

Datasheet

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

LF-24-525-24.2x16-POL

Version: 2025-07-10.2

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, water purification, 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 a **polarized cover** (0°, 60°, 90°, and 120°), allowing you to adjust the light distribution for different applications.

Key Features:

- **525nm Wavelength:** The **525nm** wavelength is perfect for a range of industrial and scientific applications, including plant growth stimulation, water purification, 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 Polarized Transparent Cover (0°, 60°, 90°, and 120°):** The durable aluminum housing provides robust protection against physical impacts, and the polarized cover ensures that light distribution can be customized depending on your needs. You can choose from 0°, 60°, 90°, or 120° for different levels of light spread, providing flexibility for diverse industrial and scientific applications.
- **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:

- **Water Purification:** The **525nm** wavelength is highly effective in water purification processes, promoting photochemical reactions that help break down pollutants and harmful substances in water.
- **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 polarized 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	Machine Vision
LED type	2835
Material	Aluminum
Dimensions	220 × 24,2 × 16 mm
Mounting	Surface mounted
Cover type	PMMA Polarised transparent
LEDs per piece	108.00

Lighting

Wave length	525nm
Beam angle	120 °
LB waarde	L80B50

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
• 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

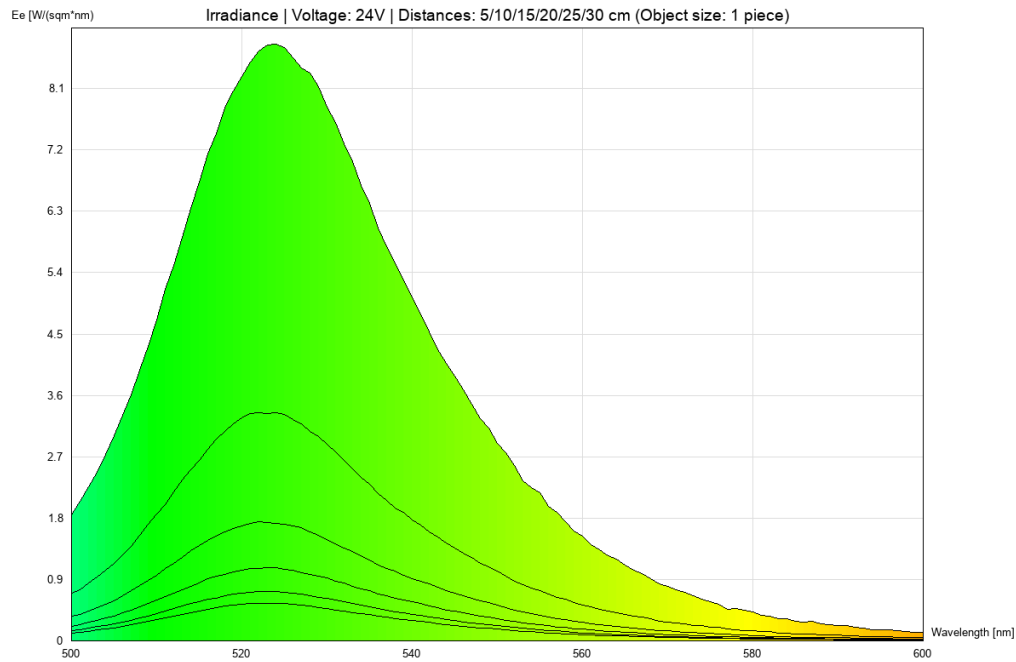
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

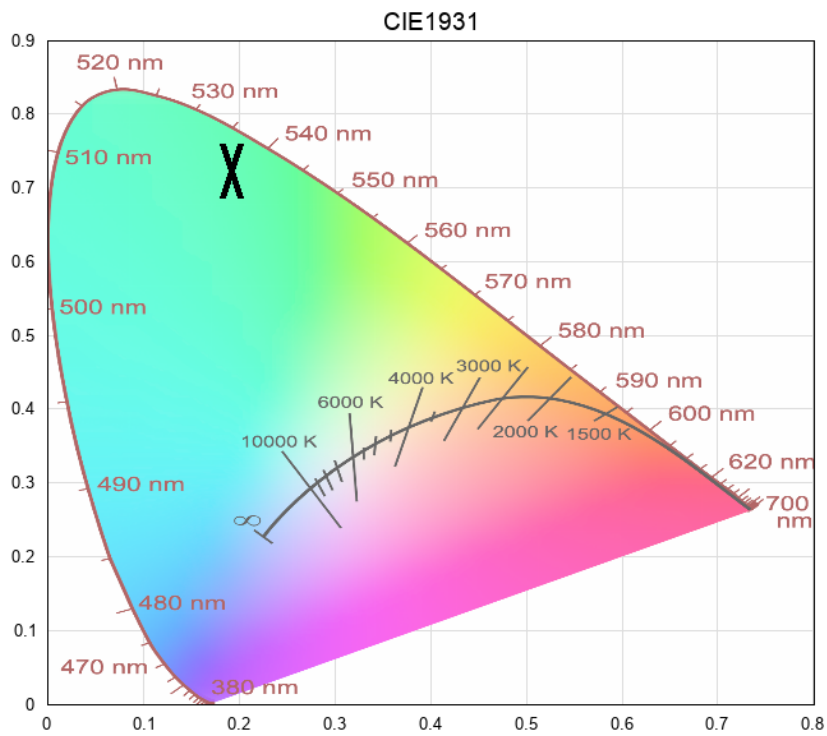
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

irradiance - 500-600-green (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.