

Datasheet

LuxaLight Industrial LED Fixture Polarised cover UV-A 395nm 24.2x16mm (24 volt, 2835, IP64)

LF-24-395-24.2x16-POL

Version: 2025-08-27.3

Product description

The LuxaLight Industrial LED Fixture Polarised Cover UV-A 395 nm (24.2 × 16 mm) is designed for industrial environments requiring durability, precision, and glare-free UV illumination. The polarised optical cover transmits linearly polarised UV-A light, suppressing glare and surface reflections. Measurements show ~155.65 W/m² total irradiance at 5 cm and ~8.88 W/m² peak irradiance at 5 cm. Its modular design (scalable from 220 mm up to 3000 mm) and compatibility with the MaNima Pollux Industrial System make it a robust solution for curing, inspection, and photochemical processes.

Key Specifications

Property	Value / Description
Wavelength	395 nm UV-A (measured peak ~395 nm)
Irradiance (5 cm)	~155.65 W/m ² (Total, 24 V); ~8.88 W/m ² (Peak, 24 V)
Cover	Polarised PMMA cover – suppresses glare & stray light
Beam angle	120° ±5°
Dimensions	220 × 24.2 × 16 mm (fixture profile)
Supply & Protection	24 V DC / ~30 W, integrated NTC sensor, IP64
Electronics (ref.)	24 V, 1.25 A, ~30 W; NTC 5 kΩ, β=3950
PCB Protection	Industrial-grade silicone coating (dust, moisture, chemical resistance)
Thermal Monitoring	Integrated NTC sensor, controllable via MaNima Pollux
Pulsing/Strobing	Supported when integrated with MaNima Pollux Industrial System
Environment	Designed for industrial conditions (dust, vibration, moisture)

Applications

- **UV-A curing** of adhesives, coatings, and resins – where controlled, directional UV exposure improves process stability
- **Fluorescence inspection & machine vision** – excitation of UV-sensitive tracers, inks, and labels with reduced glare
- **Forensic detection** – fingerprints, biological fluids, and UV security inks with higher contrast due to polarisation
- **Surface & material analysis** – defect detection on reflective or glossy surfaces (metal, glass, polymers)
- **Print & packaging quality control** – inspection of fluorescent features on reflective packaging materials
- **Plant research & agritech** – supports flavonoid and anthocyanin synthesis, useful for stress-response and coloration studies

Also applicable in R&D and specialized lighting setups.

Benefits for Engineers

- Process stability: polarised UV improves defect detection and reduces glare
- Consistent performance: thermal feedback ensures reliability and extended LED lifetime
- Rugged industrial construction: protection against dust, moisture, and vibration
- Modular scalability: customizable length and configuration per application
- Seamless integration: plug-and-play readiness for production and R&D environments

Integration with MaNima Pollux Industrial System

- Real-time NTC sensor control and feedback
- Pulse/strobing capabilities for higher peak irradiance
- Prevents thermal overload while maximizing UV output
- Delivers process data for PLC/SCADA industrial automation
- Open API (UDP-based) support for system integration and custom applications

Technical specifications

General

Brand	LuxaLight
Application	Curing & Aging Machine Vision UV Inspection
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	395nm
Beam angle	120 °

Measurement results

Peak wavelength (Object size: 1 piece)	397 nm
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Peak irradiance (Object size: 1 piece)	24V	
	5cm	9.42 W/sqm
	10cm	3.58 W/sqm
	15cm	1.82 W/sqm
	20cm	1.11 W/sqm
	25cm	0.75 W/sqm
	30cm	0.55 W/sqm

Total irradiance (Object size: 1 piece)	24V	
	5cm	155.65 W/sqm
	10cm	62.08 W/sqm
	15cm	32.1 W/sqm
	20cm	19.58 W/sqm
	25cm	13.11 W/sqm
	30cm	9.69 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

