

Datasheet

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

LE-24-395-108X2835PLX

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Product description

The **LuxaLight LED Engine UV-A 395 nm (Protected, 24 V)** is a **semi-finished aluminum PCB module**, crafted for engineers and OEMs who need a powerful UV-A light source for integration into custom fixtures, optical setups, or R&D configurations. As a component, it delivers only the **light-emitting core**, offering full flexibility in thermal management, optics, and housing design.

Equipped with 108 × 2835 SMD LEDs, an **industrial silicone coating providing IP64 protection**, and an integrated NTC temperature sensor, the module ensures high reliability and stability. When combined with the MaNima Pollux Industrial System, this engine becomes a **complete, high-efficiency UV solution**, with significantly improved efficiency through pulsing and advanced thermal control.

Key Specifications

Property	Value / Description
Type	LED Engine – semi-finished PCB module
LEDs	108 × 2835 SMD LEDs
PCB base	Aluminum
PCB protection	Industrial silicone coating (provides IP64 rating)
Dimensions	200 × 20 × 2 mm (modular design)
Supply	24 V DC / ~30 W
Wavelength	395 nm (UV-A), peak ~397 nm
Irradiance (5 cm)	~486 W/m ² total radiant power @ 24 V
Beam angle	120°
Thermal monitoring	Integrated NTC sensor (5 kΩ, β = 3950)

Applications

- **UV curing of coatings, inks & adhesives** – efficient polymerization for industrial production.
- **Fluorescence activation & inspection** – excitation of fluorescent materials for defect detection and research.
- **Photopolymerization & 3D printing** – curing of UV-sensitive resins in additive manufacturing.
- **Surface treatment & activation** – improves adhesion, activation of plastics, and surface modification.
- **Machine vision with UV contrast** – highlighting defects or features invisible under visible light.
- **Research & laboratory setups** – controlled UV-A source for photobiology, chemistry, and testing.

Also applicable in R&D and specialized lighting setups.

Benefits for Engineers

- **Semi-finished module** – ideal for OEM and R&D integration
- **Perfect Pollux companion** – becomes a fully controllable UV system with MaNima Pollux
- **Improved efficiency with Pollux** – pulsing and thermal control maximize UV performance
- **Design freedom** – adapt housing, optics, and thermal configuration as required
- **High UV intensity** – irradiance up to ~486 W/m² at 5 cm enables powerful processing
- **Modular scalability** – multiple engines can be combined for larger coverage
- **Thermal safety** – NTC ensures consistent operation and long lifetime
- **Industrial robustness** – IP64 protection via silicone coating

Integration with MaNima Pollux Industrial System

- Real-time NTC temperature monitoring

- Pulse/strobe modes for **higher peak intensities and improved efficiency**
- Prevents overheating while maximizing UV performance
- Provides data to PLC/SCADA automation systems
- Open UDP-based API for advanced system integration and customization

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		
Peak wavelength (Object size: 1 piece)	397 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	29.45 W/sqm
	10cm	11.19 W/sqm
	15cm	5.7 W/sqm
	20cm	3.46 W/sqm
	25cm	2.33 W/sqm
	30cm	1.7 W/sqm
Total irradiance (Object size: 1 piece)		24V
	5cm	486.4 W/sqm
	10cm	194 W/sqm
	15cm	100.3 W/sqm
	20cm	61.2 W/sqm
	25cm	40.96 W/sqm
	30cm	30.29 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
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Environmental

