

Datasheet

LuxaLight Industrial LED Fixture Transparent cover UV-A 405nm 24.2x16mm (24 Volt, 2835, IP64)

LF-24-405-24.2X16-TC

Version: 2025-08-26.1

Product description

The **LuxaLight Industrial LED Fixture Transparent PMMA Cover UV-A 405 nm (24.2 x 16 mm)** is designed for demanding industrial environments where durability, precision, and high radiant intensity are essential. Its **modular design** (scalable from 220 mm up to 3000 mm), the transparent PMMA cover – optimized for 405 nm UV transmission – and compatibility with the **MaNima Pollux Industrial System** make it a robust and flexible solution for curing, photochemistry, disinfection, machine vision, and additive manufacturing.

Specifications

Property	Value / Description
Wavelength	405 nm UV-A (measured peak 404 nm)
Optical Output	High radiant intensity, engineered for industrial use
Cover	Transparent PMMA cover – optimized for 405 nm, maintains high UV transmission
PCB Protection	Industrial-grade silicone coating (dust, moisture, chemical resistance)
Thermal Monitoring	Integrated NTC sensor, controllable via MaNima Pollux Industrial System
Pulsing/Strobing	Supported when integrated with MaNima Pollux Industrial
Design	Modular and scalable, adaptable from 220 mm up to 3000 mm
Dimensions	24.2 x 16 mm (fixture profile)
Environment	Built for harsh industrial conditions (dust, vibration, moisture)

Applications

- **Adhesive & resin curing** – bonding, potting, optical adhesives responsive at 405 nm
- **3D printing (SLA/DLP resins)** – industry standard wavelength for UV-curable resins
- **Machine vision & inspection** – fluorescence excitation, contaminant detection, optical brightener response
- **UV inspection & blacklight** – visual inspection of inks, coatings, adhesives, security markings
- **Food & pharma hygiene (violet light disinfection)** – bacteriostatic effects via porphyrin excitation

Also applicable in photochemistry and R&D setups.

Benefits for Engineers

- **Process efficiency:** pulsing and monitoring supported when integrated with MaNima Pollux Industrial
- **Consistent performance:** real-time thermal feedback prevents degradation and ensures lifetime stability
- **Industrial robustness:** resistant to dust, moisture, vibration, and chemical stress
- **Modular scalability:** fixture length and configuration tailored to the application
- **Easy integration:** designed for seamless use in production lines and test setups

Integration with MaNima Pollux Industrial System

- Real-time readout and control of NTC thermal sensors
- Full support for pulsing/strobing operation of the fixture
- Increased peak intensity without thermal overload
- Process data available for industrial automation (PLC/SCADA integration)
- **Open API (UDP-based)** for system integration and custom industrial 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 transparent
LEDs per piece	108.00

Lighting

Wave length UV	405 nm
Beam angle	120 °

Measurement results

Peak wavelength (Object size: 1 piece)	404 nm														
Peak irradiance (Object size: 1 piece)	<table> <tr> <th></th><th>24V</th></tr> <tr> <td>5cm</td><td>23.1342 W/sqm</td></tr> <tr> <td>10cm</td><td>9.35709 W/sqm</td></tr> <tr> <td>15cm</td><td>4.67462 W/sqm</td></tr> <tr> <td>20cm</td><td>2.82404 W/sqm</td></tr> <tr> <td>25cm</td><td>1.85731 W/sqm</td></tr> <tr> <td>30cm</td><td>1.42444 W/sqm</td></tr> </table>		24V	5cm	23.1342 W/sqm	10cm	9.35709 W/sqm	15cm	4.67462 W/sqm	20cm	2.82404 W/sqm	25cm	1.85731 W/sqm	30cm	1.42444 W/sqm
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- 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