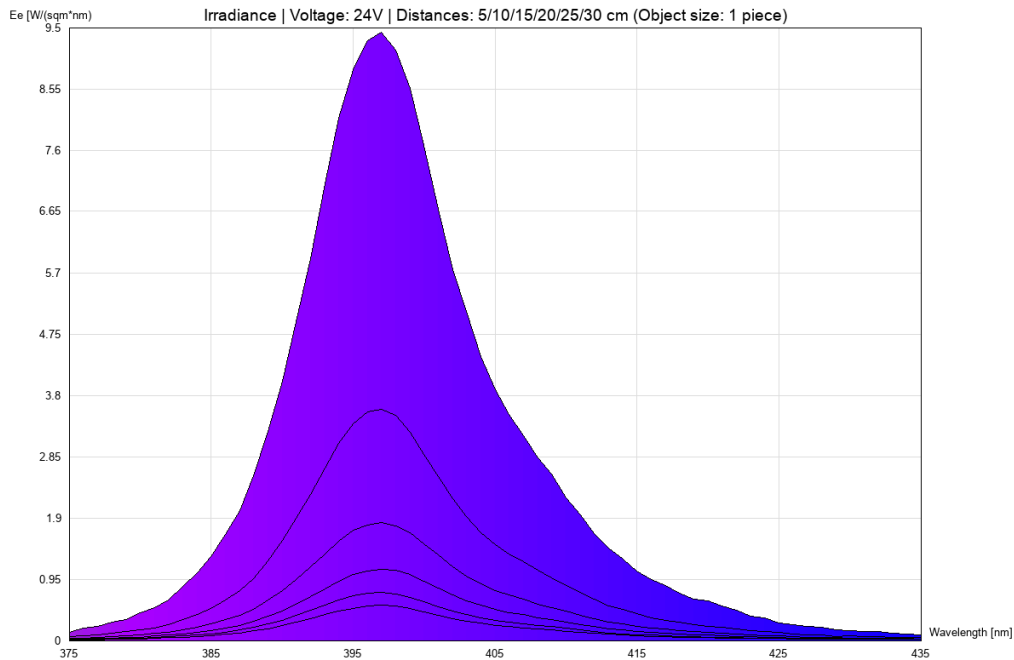
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

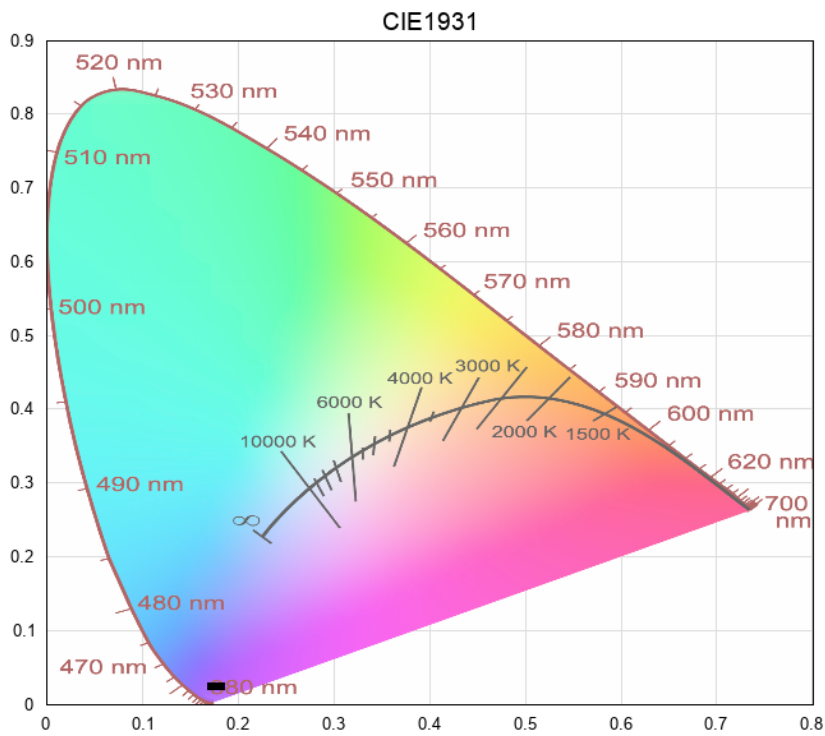
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 375-435-uv-ablue (24V)



cie1931



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