

Datasheet

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

LF-24-525-24.2X16-TC

Version: 2025-08-26.1

Product description

The **LuxaLight Industrial LED Fixture Transparent PMMA Cover Green 525 nm (24.2 × 16 mm)** delivers high-intensity green illumination with industrial-grade durability. Its **modular design** (220–3000 mm), clear **PMMA cover**, and seamless integration with the **MaNima Pollux Industrial System** make it highly suitable for machine vision, spectral imaging, food inspection, and horticultural lighting in industrial and research environments.

Key Specifications

Property	Value / Description
Wavelength	525 nm green (measured peak ~524 nm)
Optical Output	Illuminance ~195,000 lx @ 5 cm; PPFD ~1,546 µmol/m²/s @ 5 cm; Irradiance ~396 W/m² @ 5 cm
Cover	Transparent PMMA – high transmission with mechanical protection
PCB Protection	Industrial-grade silicone coating
Environmental Protection	IP64 – dust-tight and splash-resistant
Thermal Monitoring	Integrated NTC sensor, controllable via MaNima Pollux
Design	Modular & scalable, 220–3000 mm
Dimensions	24.2 × 16 mm (fixture profile)
Environment	Engineered for challenging industrial conditions (dust, vibration, moisture)

Applications

- **Machine Vision & Quality Control** – excellent for high-contrast inspection due to peak human eye sensitivity
- **Surface Inspection** – highlights scratches, defects, and microstructures
- **Printing & Packaging Verification** – detection of print quality, labels, and contrast markers
- **Spectral & Multispectral Imaging** – precise green channel for scientific and industrial analysis
- **Food Inspection** – evaluation of ripeness, freshness, and color uniformity
- **Horticulture** – penetrates leaf canopies and complements red/blue lighting for balanced growth

Benefits for Engineers

- **Optimized Green Output:** concentrated green wavelength improves imaging contrast and analysis
- **Thermally Stable:** real-time Pollux feedback ensures consistent performance and LED longevity
- **Sturdy Design:** robust PMMA cover and IP64 rating for industrial reliability
- **Flexible Configuration:** modular scalability from 220 to 3000 mm
- **Plug-and-Play Integration:** seamless compatibility with Pollux, PLC, and SCADA systems

Integration with MaNima Pollux Industrial System

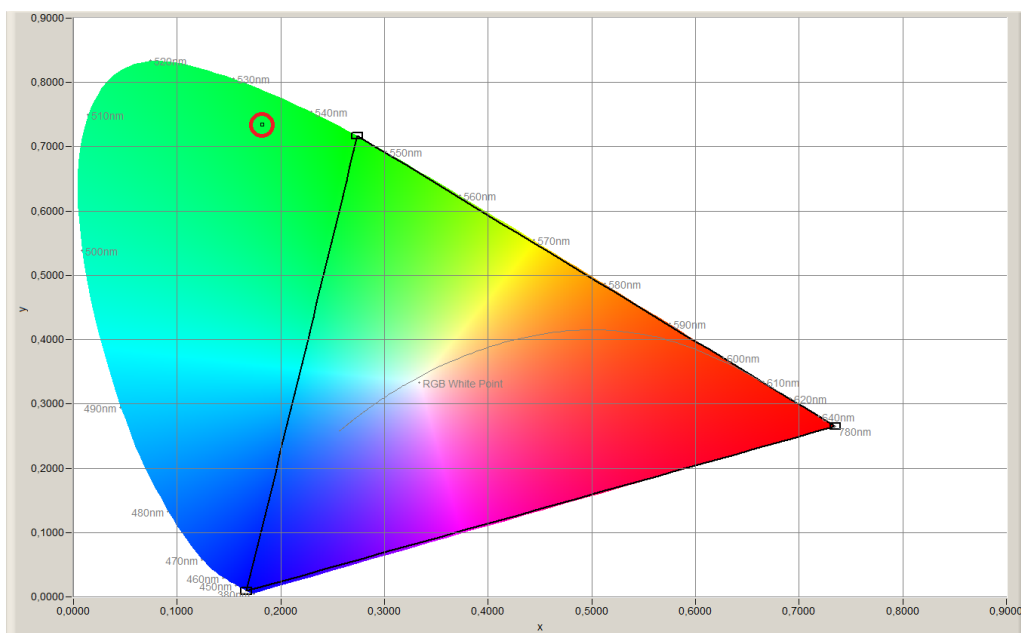
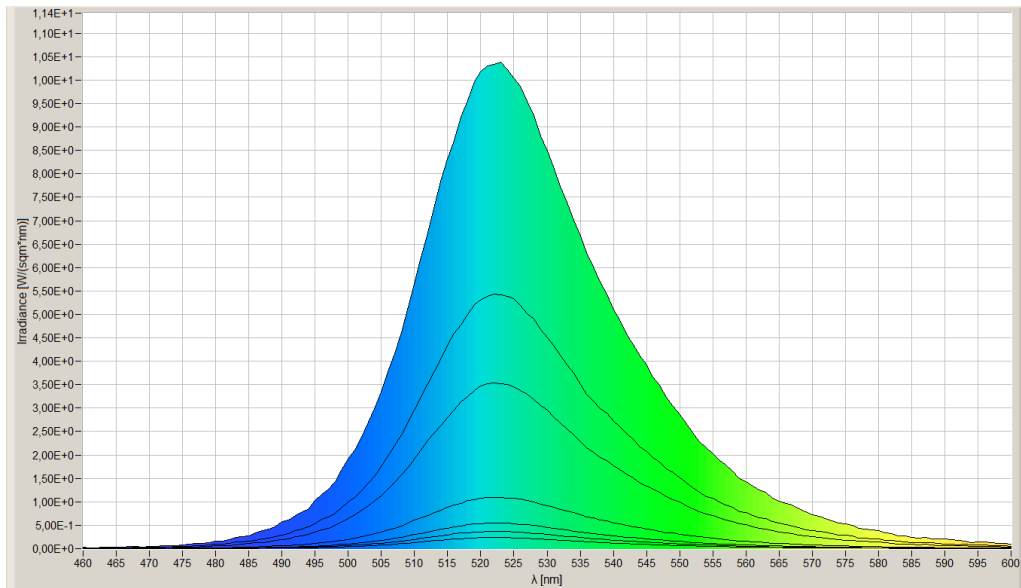
- Real-time NTC temperature monitoring
- Pulsing/strobing for enhanced peak intensity
- Thermal overload protection during continuous use
- PLC/SCADA-compatible integration
- **Open API (UDP-based)** for custom automation solutions