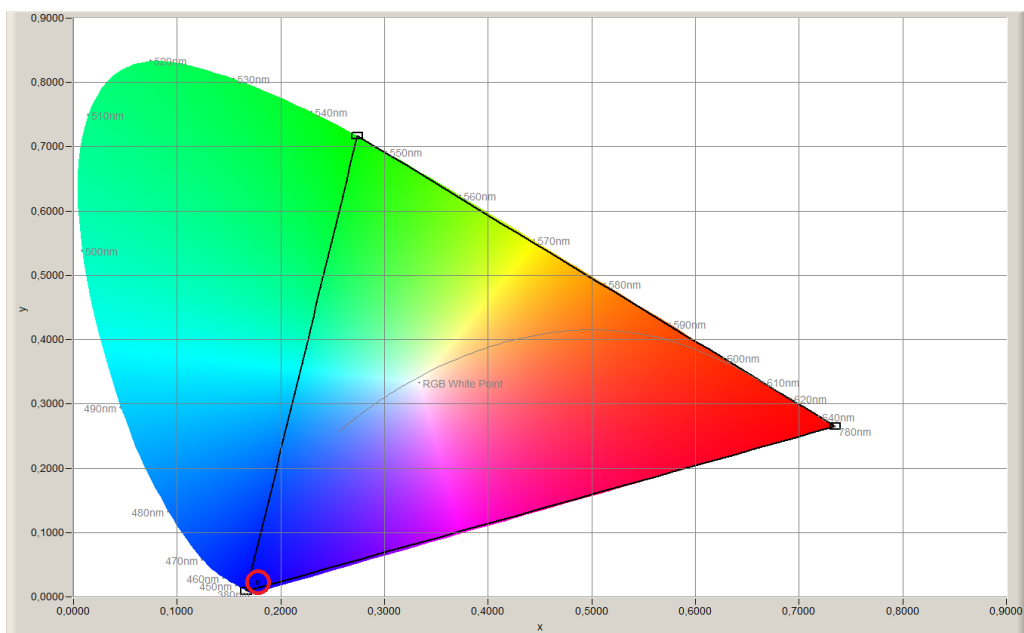
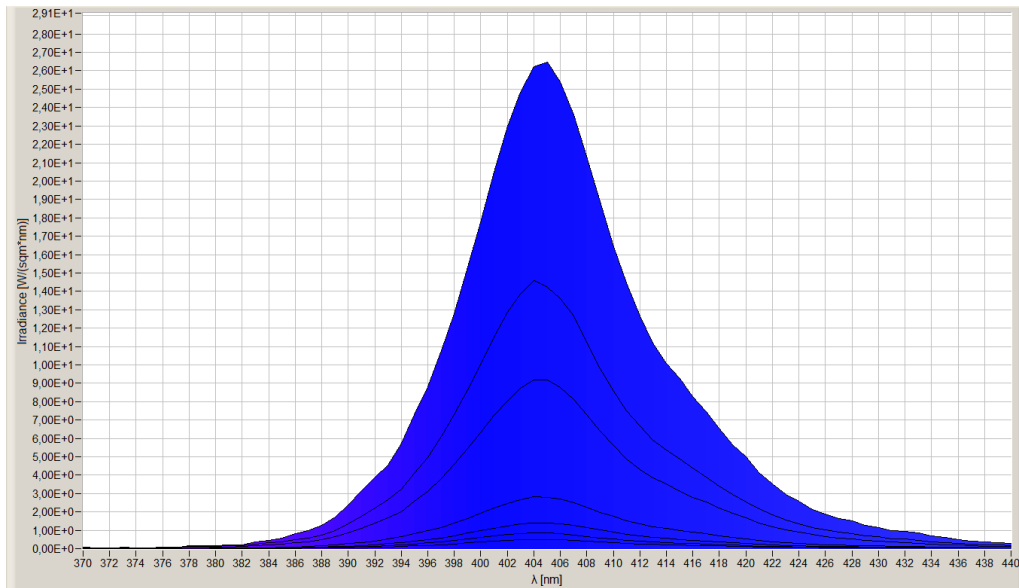
IP class IP 64

