical and visual inspection
- **Non-moulded IP64 design** – dust- and splash-resistant, not immersion-proof
- Aluminum profile ensures **durability and efficient thermal management**

Applications

- **Machine Vision & Quality Control** – uniform neutral white lighting improves defect detection, surface inspection, and color-critical quality checks
- **Assembly Lines & Industrial Workstations** – diffuse, glare-free illumination enhances accuracy, ergonomics, and operator comfort
- **Optical & Electronic Component Inspection** – true-to-color illumination for PCB assembly, coatings, plastics, and fine mechanical parts
- **Cleanrooms & Controlled Environments** – diffuse opaline light reduces glare and reflections, supporting hygienic and precision environments
- **Laboratories & R&D** – reliable, stable neutral white light source for test setups, imaging, and analysis

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

Benefits for Engineers

- **Glare-free neutral white output** – consistent, uniform illumination
- **IP64 protection** – dust- and splash-resistant

- **Diffuse coverage** – eliminates hotspots for reliable lighting
 - **NTC monitoring** – improves safety and system reliability
 - **Automation-ready** – compatible with Pollux, PLC, and SCADA
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Integration with MaNima Pollux System

- Real-time NTC temperature monitoring
- Pulsing/strobing for adaptive illumination control
- Thermal overload protection
- PLC/SCADA compatibility
- **Open API (UDP-based)** for 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	PMMA opal	
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)	4370 K	
Illuminance (Lux) (Object size: 1 piece)		24V
	5cm	142138.08 lx
	10cm	53934.5 lx
	15cm	27733.78 lx
	20cm	17174.19 lx
	25cm	11564 lx
	30cm	8676.3 lx
Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)		24V
	5cm	2209.69 umol/m2
	10cm	838.27 umol/m2
	15cm	431.57 umol/m2
	20cm	267.35 umol/m2
	25cm	180.15 umol/m2
	30cm	135.03 umol/m2
Peak wavelength (Object size: 1 piece)	452 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	2.87 W/sqm
	10cm	1.12 W/sqm
	15cm	0.58 W/sqm
	20cm	0.36 W/sqm
	25cm	0.24 W/sqm
	30cm	0.18 W/sqm

Total irradiance

(Object size: 1 piece)

	24V
5cm	498.34 W/sqm
10cm	188.96 W/sqm
15cm	97.13 W/sqm
20cm	60.22 W/sqm
25cm	40.54 W/sqm
30cm	30.35 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

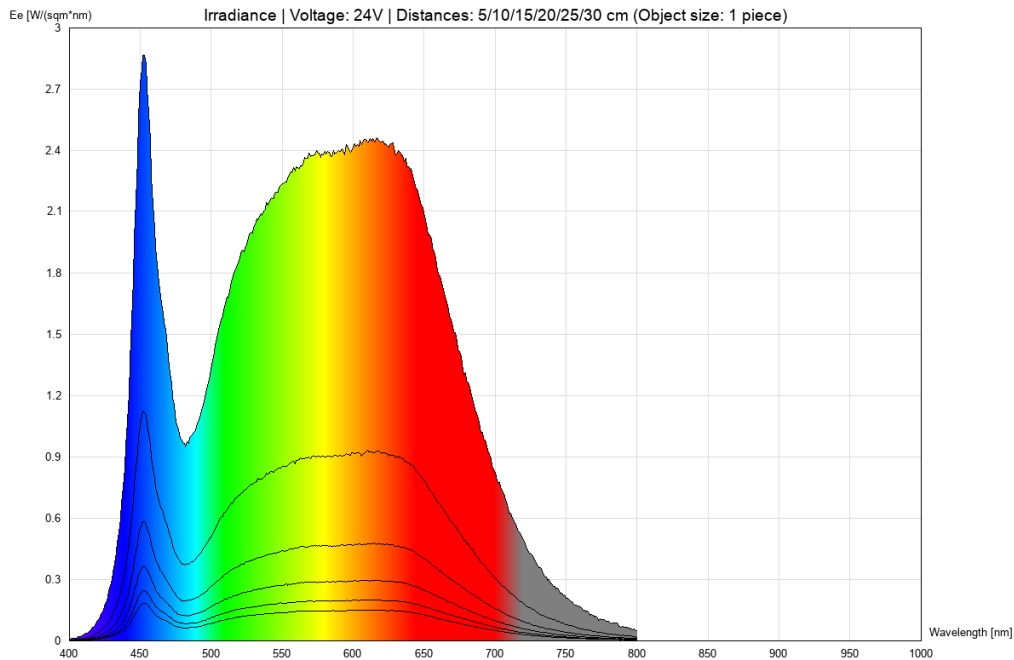
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

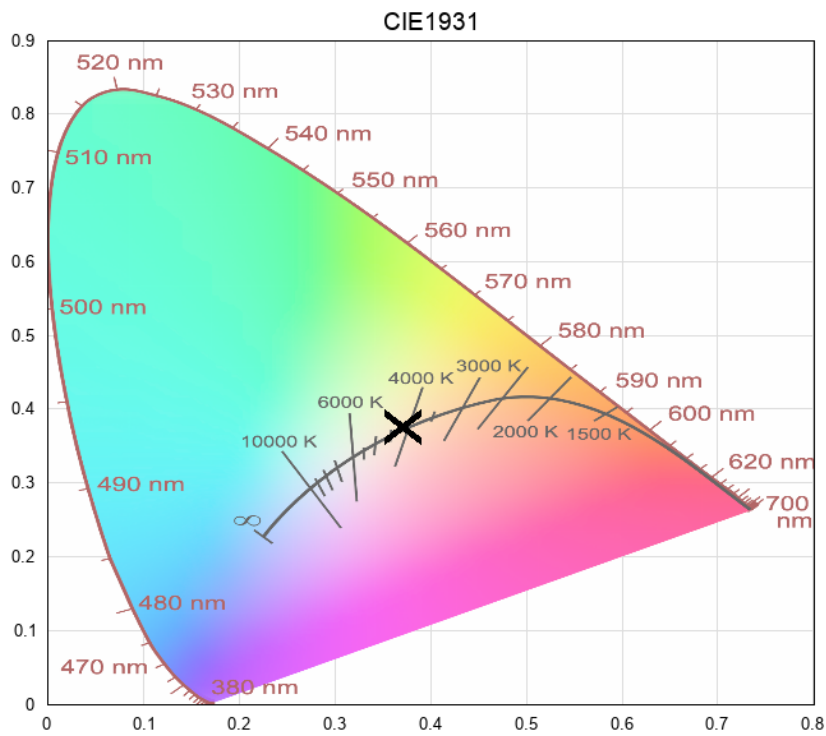
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - full-spectrum (24V)



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