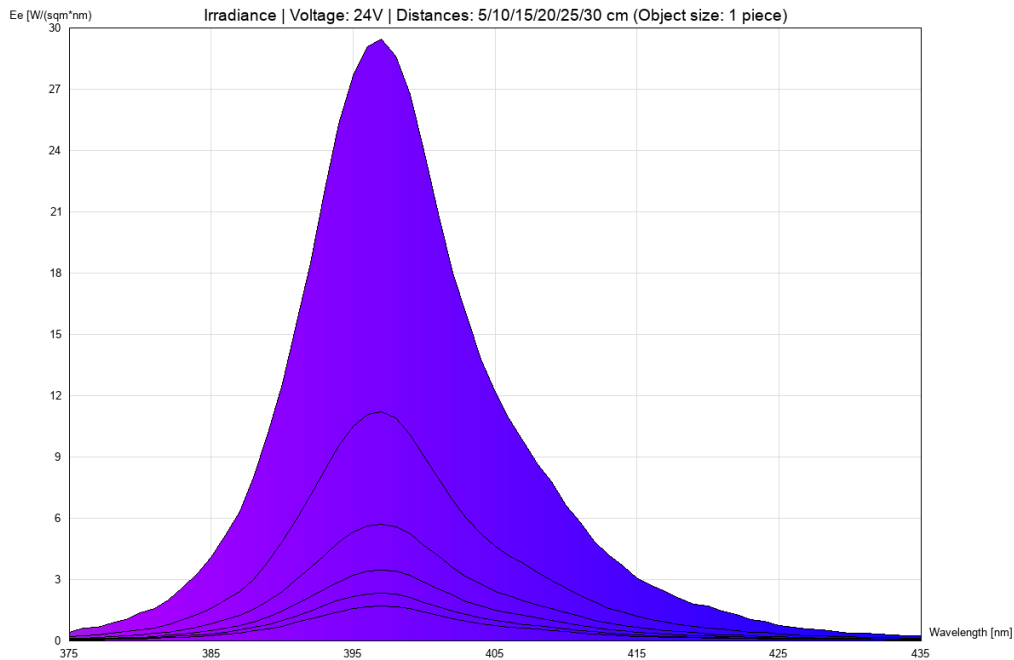
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

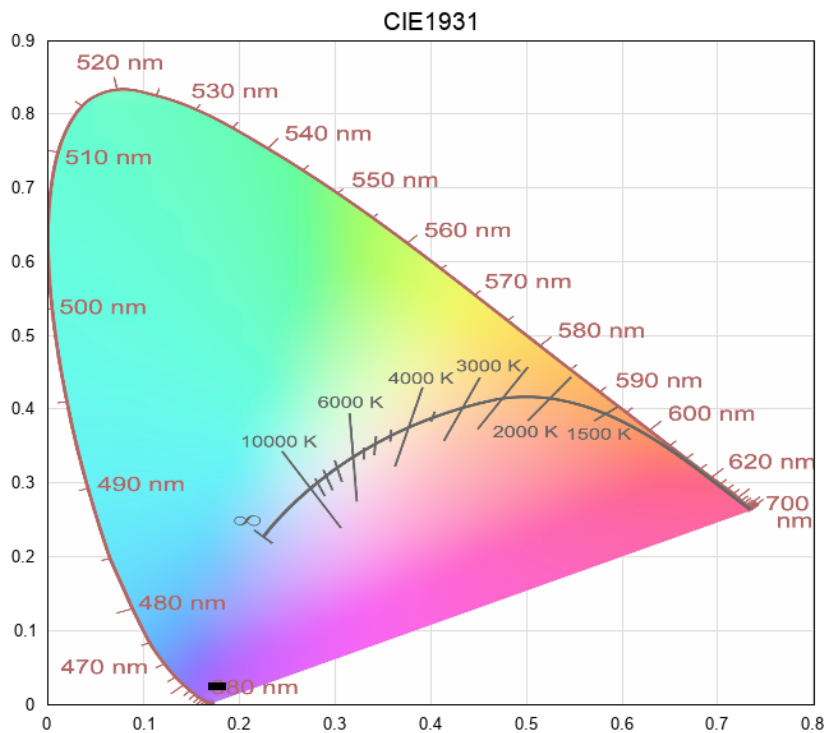
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

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



cie1931



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