

Datasheet

LuxaLight Industrial LED Fixture Transparent IP68 UV-A 405nm 24.2x16mm (24 Volt, 2835, IP68)

LF-24-405-24.2x16-PU

Version: 2025-08-26.1

Product description

The **LuxaLight Industrial LED Fixture Transparent IP68 UV-A 405 nm (24.2 × 16 mm, 2835 LEDs)** is a fully encapsulated, moulded LED solution designed to withstand the harshest conditions. With a **polyurethane-moulded housing (IP68)**, high-intensity UV-A output, and seamless integration with the **MaNima Pollux Industrial System**, this fixture offers durability, uniform lighting performance, and reliability in outdoor, marine, industrial, and submerged environments.

Key Specifications

Property	Value / Description
Wavelength	405 nm UV-A (measured peak ~405 nm)
Optical Output	~443 W/m ² @ 5 cm; ~165 W/m ² @ 10 cm; ~82 W/m ² @ 15 cm
Cover	Fully moulded transparent polyurethane encapsulation
LED Type / Protection	2835 LEDs; IP68 encapsulated (dust- and waterproof)
Beam Angle	120°
Voltage / Power	24 V DC, ~30 W per fixture
Thermal Monitoring	Integrated NTC sensor, controllable via MaNima Pollux
Design	Modular & scalable, 220–3000 mm
Dimensions	24.2 × 16 mm profile
Operating Environment	Outdoor, marine, industrial, and submerged use (–5...+60 °C)

IP68 Moulded Design – Fully Encapsulated Housing

This fixture is **completely encapsulated in transparent polyurethane**, offering:

- **IP68 waterproofing** – fully protected for submerged or exposed environments
- **High mechanical resilience** – robust against shock, vibration, and impact (IK10 equivalent)
- **Stable optical output** – consistent UV spread through the encapsulated cover
- **Maintenance-free design** – seamless housing resistant to dust, dirt, and corrosion
- **Extended durability** – protects LEDs and electronics from moisture, chemicals, and environmental stress
- **Engineered for extremes** – reliable in marine, outdoor, and harsh industrial settings

Applications

- **UV-A Curing of Adhesives & Coatings** – in outdoor, humid, or submerged conditions where reliability is critical
- **3D Printing & Dental Applications** – deep penetration curing in environments with high humidity or dust
- **Food & Medical Disinfection (violet light)** – antimicrobial effect on surfaces in wet or exposed areas
- **Industrial & Outdoor Surface Inspection** – robust performance in dusty, wet, or chemically exposed production sites
- **Marine & Offshore Lighting** – durable UV-A source for underwater or saltwater applications
- **Fluorescence Excitation** – reliable detection of dyes and markers in challenging environments

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

Benefits for Engineers

- **IP68 polyurethane encapsulation** – waterproof, dustproof, and maintenance-free
- **Shock & vibration resistant** – durable housing protects internal components

- **Consistent lighting** – uniform UV output through encapsulation
- **Extended operational life** – resistant to environmental stressors like corrosion and moisture
- **Automation-ready** – seamless compatibility with Pollux, PLC, and SCADA systems

Integration with MaNima Pollux Industrial System

- Real-time NTC temperature monitoring
- Pulsing/strobing for optimized peak output
- Thermal overload protection for continuous operation
- PLC/SCADA system compatibility
- **Open API (UDP-based)** for advanced automation

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	Polyurethane
LEDs per piece	108.00

Lighting

Wave length UV	395
Beam angle	120 °

Measurement results

Peak wavelength (Object size: 1 piece)	404 nm
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Peak irradiance (Object size: 1 piece)

	24V
5cm	26.3011 W/sqm
10cm	9.24065 W/sqm
15cm	4.60121 W/sqm
20cm	2.74051 W/sqm
25cm	1.76836 W/sqm
30cm	1.2926 W/sqm

Total irradiance (Object size: 1 piece)

	24V
5cm	443.4 W/sqm
10cm	165.1 W/sqm
15cm	82.15 W/sqm
20cm	49.01 W/sqm
25cm	32.08 W/sqm
30cm	23.41 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

