

Datasheet

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

LF-24-405-24.2X16-OC

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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 offers 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 equipped with a silicone layer on the PCB, providing additional protection against moisture, dust, and other harmful environmental factors. The **opal covering** creates a diffused effect of the radiation, which is useful in applications requiring even exposure of the treated surface. This covering does not enhance the transmission of radiation but rather distributes it, making it ideal for certain processes.

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.
- **Silicone Coating on PCB:** The PCB is coated with silicone, providing protection against environmental factors like moisture and dust, adding durability for tough industrial environments.
- **Opal Covering:** The **opal covering** creates a diffused effect of radiation, useful for applications requiring even radiation exposure across the treated surface.
- **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:** The silicone coating provides extra protection against dust, moisture, and other environmental factors, making the fixture suitable for heavy-duty industrial environments.
- **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 × 24,4 × 16 mm
Mounting	Surface mounted
Cover type	PMMA opal
LEDs per piece	108.00

Lighting

Wave length	405nm
Beam angle	120 °

Measurement results

PPFD

Value	Measuring distance
852 µmol/m2	50 mm
450 µmol/m2	75 mm
293 µmol/m2	100 mm
89,5 µmol/m2	200 mm
46,9 µmol/m2	300 mm
30,8 µmol/m2	400 mm
20,3 µmol/m2	600 mm

Irradiance

Value	Measuring distance
275,7 W/m2	50 mm
145,7 W/m2	75 mm
95 W/m2	100 mm
28,5 W/m2	200 mm
14,7 W/m2	300 mm
9,7 W/m2	400 mm
6,2 W/m2	600 mm

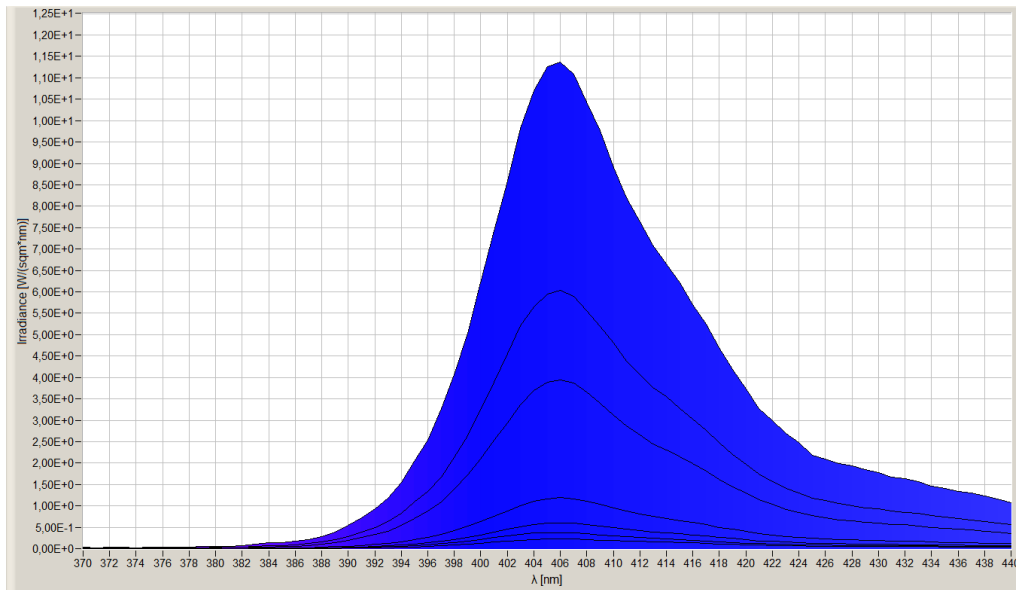
- By combining Pulse Mode with Real-Time Monitoring, the efficiency of LED systems can be increased, resulting in higher output.
- We have the expertise and equipment to perform measurements tailored to the specific requirements of the application.

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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