Datasheet

LuxaLight Industrial LED Fixture Transparent cover Deep Red 660nm 24.2x16mm (24 Volt, 2835, IP64)

LF-24-660-24.2X16-TC

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Product description

The LuxaLight Industrial LED Fixture is designed for intensive industrial applications that require high radiation intensity for a wide range of processes, including material curing, biological research, and more. With a wavelength of 660nm, this LED fixture provides a reliable and efficient solution for processes that benefit from deep red light, such as plant growth stimulation, tissue regeneration, and more.

The LED fixture is equipped with a silicone coating on the PCB, offering extra protection against moisture, dust, and other environmental factors. The transparent cover not only protects the fixture from mechanical damage but also allows the 660nm wavelength to pass through effectively for maximum performance and reliability.

Key Features:

- **660nm Wavelength:** The 660nm wavelength is ideal for applications that require deep red light, such as horticulture, biological research, and specific industrial processes.
- **24V Power Supply:** The fixture operates on a reliable 24V power supply, ensuring stable and consistent operation, perfect for demanding industrial applications.
- **Silicone Coating on PCB:** The PCB is coated with silicone to protect against environmental factors like moisture and dust, ensuring durability in harsh industrial environments.
- **Transparent Cover with Mechanical Protection:** The cover provides mechanical protection against physical damage while allowing the 660nm wavelength to pass through effectively, ensuring maximum performance and reliability.
- **Integration with MaNima Pollux Industry Pulsing (Strobing):** The LED fixture supports integration with the MaNima Pollux Industry System for pulsing (strobing), significantly increasing radiation intensity. This feature allows 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. This maintains the optimal operating temperature for maximum radiation output and consistent performance.

Applications:

- **Horticulture & Agriculture:** The 660nm wavelength is highly effective in stimulating plant growth, making it ideal for greenhouse environments and other agricultural applications where plant health and growth are critical.
- **Biological Research:** In scientific and medical fields, 660nm light can be used for applications such as promoting tissue regeneration, cell cultivation, and photobiomodulation therapy (PBM), which can aid in pain reduction and wound healing.
- **Medical Therapy:** 660nm light is used in phototherapy treatments, including skin healing, anti-aging treatments, and muscle recovery, leveraging the benefits of red light to stimulate cells and tissues.
- **Food Industry:** The 660nm wavelength can be used for applications such as the stimulation of growth in food production environments or in the pasteurization process of certain food products.
- **Industrial Material Curing (Non-UV):** The deep red light is used for curing certain types of coatings and materials that respond to red wavelengths, ensuring effective and rapid curing processes in industrial settings.
- **Cosmetic Industry:** The fixture is ideal for applications in the cosmetic industry, where red light is used for skin treatments such as reducing wrinkles, improving skin tone, and promoting collagen production.

Benefits:

- **High Radiation Intensity:** The ability to pulse with the MaNima Pollux Industry System allows radiation intensity to be significantly increased, resulting in faster reactions and increased productivity.
- **Real-Time Temperature Monitoring for Consistent Performance:** The NTC sensor, combined with the MaNima Pollux Industry System, ensures continuous temperature measurement, helping to maintain the optimal operating temperature and preventing overheating, which prolongs the LED's lifespan and improves efficiency.
- **Industrial Durability:** The silicone coating on the PCB provides extra protection against dust, moisture, and other environmental factors, making the fixture resistant to the challenges of heavy industrial environments.
- **Efficiency and Speed:** The LED fixture provides sufficient power for fast and efficient performance, which is essential for industrial production systems that need to process or cure large volumes of material quickly.

Technical specifications

General	
Brand	LuxaLight
Application	Barcode Scanning Machine Vision
LED type	2835
Material	Aluminum
Dimensions	220 × 24,2 × 16 mm
Mounting	Surface mounted
Warranty	5 years
Cover type	PMMA transparent
LEDs per piece	108.00
Lifetime	70000 hours

Lighting	
Wave length	660 nm
Beam angle	120 °
LB waarde	L80B50

Measurement results

Illuminance (Lux)
(Object size: 1 piece)

	24V
5cm	26980 lx
10cm	10420 lx
15cm	5294 lx
20cm	3242 lx
25cm	2179 lx
30cm	1653 lx

Total PPFD umol/m2 (PAR 400-700nm)
(Object size: 1 piece)

	24V
5cm	2485.19 umol/m2
10cm	928.214 umol/m2
15cm	473.499 umol/m2
20cm	295.018 umol/m2
25cm	198.704 umol/m2
30cm	150.551 umol/m2

Peak wavelength
(Object size: 1 piece)
662 nm

• 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

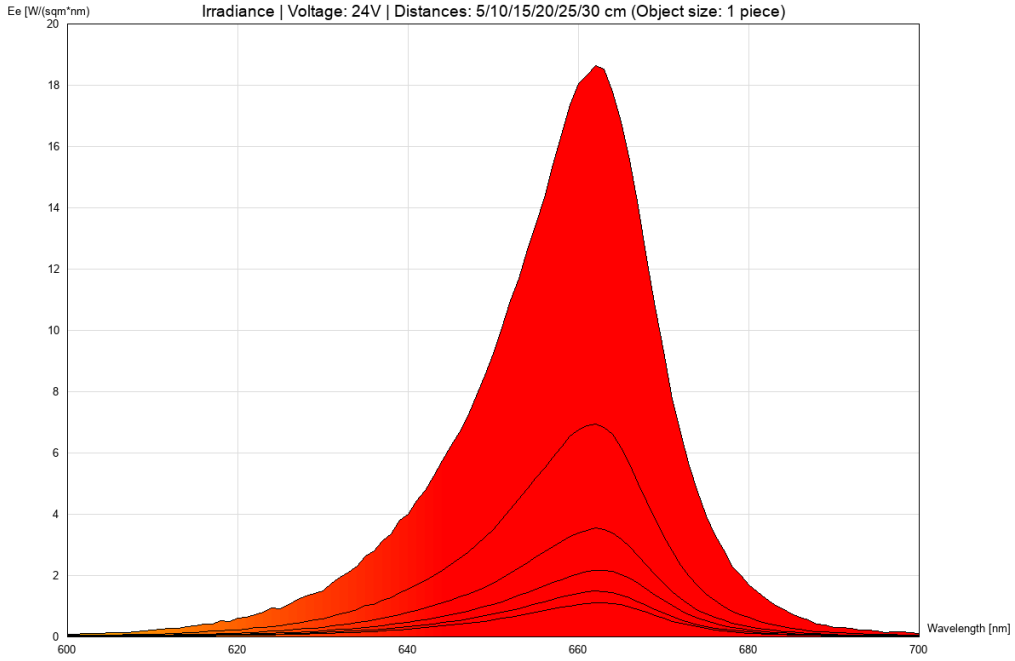
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 600-700-red (24V)



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