Directives - standards - certificates

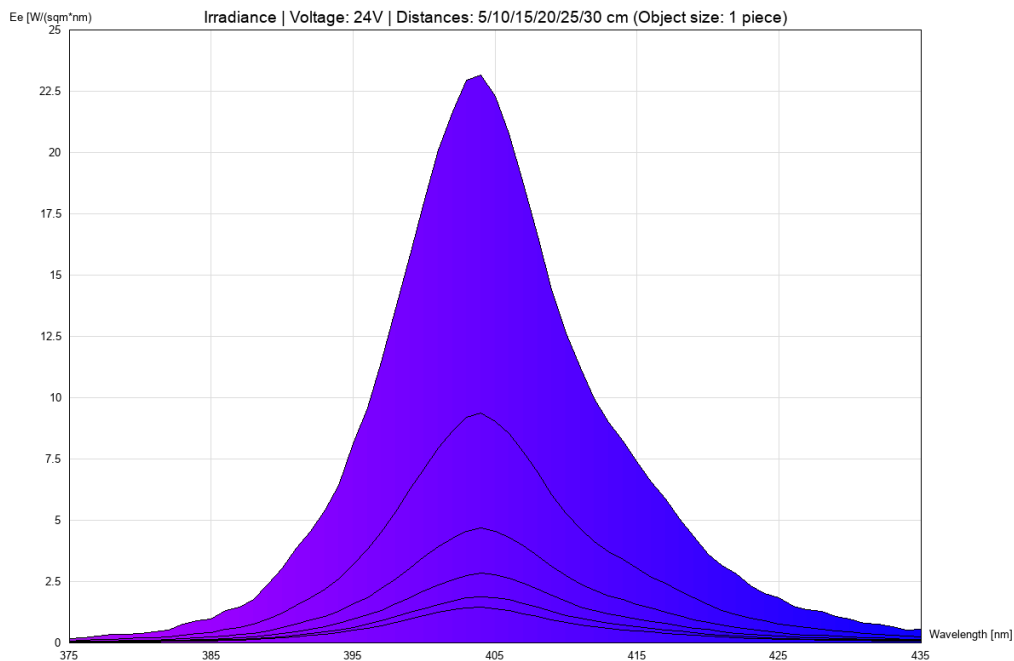
Directives RoHS
CE

Safety standards EN60598-1
EN62031
IEC62471

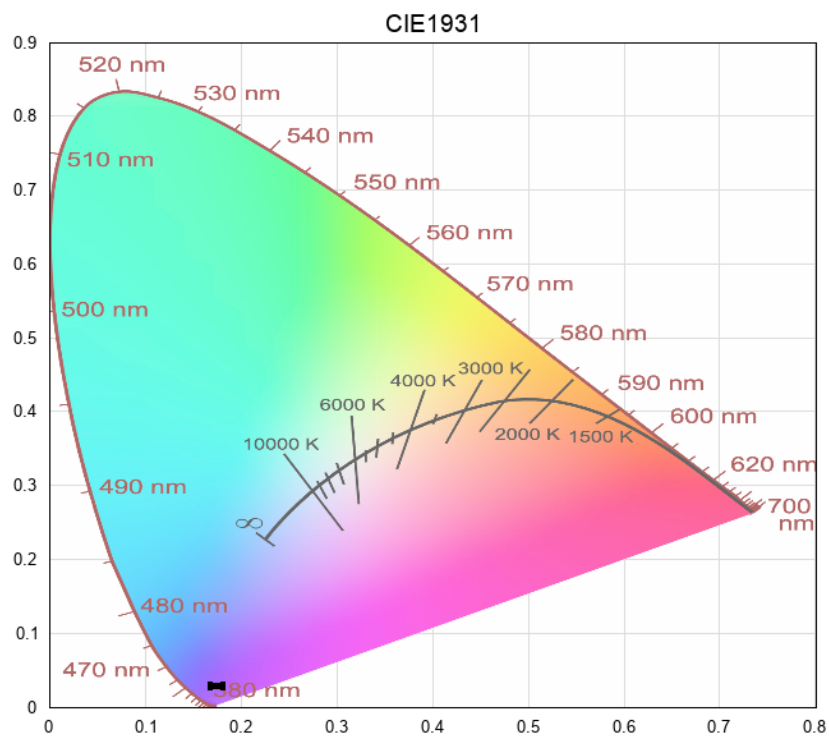
Measurement results



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



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