Technical specifications

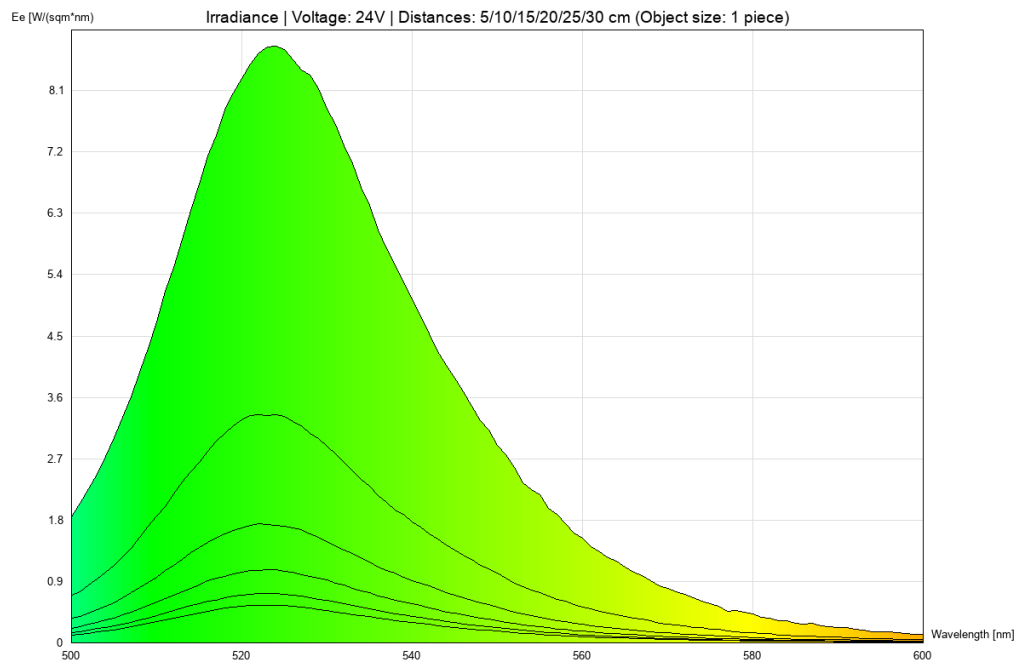
General	
Brand	LuxaLight
Application	Horticulture Machine Vision
LED type	2835
Material	Aluminum
Dimensions	220 × 24,2 × 16 mm
Mounting	Surface mounted
Warranty	5 years
Cover type	PMMA transparent
LEDs per piece	108.00
Lifetime	70000 hours
Lighting	
Wave length	525 nm
Beam angle	120 °
LB waarde	L80B50
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	

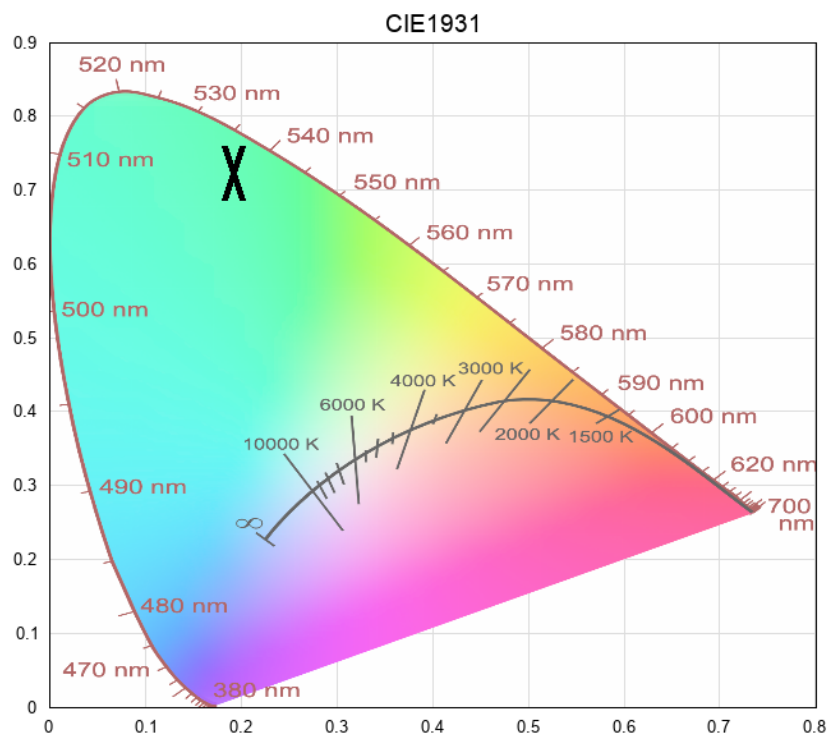
Measurement results



irradiance - 500-600-green (24V)



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