

Datasheet

LuxaLight Industrial LED Fixture Opaline cover White 5700k 24.2x16mm (24 Volt, 2835, IP64)

LF-24-5700K-24.2X16-OC

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Product description

The **LuxaLight Industrial LED Fixture Opaline Cover White 5700 K** is a durable industrial fixture built into a 24.2 × 16 mm aluminum profile with a **PMMA opaline cover**. This design delivers **uniform, glare-free daylight-white illumination** (5700 K, CRI ≥ 95), ideal for tasks where precise color reproduction and clarity are critical. With **IP64 protection**, **24 V DC (~30 W)**, and an integrated **NTC sensor**, the fixture is optimized for indoor and sheltered industrial use. Integration with the **MaNima Pollux Industrial System** enables pulsing, real-time temperature monitoring, and automation compatibility.

Key Specifications

Property	Value / Description
Color Temperature	5700 K Daylight White, high CRI (≥ 95)
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

- **Daylight 5700 K spectrum** – ideal for inspection and industrial process lighting
- **Diffuse, glare-free illumination** – eliminates hotspots and sharp reflections
- **Non-moulded IP64 design** – dust- and splash-resistant (not immersion-proof)
- Aluminum profile ensures **durability and thermal stability**

Applications

- **Food & Pharmaceutical Inspection** – daylight spectrum with high CRI ensures precise defect detection and hygienic quality checks
- **Machine Vision & Automated Quality Control** – uniform daylight-white illumination enhances object detection, sorting, and color-critical inspections
- **Line Scan Cameras & High-Speed Imaging** – stable diffuse light ideal for line-scan systems and fast-moving production lines
- **Surface & Material Inspection** – accurate daylight rendering supports evaluation of coatings, plastics, metals, and textiles
- **Cleanrooms & Controlled Environments** – glare-free illumination supports sterile processes and minimizes reflections
- **Laboratories & R&D** – consistent daylight-quality lighting for research setups, optical testing, and advanced imaging

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

Benefits for Engineers

- **Daylight-white, high-CRI output** – accurate visual and technical inspection
- **IP64 protection** – dust- and splash-resistant
- **Diffuse uniform lighting** – glare-free, without hotspots

- **NTC monitoring** – safeguards performance and reliability
 - **Automation-ready** – seamless integration 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	5700 K	
Beam angle	120 °	
Measurement results		
CRI (Object size: 1 piece)	95	
CCT (Object size: 1 piece)	5833 K	
Illuminance (Lux) (Object size: 1 piece)		24V
	5cm	126630.24 lx
	10cm	51161.53 lx
	15cm	26609.55 lx
	20cm	16513.54 lx
	25cm	10923.02 lx
	30cm	8111.22 lx
Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)		24V
	5cm	2007.19 umol/m2
	10cm	813.92 umol/m2
	15cm	424.37 umol/m2
	20cm	263.83 umol/m2
	25cm	175.31 umol/m2
	30cm	129.98 umol/m2
Peak wavelength (Object size: 1 piece)	454 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	3.45 W/sqm
	10cm	1.45 W/sqm
	15cm	0.76 W/sqm
	20cm	0.48 W/sqm
	25cm	0.32 W/sqm
	30cm	0.23 W/sqm

Total irradiance

(Object size: 1 piece)

	24V
5cm	458.23 W/sqm
10cm	185.97 W/sqm
15cm	96.71 W/sqm
20cm	60.05 W/sqm
25cm	39.89 W/sqm
30cm	29.54 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

