

Datasheet

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

LF-24-405-24.2x16-PU

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Product description

The **LuxaLight Industrial UV LED Fixture** is designed for intensive industrial applications that require high radiation intensity for a wide range of processes, including material curing, reactors, disinfection, and more. With a wavelength of **405nm**, this LED fixture provides a reliable and efficient solution for curing coatings, resins, and other materials, but also for applications such as accelerating chemical reactions in photochemical processes, disinfecting surfaces, and supporting reactors.

The LED fixture is fully encapsulated in a durable polyurethane (PU) layer, making it **IP68 waterproof** and resistant to submersion in water. Additionally, it has a high **IK10 impact resistance**, ensuring that it can withstand heavy physical impacts, making it ideal for use in industrial environments where there is a risk of physical damage. This guarantees long-lasting performance and reliability, even in the most demanding conditions.

Key Features:

- **405nm Wavelength:** The **405nm wavelength** is ideal for a wide range of industrial applications, including curing resins, coatings, and materials, as well as for photochemical processes, reactors, and disinfection.
- **24V Power Supply:** The fixture operates on a reliable 24V power supply, ensuring stable and consistent performance, perfect for demanding industrial applications.
- **Fully Encapsulated in PU:** The LED fixture is fully encapsulated in a polyurethane (PU) layer, ensuring **IP68 waterproofing** and protection against submersion in water.
- **High IK10 Impact Resistance:** The fixture has a high **IK10 impact resistance**, meaning it can withstand heavy physical impacts, making it ideal for industrial environments with the risk of physical damage.
- **Integration with MaNima Pollux Industry Pulsing (Strobing):** The LED fixture supports integration with the MaNima Pollux Industry System for pulsing (strobing), allowing the radiation intensity to be significantly increased. This feature ensures faster reactions and enhanced efficiency in industrial processes.
- **Real-Time Temperature Monitoring via NTC Sensor:** The integrated NTC sensor ensures continuous temperature measurement and adjustment via the MaNima Pollux Industry System. This allows for optimal operating temperature maintenance, maximizing radiation output and consistent performance.

Applications:

- **UV Curing of Coatings:** Ideal for curing coatings in the printing industry, such as in the paint industry, where rapid curing is essential for productivity.
- **3D Printing:** Perfect for accelerating the curing of 3D printed objects, especially for resins requiring a specific **405nm wavelength** to fully cure.
- **Packaging Industry:** The LED fixture is ideal for curing packaging materials, such as in the food or pharmaceutical industries, ensuring rapid curing of printed materials.
- **Disinfection:** The **405nm wavelength** can also be used for disinfecting surfaces, particularly in controlled industrial environments such as laboratories and cleanrooms.
- **Reactor Applications:** Accelerating chemical reactions and photochemical processes in reactors, where the **405nm wavelength** plays a crucial role.

Benefits:

- **High Radiation Intensity:** The ability to pulse the radiation intensity via the MaNima Pollux Industry System ensures faster curing times and increased productivity.
- **Real-Time Temperature Monitoring for Consistent Performance:** The NTC sensor, combined with the MaNima Pollux Industry System, ensures continuous temperature measurement and adjustment, maintaining optimal operating temperature and preventing overheating.
- **Industrial Durability:** Encapsulating the fixture in PU provides **IP68 waterproofing** and **IK10 impact resistance**, offering maximum protection against harsh industrial environments, moisture, and physical impact.
- **Efficiency and Speed:** The fixture provides sufficient power for fast and efficient curing, which is essential for industrial production systems that need to cure large volumes of material quickly.
- **Long-Term Reliable Performance:** The use of high-quality materials and robust design features ensures long-term performance and reliability, even in demanding 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	Polyurethane
LEDs per piece	108.00

Lighting

Wave length UV	395
Beam angle	120 °

Measurement results

PPFD	Value	Measuring distance
	982 µmol/m2	50 mm
519 µmol/m2	75 mm	
346 µmol/m2	100 mm	
110 µmol/m2	200 mm	
55,2 µmol/m2	300 mm	
35,8 µmol/m2	400 mm	
23,9 µmol/m2	600 mm	

Irradiance	Value	Measuring distance
	352,3 W/m2	50 mm
192,9 W/m2	75 mm	
128,8 W/m2	100 mm	
40,6 W/m2	200 mm	
20 W/m2	300 mm	
12,6 W/m2	400 mm	
8,2 W/m2	600 mm	

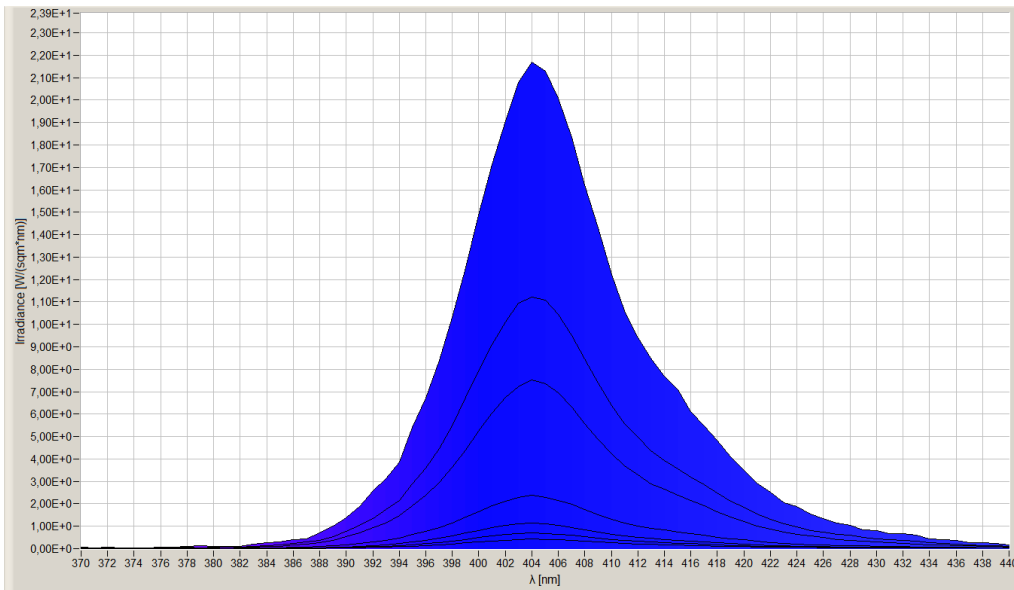
- By combining Pulse Mode with Real-Time Monitoring, the efficiency of LED systems can be increased, resulting in higher output.
- We have the expertise and equipment to perform measurements tailored to the specific requirements of the application.

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



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