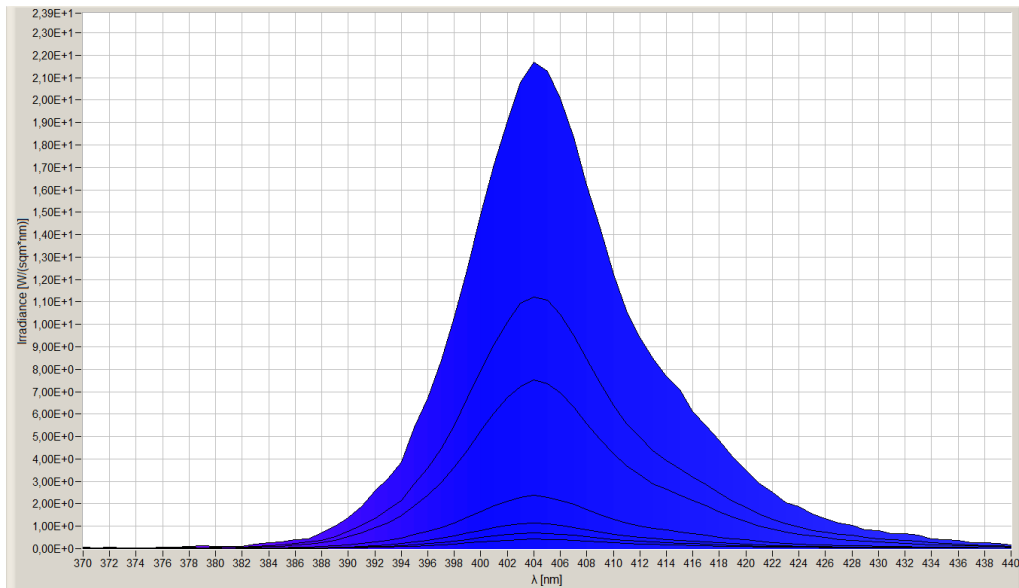
IP class IP 68

Directives - standards - certificates

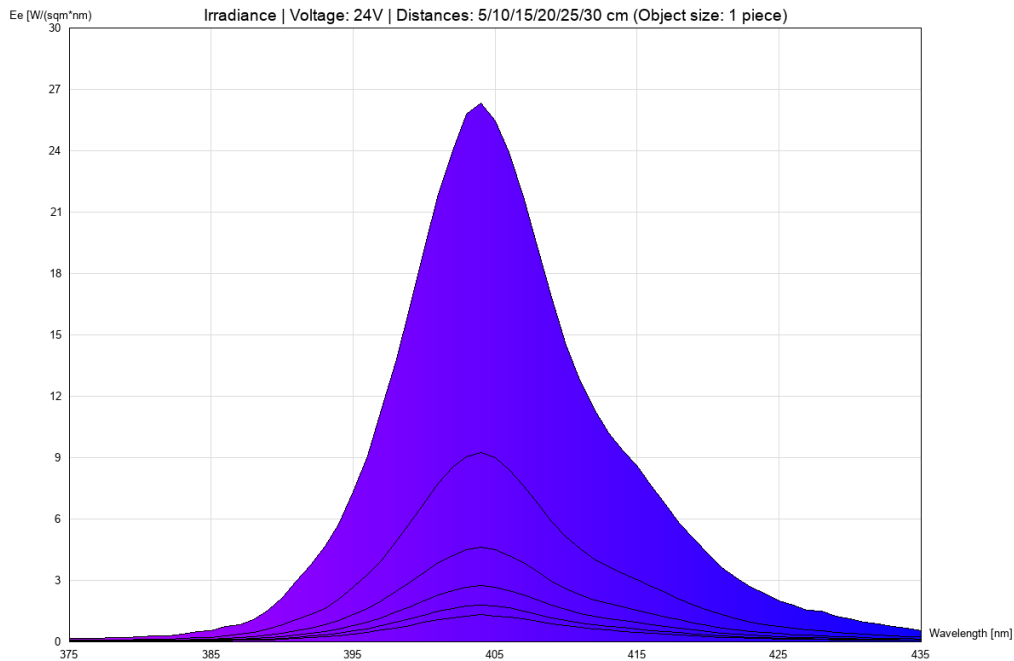
Directives RoHS
CE

Safety standards EN60598-1
EN62031
IEC62471

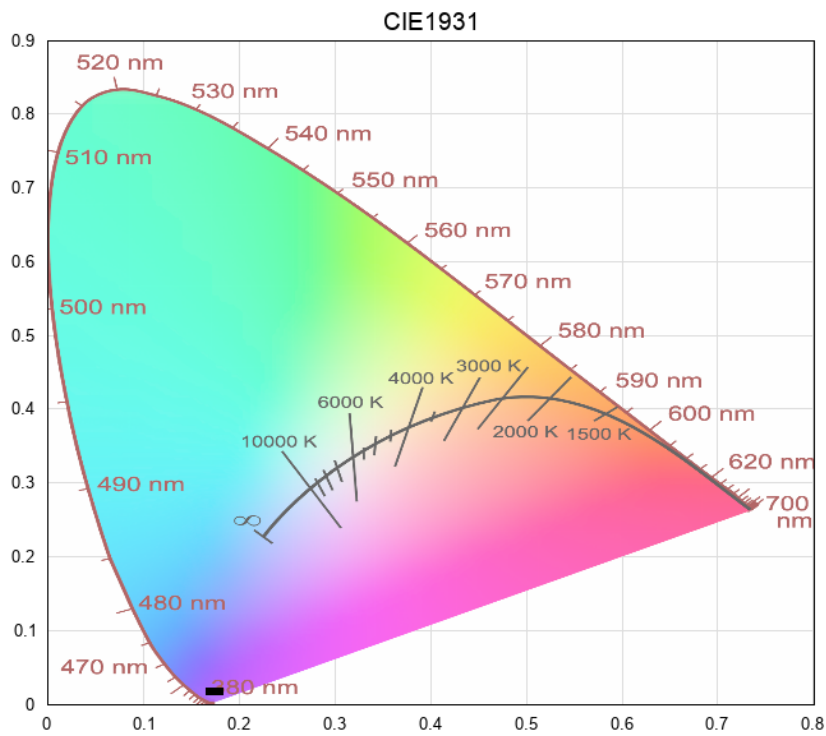
Measurement results



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



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