

Datasheet

LuxaLight LED Engine UV-A 365nm Protected (24 Volt, 108 LEDs, 2835, IP64)

LE-24-365-108X2835PLX

Version: 2025-08-27.2

Product description

The **LuxaLight LED Engine UV 365 nm (Protected, 24 V)** is a **semi-finished aluminum PCB module**, developed for engineers and OEMs who require high-performance UV-A radiation for integration into industrial, medical, forensic, or R&D systems. Delivered as a **light-emitting core**, it provides maximum flexibility in housing, optics, and thermal management.

With 108 × 2835 SMD LEDs, an **industrial silicone coating ensuring IP64 protection**, and an integrated NTC sensor, the module delivers stable and durable performance. Combined with the MaNima Pollux Industrial System, it becomes a **complete, high-efficiency UV-A solution**, enabling pulsed operation, thermal monitoring, and advanced integration into automation platforms.

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 (IP64)
Dimensions	200 × 20 × 2 mm (modular design)
Supply	24 V DC / ~30 W
Wavelength	365 nm UV-A
Irradiance (5 cm)	~412 W/m ² (typical UV output)
PPFD (5 cm)	Not applicable (outside PAR range)
Illuminance (5 cm)	Not applicable (UV not visible to human eye)
Beam angle	120°
Thermal monitoring	Integrated NTC sensor (5 kΩ, β = 3950)

Applications

- **UV curing (inks, resins, adhesives, coatings)** – initiates fast, low-temperature polymerization in printing, 3D printing, electronics, and industrial processes.
- **Fluorescence & forensic analysis** – excites fluorescent compounds in biological samples, minerals, inks, and security features for high-contrast imaging.
- **Document & currency verification** – reveals hidden safety markings, counterfeit detection, and anti-tampering features under UV.
- **Material inspection & quality control** – exposes invisible surface defects, contamination, or impurities in plastics, glass, and packaging.
- **Medical diagnostics & dermatology** – used in Wood's lamp techniques to detect skin disorders, infections, or porphyrins via induced fluorescence.
- **Sterilization & disinfection support** – activates UV-sensitive compounds and photocatalysts for germ reduction on surfaces, air, and water.
- **Environmental, food & agricultural research** – enables non-destructive fluorescence analysis of water quality, crop health, and food integrity.
- *R&D & sensor calibration – stable UV-A reference source for spectroscopy, device testing, and experimental setups.*

Benefits for Engineers

- **Semi-finished module** – flexible integration for OEMs and R&D setups
- **Perfect Pollux companion** – becomes a complete, controllable UV-A system with MaNima Pollux
- **Strong UV-A output** – ~412 W/m² at 5 cm for demanding applications
- **Design freedom** – housing, optics, and thermal management remain customizable
- **Thermal safety** – integrated NTC sensor ensures stable operation and extended lifetime

- **Modular scalability** – multiple modules can be combined for larger coverage
- **Industrial robustness** – IP64 protection via silicone coating

Integration with MaNima Pollux Industrial System

- Real-time NTC temperature monitoring
- Pulse/strobe modes for **enhanced UV-A efficiency**
- Prevents overheating while maintaining high performance
- Compatible with PLC/SCADA for industrial automation
- Open UDP API for advanced system integration

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	365nm	
Beam angle	120 °	
Measurement results		
Peak wavelength (Object size: 1 piece)	369 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	26.57 W/sqm
	10cm	11.96 W/sqm
	15cm	6.18 W/sqm
	20cm	3.8 W/sqm
	25cm	2.49 W/sqm
	30cm	1.84 W/sqm
Total irradiance (Object size: 1 piece)		24V
	5cm	353.6 W/sqm
	10cm	158.1 W/sqm
	15cm	83.74 W/sqm
	20cm	51.78 W/sqm
	25cm	33.83 W/sqm
	30cm	24.68 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
----------------	--

