Datasheet

LuxaLight Industrial LED Fixture Polarised cover Near Infrared 960nm 24.2x16mm (24 Volt, 2835, IP64)

LF-24-960-24.2X16-POL

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Product description

he **LuxaLight Industrial LED Fixture Polarised Cover Near-Infrared (NIR) 960 nm** (24.2 × 16 mm) provides invisible NIR radiation for industrial machine vision, sensing, and automation applications. The polarised PMMA cover suppresses glare and stray radiation, ensuring clean and directional illumination for cameras and sensors. At 5 cm distance, the fixture delivers **~298.3 W/m² total irradiance** and **~5.99 W/m² peak irradiance**. With modular scalability (220–3000 mm) and seamless integration with the MaNima Pollux Industrial System, it offers reliable and controllable NIR output for demanding environments.

Key Specifications

Property	Value / Description
Wavelength	Near-Infrared 960 nm (measured peak ~960 nm)
Irradiance (5 cm)	Total: ~298.3 W/m²; Peak: ~5.99 W/m²
Cover	Polarised PMMA – suppresses glare & stray radiation
Beam Angle	120°
Dimensions	220 × 24.2 × 16 mm (fixture profile)
LEDs per Fixture	108 × 2835 SMD LEDs
Supply & Protection	24 V DC / ~30 W; IP64; integrated NTC sensor (5 kΩ, β = 3950)
PCB Protection	Industrial-grade silicone coating
Thermal Monitoring	Integrated NTC sensor, controllable via MaNima Pollux
Pulsing/Strobing	Supported with MaNima Pollux Industrial System
Environment	Designed for industrial use (dust, moisture, vibration resistant)

Applications

- **Machine vision & spectral imaging** – NIR illumination enhances subsurface contrast and reduces glare in camera inspection
- **Packaging & sorting** – invisible NIR light reveals seals, hidden codes, and defects without disturbing visible-light processes
- **Automation & sensing** – reliable NIR source for safety triggers, positioning, and object tracking
- **Agriculture & quality control** – supports non-invasive crop monitoring and material inspection using NIR-sensitive sensors
- **Industrial drying & curing** – precise NIR radiation for material processing without visible light interference

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Benefits for Engineers

- High-output, polarised NIR radiation for glare-free inspection
- Stable operation via integrated NTC thermal monitoring
- IP64-protected design for harsh industrial environments
- Modular scalability up to 3 m
- Plug-and-play automation with Pollux, PLC, SCADA, UDP

Integration with MaNima Pollux Industrial System

- Real-time thermal feedback via integrated NTC sensor
- Pulse & strobe modes for flexible NIR output
- Automatic thermal protection ensures long-term reliability
- Seamless PLC/SCADA connectivity for industrial automation
- Open UDP API for advanced control and data logging

Technical specifications

General	
Brand	LuxaLight
Application	Hyper - spectral Imaging Machine Vision
LED type	2835
Material	Aluminum
Dimensions	220 × 24,2 × 16 mm
Mounting	Surface mounted
Cover type	PMMA Polarised transparent
LEDs per piece	108.00

Lighting	
Wave length	960nm
Beam angle	120 °

Measurement results	
Peak wavelength (Object size: 1 piece)	963 nm

Peak irradiance
(Object size: 1 piece)

	24V
5cm	5.99 W/sqm
10cm	2.23 W/sqm
15cm	1.15 W/sqm
20cm	0.71 W/sqm
25cm	0.47 W/sqm
30cm	0.36 W/sqm

Total irradiance
(Object size: 1 piece)

	24V
5cm	298.3 W/sqm
10cm	111.44 W/sqm
15cm	57.44 W/sqm
20cm	35.53 W/sqm
25cm	23.78 W/sqm
30cm	17.94 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

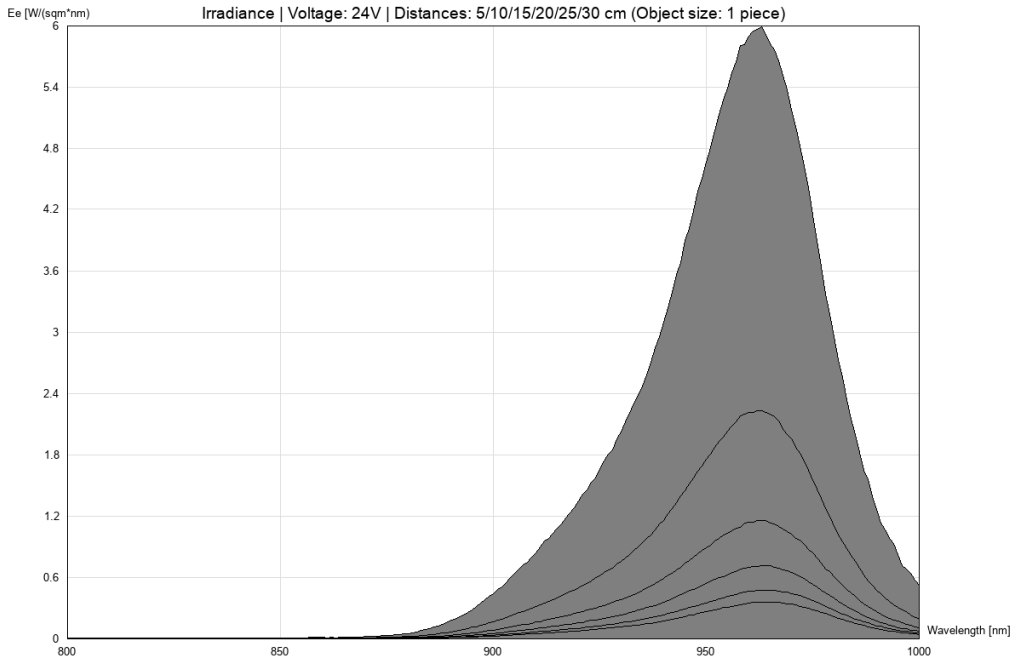
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 800-nir (24V)



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