Datasheet

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

LF-24-405-24.2x16-POL

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Product description

The **LuxaLight Industrial UV LED Fixture** is designed for intensive industrial applications requiring 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, as well as accelerating chemical reactions in photochemical processes, supporting reactors, and disinfecting surfaces.

The LED fixture is equipped with a silicone coating on the PCB, offering extra protection against moisture, dust, and other environmental factors. The **polarized** cover provides protection while allowing the **405nm wavelength** to pass through effectively for maximum performance and reliability without compromising the effectiveness of the radiation.

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 photochemical processes, reactors, and disinfection.
- **24V Power Supply**: The fixture operates on a reliable 24V power supply, ensuring stable and consistent operation, perfect for demanding industrial applications.
- **Silicone Coating on PCB**: The PCB is coated with silicone to protect against environmental factors like moisture and dust, ensuring durability in harsh industrial environments.
- **Polarized Cover**: The cover is polarized and provides protection while allowing the **405nm wavelength** to pass through effectively for maximum performance and reliability.
- **Integration with MaNima Pollux Industry Pulsing (Strobing)**: The LED fixture supports integration with the MaNima Pollux Industry System for pulsing (strobing), significantly increasing radiation intensity. This feature allows for faster reactions and improved efficiency in industrial processes.
- **Real-Time Temperature Monitoring via NTC Sensor**: The integrated NTC sensor ensures continuous temperature measurement and adjustment through the MaNima Pollux Industry System. This maintains the optimal operating temperature for maximum 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.
- **Reactors and Chemical Processes**: Perfect for accelerating photochemical reactions, such as in reactors for resin or other material production that rely on UV light.
- **Disinfection**: The **405nm wavelength** can be used for disinfecting surfaces, particularly in controlled industrial environments such as laboratories and cleanrooms.
- **3D Printing**: Suitable for accelerating the curing of 3D printed objects, especially for resins that require a specific **405nm wavelength** for full curing.
- **Packaging Industry**: The LED fixture is ideal for curing packaging materials, such as in the food or pharmaceutical industry, ensuring rapid curing of printed materials.

Benefits:

- **High Radiation Intensity**: The ability to pulse with the MaNima Pollux Industry System allows radiation intensity to be significantly increased, resulting in faster reactions and increased productivity.
- **Real-Time Temperature Monitoring for Consistent Performance**: The NTC sensor, combined with the MaNima Pollux Industry System, ensures continuous temperature measurement, helping to maintain the optimal operating temperature and preventing overheating, which prolongs the LED's lifespan and improves efficiency.
- **Industrial Durability**: The silicone coating on the PCB provides extra protection against dust, moisture, and other environmental factors, making the fixture resistant to the challenges of heavy industrial environments.
- **Efficiency and Speed**: The LED fixture provides sufficient power for fast and efficient performance, which is essential for industrial production systems that need to process or cure large volumes of material quickly.

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	
Beam angle	120 °

Measurement results

PPFD

Value	Measuring distance
259 µmol/m2	50 mm
119 µmol/m2	75 mm
73 µmol/m2	100 mm
20,3 µmol/m2	200 mm
9,1 µmol/m2	300 mm
5,9 µmol/m2	400 mm
3,7 µmol/m2	600 mm

Irradiance

Value	Measuring distance
88 W/m2	50 mm
40 W/m2	75 mm
25 W/m2	100 mm
6,7 W/m2	200 mm
3,1 W/m2	300 mm
1,9 W/m2	400 mm
1,2 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

Symbol	Function
V+	V+
GND	Ground
NTC	NTC sensor
NTC_GND	NTC ground

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