Environmental

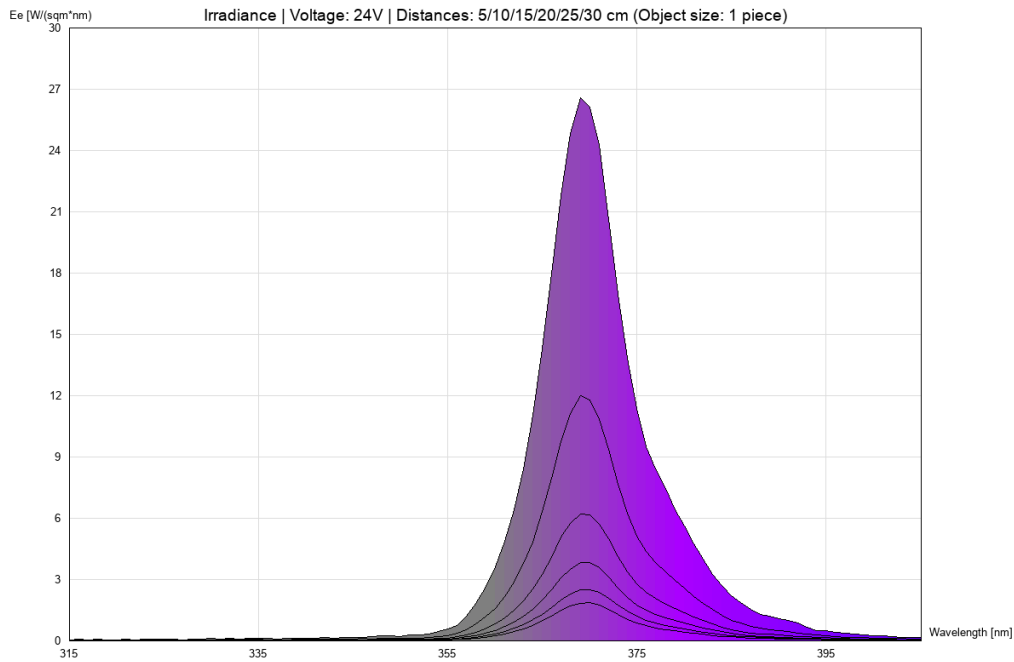
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

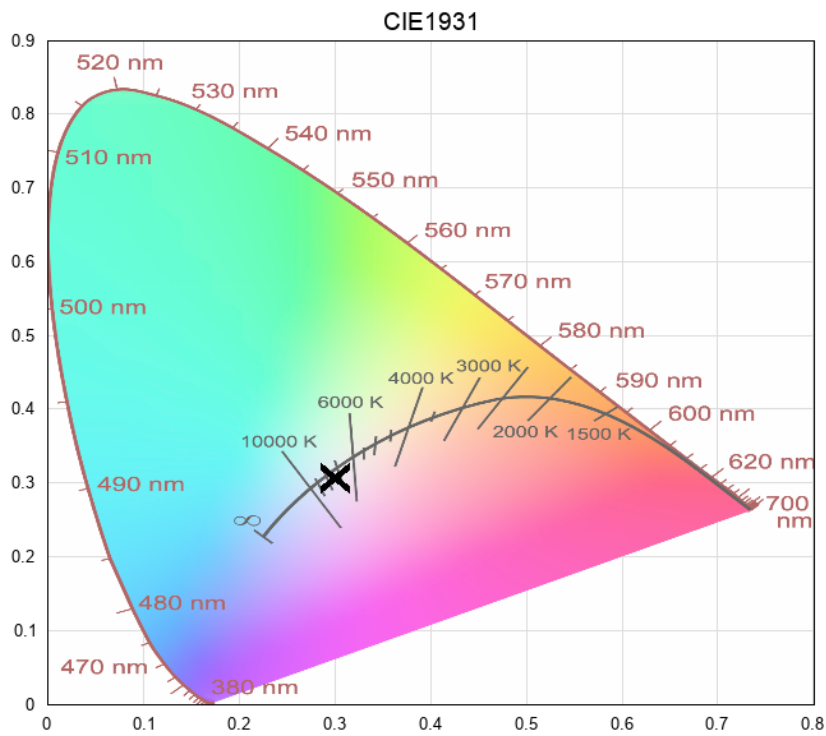
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 315-405-uv-a (24V)



cie1931



While LuxaLight has made every reasonable effort to ensure the accuracy of the information in this brochure, LuxaLight does not guarantee that it is error - free, nor does LuxaLight make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. LuxaLight reserves the right to make any adjustments to the information contained herein at any time without notice. LuxaLight expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalogue are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult LuxaLight for the latest dimensions and design specifications.