Datasheet

LuxaLight LED Engine UV-A 395nm Protected (24 Volt, 108 LEDs, 2835, IP64)

LE-24-395-108X2835PLX

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Product description

Our advanced UV-A 395nm LED engine offers a powerful solution for a wide range of industrial and research-related applications. This LED engine is designed for use in environments where precision, flexibility, and reliability are essential, but without the housing, making it an ideal choice for applications that require customized integration. The LED engine provides a range of unique advantages:

Optimal Wavelength for Specific Applications: The 395 nm wavelength is ideal for applications requiring UV-A light, such as curing, fluorescence, and photochemical processes. This wavelength provides high energy intensity, essential for activating photochemical reactions in various industrial and research environments.

Stroboscopic Pulse Function: The strobing pulse technology enables the generation of radiation with higher peak intensity. This technique increases efficiency in processes that are sensitive to short light pulses. The ability to deliver rapid, repeated pulses enhances effectiveness in applications such as surface treatment, photopolymerization, or material processing. This functionality is fully supported when integrated with the Manima Pollux Industry system, providing precise control and optimization of pulse intensity for maximum performance.

Increased Radiation Capacity: When integrated with the Manima Pollux Industry system, the UV-A 395nm LED engine achieves a radiation capacity significantly higher than conventional systems. This provides benefits such as accelerated reactions, improved industrial machine performance, and more accurate control over treatment parameters.

Reliable Performance and Long Lifespan: The robust construction of the LED engine ensures reliable performance, even without the protective housing. The long lifespan of the LEDs reduces the need for frequent replacements and minimizes downtime, contributing to higher operational efficiency and lower maintenance costs.

Energy Efficiency and Sustainability: Our technology is designed with energy efficiency in mind, reducing operational costs while optimizing energy output. This makes it a sustainable choice for industrial applications looking to minimize energy consumption and environmental impact.

Built-in NTC Sensor: The LED engine is equipped with an NTC (Negative Temperature Coefficient) sensor for precise temperature regulation. This ensures that the system operates within optimal temperature ranges for maximum performance and extended lifespan.

Real-time Monitoring and Maximum Radiation: When combined with the Manima Pollux Industry system, real-time monitoring allows for achieving the maximum radiation output from the UV-LED fixture. This integration provides precision control, ensuring the system operates with maximum efficiency under varying conditions.

Applications:

- **Curing Coatings and Inks**: Ideal for fast curing of coatings, inks, and adhesives in industrial production lines.
- **Fluorescence Research**: For applications where materials fluoresce under UV-A light, such as detecting cracks or studying material aging.
- **Photochemical Reactions**: Perfect for activating photochemical processes in laboratory environments.
- **Material Processing and Surface Treatment**: For applications that require precision and control in material processing, such as improving adhesion or activating chemical reactions.
- **Research and R&D**: Suitable for scientific research where the 395 nm wavelength is necessary, such as testing UV stability or investigating fluorescent properties of materials.
- **Reactor Applications**: The UV-A 395nm LED engine is particularly suited for reactors using UV light to accelerate photochemical reactions, such as in pharmaceutical, chemical, and environmental industries. The high intensity of the LED engine provides advantages in applications like water treatment, wastewater purification, and synthesizing chemical compounds.

With the combination of the 395 nm UV-A LED engine, stroboscopic pulse function, and real-time monitoring, this is the ideal choice for applications requiring precision, power, and efficiency.

Technical specifications

General	
Brand	LuxaLight
Application	Curing & Aging Machine Vision UV Inspection
LED type	2835
PCB color	White
Material	Aluminum
Dimensions	200 × 20 × 2 mm
Mounting	3M tape VHB4905
LEDs per piece	108.00

Lighting	
Wave length UV	385~410 nm
Wave length	395nm
Beam angle	120 °

Measurement results

PPFD

Value	Measuring distance
480 µmol/m2	50 mm
292 µmol/m2	75 mm
210 µmol/m2	100 mm
72,7 µmol/m2	200 mm
38,7 µmol/m2	300 mm

Irradiance

Value	Measuring distance
361 W/m2	50 mm
255 W/m2	75 mm
161 W/m2	100 mm
54,7 W/m2	200 mm
28 W/m2	300 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 64

Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

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