Datasheet

LuxaLight LED Engine Near Infrared 860nm Protected (24 Volt, 108 LEDs, 2835, IP64)

LE-24-860-108X2835PLX

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Product description

The LuxaLight Industrial LED Engine, designed for high-performance applications, is optimized for processes requiring light in the near-infrared spectrum. With a wavelength of 860nm, this LED engine provides an efficient solution for applications such as medical treatments, material testing, and scientific research that benefit from infrared light.

This LED engine is a semi-finished product, which allows easy integration into custom systems or housings depending on your specific needs. It is ideal for use in various industrial, research, and medical applications, where the 860nm wavelength can provide the desired results. The engine is designed for seamless integration into larger systems or custom enclosures.

Key Features:

- **860nm Wavelength:** The 860nm wavelength is ideal for applications requiring near-infrared light, such as material testing, medical therapies, and specific scientific processes.
- **24V Power Supply:** The LED engine operates on a reliable 24V power supply, ensuring stable and consistent operation, perfect for demanding industrial and research applications.
- **High Radiation Intensity:** This LED engine delivers high radiation intensity, making it suitable for high-efficiency processes that require significant light output in the infrared spectrum.
- **Semi-Finished Product:** The LED engine can be integrated into custom systems or housings, offering flexibility for various industrial, research, or medical setups.
- **Integration with MaNima Pollux Industry Pulsing (Strobing):** The LED engine is compatible with the MaNima Pollux Industry System for pulsing (strobing), enhancing radiation intensity 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, maintaining optimal operating conditions for maximum radiation output.

Applications:

- **Medical Therapy:** The 860nm wavelength is effective for various therapeutic applications, including tissue healing, pain relief, and promoting circulation, often used in photobiomodulation (PBM) treatments.
- **Material Testing & Quality Control:** This LED engine is ideal for testing materials that react to infrared light, useful in industrial settings for evaluating the quality and integrity of different materials.
- **Biological & Scientific Research:** The 860nm wavelength is beneficial for various research fields, such as studying biological processes, enhancing cell growth, and promoting deep tissue regeneration.
- **Medical Equipment:** The engine can be integrated into medical devices designed for infrared treatments, such as those used for physiotherapy, pain management, and deep tissue therapy.
- **Industrial Applications:** The LED engine can be used in processes requiring infrared light for material curing, heat testing, and other industrial applications.

Benefits:

- **High Radiation Intensity:** The engine provides high radiation intensity, allowing for faster reactions and increased productivity in infrared applications.
- **Flexible Integration:** As a semi-finished product, it can be easily integrated into custom housings or systems tailored to specific applications.
- **Efficient Performance:** The engine delivers consistent, efficient performance, ideal for demanding environments that require stable light output.
- **Real-Time Temperature Monitoring:** The integrated NTC sensor, in combination with the MaNima Pollux Industry System, ensures consistent temperature management for optimal performance and reliability over time.

Technical specifications

General	
Brand	LuxaLight
Application	Hyper - spectral Imaging Machine Vision
LED type	2835
PCB color	White
Material	Aluminum
Dimensions	200 × 20 × 2 mm
Mounting	3M tape VHB4905
Warranty	5 years
Warranty	70000
LEDs per piece	108.00

Lighting	
Wave length	860 nm
Beam angle	120 °

Measurement results

Irradiance

Value	Measuring distance
522 W/m2	25 mm
283 W/m2	50 mm
161 W/m2	75 mm
110 W/m2	100 mm
37,1 W/m2	200 mm
19,6 W/m2	300 mm

Electronics	
Working voltage	24V
Current per piece	1.25 A / piece
Power consumption per piece	30.00 W / piece
PCB material	Aluminium

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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