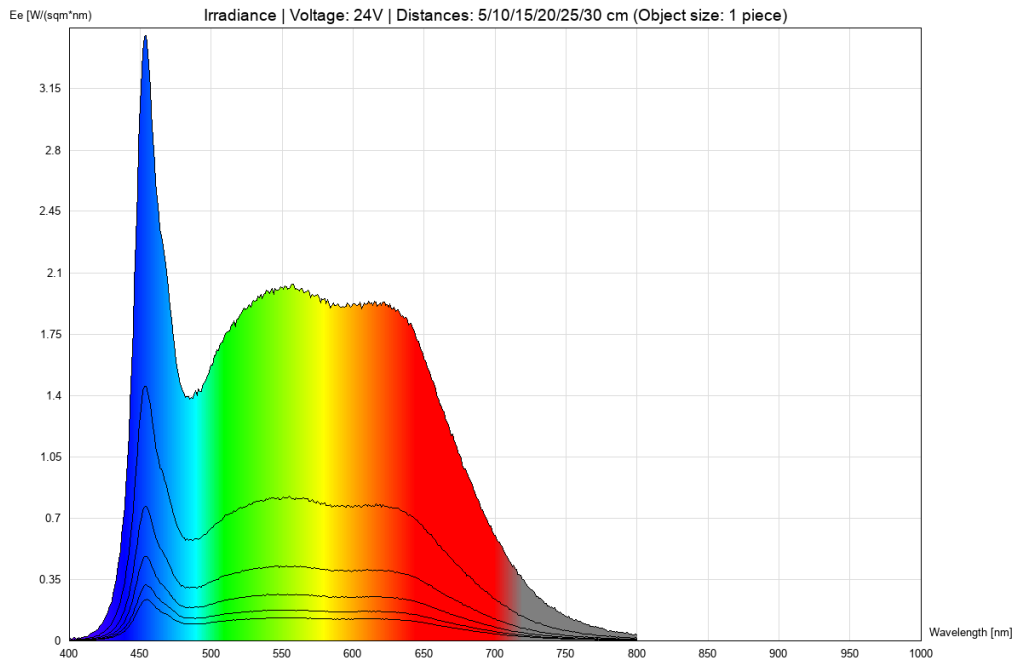
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

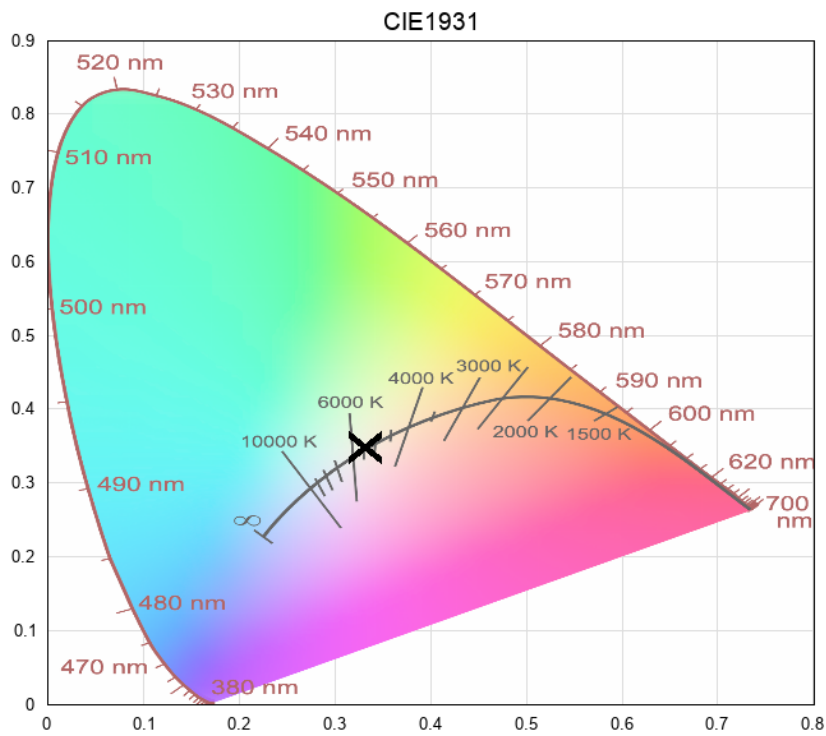
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - full-spectrum (24V)



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