

Datasheet

LuxaLight Industrial LED Fixture Opaline cover Neutral White 4800k 24.2x16mm (24 Volt, 2835, IP64)

LF-24-4800k-24.2X16-OC

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Product description

The **LuxaLight Industrial LED Fixture Opaline Cover Neutral White 4800 K** is a durable industrial fixture built into a 24.2 × 16 mm aluminum profile with a **PMMA opaline cover**. The opaline diffuser provides **uniform, glare-free neutral white illumination**, ideal for environments requiring accurate color rendering and consistent light quality. 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** enables pulsing, real-time thermal monitoring, and full automation compatibility.

Key Specifications

Property	Value / Description
Color Temperature	4800 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

- **Balanced 4800 K spectrum** – close to daylight, ideal for visual and technical inspection
- **Diffuse output** – smooth, glare-free illumination without hotspots
- **Non-moulded IP64 design** – dust- and splash-resistant, not immersion-proof
- Aluminum profile provides **durability and thermal stability**

Applications

- **Machine Vision & Visual Quality Control** – neutral white light supports defect detection, surface inspection, and color-critical checks
- **Food & Pharmaceutical Inspection** – glare-free diffuse lighting ensures hygienic and shadow-free visibility in production lines
- **Assembly Lines & Industrial Workstations** – enhances accuracy and ergonomics with daylight-like neutral white light
- **Optical & Electronic Component Inspection** – reliable true-to-color illumination for PCBs, coatings, and plastic parts
- **Cleanrooms & Controlled Environments** – opaline diffuser reduces glare and reflections, supporting sterile processes
- **Laboratories & R&D** – stable neutral white source for analytical setups, imaging, and optical bonding

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

Benefits for Engineers

- **Consistent neutral white output** – accurate and glare-free illumination
- **IP64 protection** – dust- and splash-resistant
- **Diffuse coverage** – no hotspots, uniform lighting distribution
- **NTC monitoring** – process safety and 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	4800 K	
Beam angle	120 °	
Measurement results		
CRI (Object size: 1 piece)	93	
CCT (Object size: 1 piece)	4920 K	
Illuminance (Lux) (Object size: 1 piece)		24V
	5cm	123785.36 lx
	10cm	49454.6 lx
	15cm	25458.37 lx
	20cm	15799.01 lx
	25cm	10691.46 lx
	30cm	8051.67 lx
Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)		24V
	5cm	1958.45 umol/m2
	10cm	783.18 umol/m2
	15cm	403.11 umol/m2
	20cm	250.54 umol/m2
	25cm	169.41 umol/m2
	30cm	127.42 umol/m2
Peak wavelength (Object size: 1 piece)	454 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	2.97 W/sqm
	10cm	1.19 W/sqm
	15cm	0.62 W/sqm
	20cm	0.39 W/sqm
	25cm	0.26 W/sqm
	30cm	0.2 W/sqm

Total irradiance
(Object size: 1 piece)

	24V
5cm	444.73 W/sqm
10cm	177.44 W/sqm
15cm	91.34 W/sqm
20cm	56.76 W/sqm
25cm	38.32 W/sqm
30cm	28.78 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

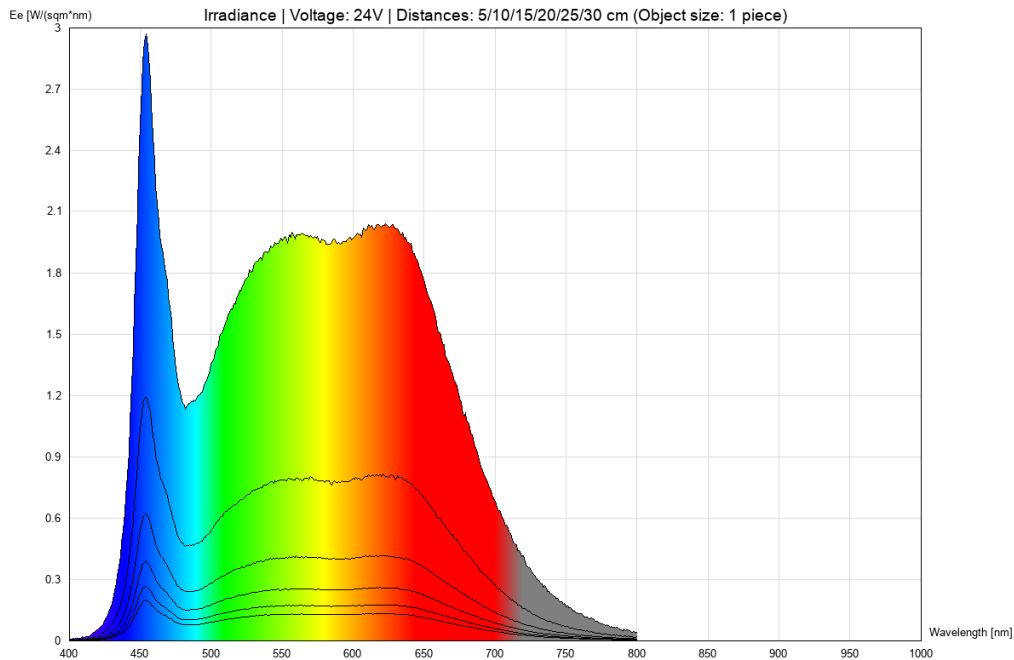
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

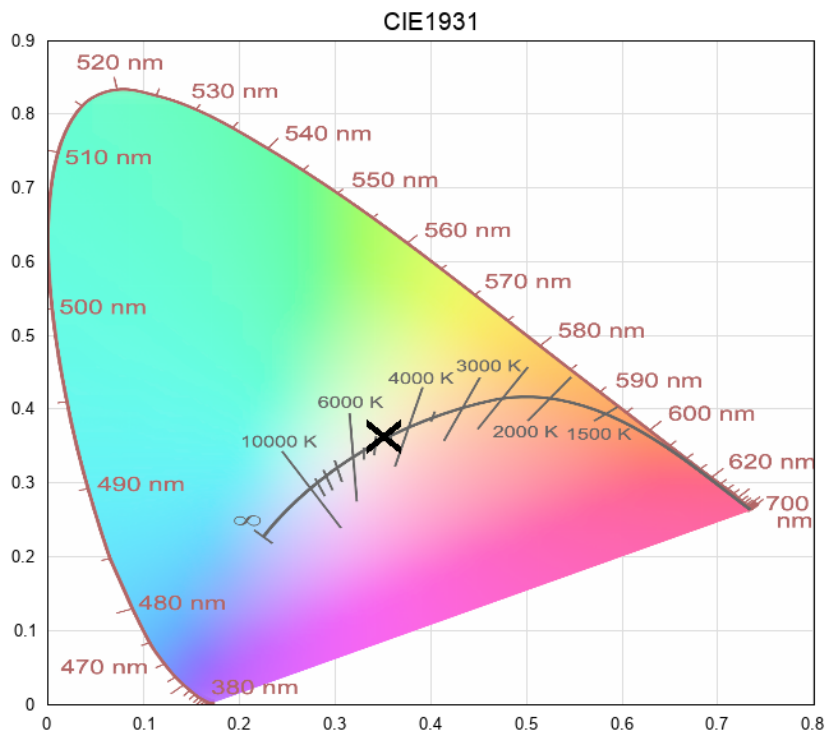
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - full-spectrum (24V)



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