

Datasheet

LuxaLight Industrial LED Fixture Opaline cover Green 525nm 24.2x16mm (24 Volt, 2835, IP64)

LF-24-525-24.2X16-OC

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Product description

The **LuxaLight Industrial LED Fixture** is specifically engineered for demanding industrial applications that require high radiation intensity. With a wavelength of **525nm**, this LED fixture is a reliable and efficient solution for a variety of industrial processes, including plant growth stimulation, biological research, and more. The **525nm** wavelength is ideal for applications such as plant growth enhancement, biological studies, and other specific industrial needs that benefit from green light. The fixture features an **opal cover**, providing diffuse light for uniform distribution while protecting the LED from dust and mechanical damage.

Key Features:

- **525nm Wavelength:** The **525nm** wavelength is perfect for a range of industrial and scientific applications, including plant growth stimulation and biological research, where green light is essential.
- **24V Power Supply:** Powered by a reliable 24V power supply, ensuring stable operation across demanding industrial environments.
- **Aluminum Housing with Opal Transparent Cover for Mechanical Protection:** The durable aluminum housing provides robust protection against physical impacts, and the opal transparent cover ensures the LED fixture remains protected while allowing the **525nm** wavelength to pass through effectively. The opal cover also diffuses the light for more even distribution, ensuring long-lasting reliability and performance.
- **Industrial-Grade Durability:** Designed with an industrial focus, this fixture withstands the rigors of tough environments, offering resistance to moisture, dust, and mechanical stresses.
- **Real-Time Temperature Monitoring via NTC Sensor:** Integrated with a temperature monitoring system, the fixture ensures continuous temperature regulation, maintaining an optimal operating temperature for consistent and efficient performance.

Applications:

- **Plant Growth Stimulation:** The **525nm** wavelength is ideal for stimulating plant growth, making it perfect for greenhouse environments, agricultural applications, and other horticultural needs.
- **Biological and Medical Research:** The fixture supports biological research by promoting cell growth and regeneration, making it valuable for cell cultivation, tissue studies, and medical applications such as photobiomodulation therapy (PBM).
- **Medical Therapy:** Used in phototherapy for skin healing, muscle recovery, and anti-aging treatments, the **525nm** light stimulates cell and tissue regeneration for faster recovery.
- **Food Industry:** The green light is utilized in food production environments to stimulate growth or assist in processes such as the pasteurization of specific food products.
- **Cosmetic Industry:** In the cosmetic industry, **525nm** light is beneficial for enhancing skin tone, reducing wrinkles, and promoting collagen production, providing a non-invasive solution for skin treatments.

Benefits:

- **High Radiation Intensity:** With the ability to pulse, the fixture can significantly increase radiation intensity, resulting in faster reaction times and higher productivity in industrial processes.
- **Efficient Temperature Management:** The NTC sensor continuously monitors temperature, ensuring that the fixture remains at optimal levels for peak performance, thus preventing overheating and extending the lifespan of the fixture.
- **Industrial Durability:** The aluminum housing, combined with the opal transparent cover, provides robust protection against physical damage while ensuring reliable performance in harsh industrial conditions, extending the fixture's lifespan and minimizing maintenance.
- **Fast and Efficient Performance:** The high efficiency of the **525nm** LED ensures fast processing speeds, ideal for high-throughput industrial applications such as material curing, water purification, and large-scale production processes.

Technical specifications

General		
Brand	LuxaLight	
Application	Horticulture Machine Vision	
LED type	2835	
Material	Aluminum	
Dimensions	220 × 24,2 × 16 mm	
Mounting	Surface mounted	
Cover type	PMMA opal	
LEDs per piece	108.00	
Lighting		
Wave length	525nm	
Beam angle	120 °	
Measurement results		
Illuminance (Lux) (Object size: 1 piece)		24V
	5cm	180300 lx
	10cm	66190 lx
	15cm	34120 lx
	20cm	21000 lx
	25cm	14210 lx
	30cm	10830 lx
Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)		24V
	5cm	1545.93 umol/m2
	10cm	570.39 umol/m2
	15cm	294.37 umol/m2
	20cm	181.107 umol/m2
	25cm	122.342 umol/m2
	30cm	93.2151 umol/m2
Peak wavelength (Object size: 1 piece)	524 nm	
<div>• By combining Pulse Mode with Real-Time Monitoring, the efficiency of LED systems can be increased, resulting in higher output.</div> <div>• We have the expertise and equipment to perform measurements tailored to the specific requirements of the application.</div>		
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

