

Datasheet

LuxaLight LED Engine 24V UV-B 300nm (24 Volt, 57 LEDs, 3535, IP20)

LE-24-300-57X3535ILX60

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Product description

The **LuxaLight LED Engine 24 V UV-B 300 nm (57 LEDs, 3535, IP20)** is a **semi-finished aluminum PCB module**, designed for engineers and OEMs who require controlled UV-B radiation for phototherapy, photochemistry, or research setups. Delivered as a **light-emitting core**, it offers full flexibility for housing, optics, and thermal integration.

With 57 × 3535 SMD LEDs, a **60° optic**, and IP20 protection, this engine provides **high UV-B irradiance at close distances**. The integrated NTC sensor ensures safe and stable operation. Combined with the MaNima Pollux Industrial System, it becomes a **fully controllable UV-B source**, supporting pulsed operation, thermal monitoring, and advanced automation.

Key Specifications

Property	Value / Description
Type	LED Engine – semi-finished PCB module
LEDs	57 × 3535 SMD LEDs
PCB base	Aluminum
PCB protection	IP20 (no dust/moisture protection)
Dimensions	200 × 20 × 2 mm (modular design)
Supply	24 V DC / ~55.2 W (~2.30 A)
Wavelength	300 nm UV-B
Irradiance (5 cm)	~208 W/m ²
Irradiance (10 cm)	~124 W/m ²
Irradiance (15 cm)	~78 W/m ²
Beam angle	60° (focused optic)
Thermal monitoring	Integrated NTC sensor (5 kΩ, β = 3950)

Applications

- **Phototherapy for dermatology** – targeted treatment of skin conditions such as psoriasis, eczema, or vitiligo with controlled UV-B dosing.
- **Vitamin D synthesis systems** – supports medical and wellness devices designed to stimulate natural vitamin D production.
- **Photochemical activation** – efficient initiation of specific chemical reactions, polymerization, or material modification requiring UV-B energy.
- **Surface decontamination (specialized use)** – localized microbial inactivation in cases where UV-C is unsuitable or too aggressive.
- **Optical spectroscopy & fluorescence** – excitation of UV-B responsive compounds in diagnostics, sensors, and scientific instruments.
- *R&D & calibration – stable UV-B reference source for sensor validation, photobiological research, and laboratory test setups.*

Benefits for Engineers

- **High UV-B output** – ~208 W/m² at 5 cm for phototherapy and research use
- **Semi-finished module** – adaptable for OEM and R&D integration
- **Pollux-compatible** – pulse/strobe control and thermal feedback supported
- **Focused beam** – 60° optic provides efficient, localized irradiation
- **Thermal reliability** – integrated NTC ensures consistent safe operation
- **Compact & powerful design** – ideal for medical, wellness, and research tools
- **Scalable system** – multiple modules can be combined for larger coverage

Integration with MaNima Pollux Industrial System

- Real-time NTC thermal monitoring
- Pulse/strobe operation for **precise UV-B dosing**
- Overheating protection while maintaining stable output
- PLC/SCADA compatibility for automated operation
- Open UDP API for advanced system integration

Technical specifications

General		
Brand	LuxaLight	
Application	Disinfection	
LED type	3535	
PCB color	White	
Material	Aluminum	
Dimensions	200 × 20 × 2 mm	
Mounting	3M tape VHB4905	
LEDs per piece	57.00	
Lighting		
Wave length	275 nm	
Beam angle	60 °	
Measurement results		
Peak wavelength (Object size: 1 piece)	300 nm	
Peak irradiance (Object size: 1 piece)		24V
	5cm	11.81 W/sqm
	10cm	7.05 W/sqm
	15cm	4.41 W/sqm
	20cm	3.21 W/sqm
	25cm	2.25 W/sqm
	30cm	1.71 W/sqm
Total irradiance (Object size: 1 piece)		24V
	5cm	208.1 W/sqm
	10cm	123.7 W/sqm
	15cm	78.16 W/sqm
	20cm	56.79 W/sqm
	25cm	40.05 W/sqm
	30cm	30.58 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	2.30 A / piece	
Power consumption per piece	55.20 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

Directives - standards - certificates

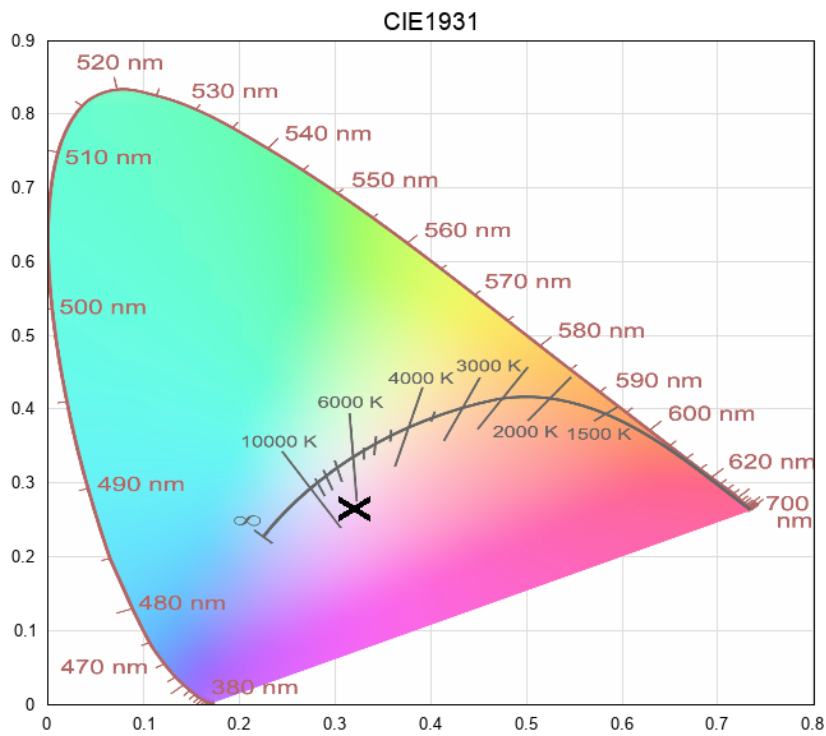
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 280-315-uv-b (24V)



cie1931



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