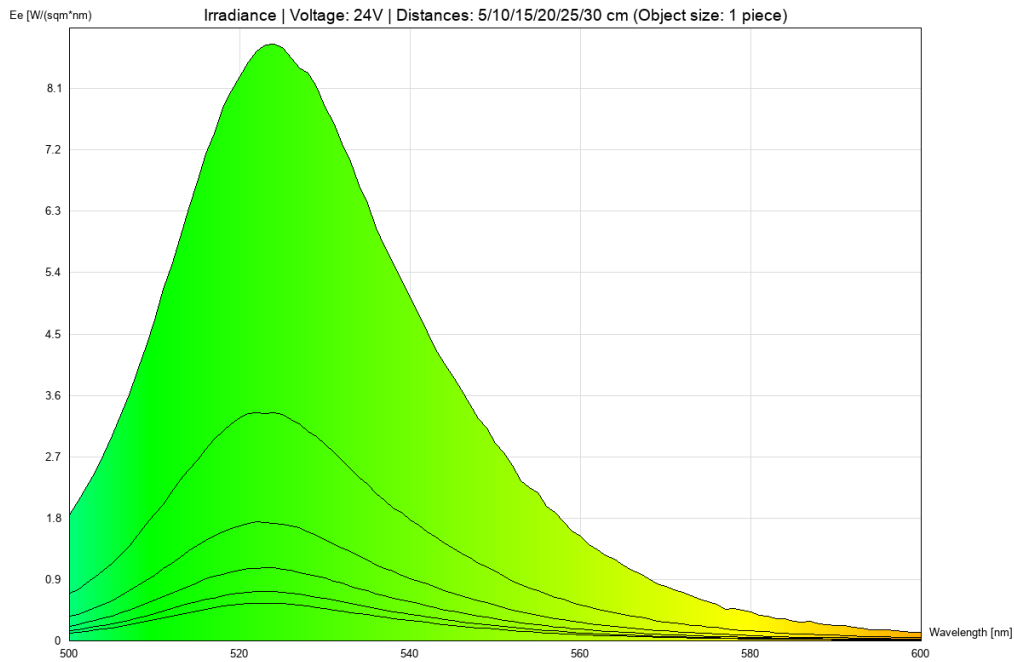
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

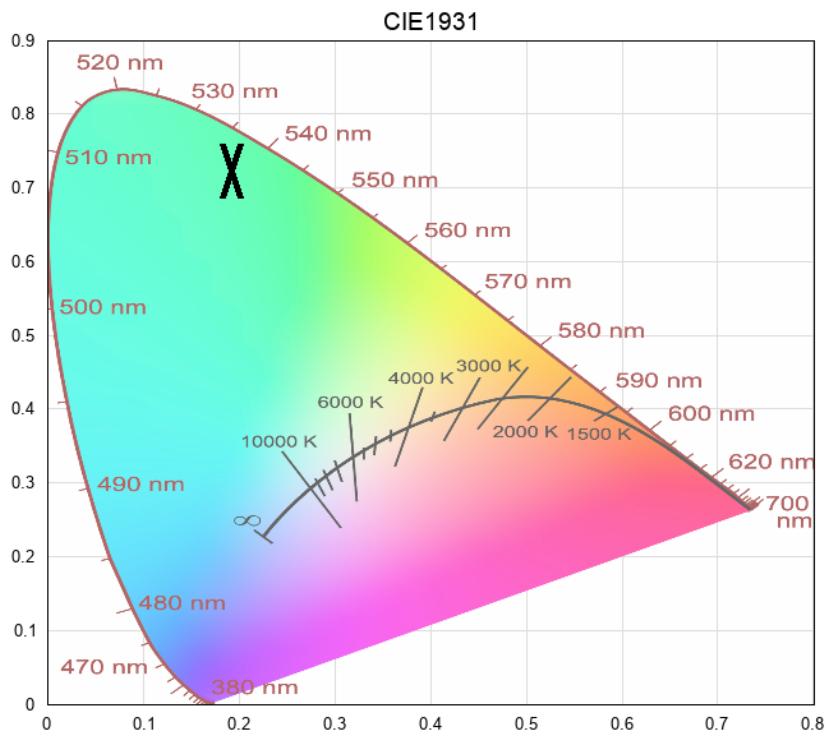
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 500-600-green (24V)



cie1931



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