

# **Datasheet**

LuxaLight Industrial LED Fixture Transparent cover Red 640nm 24.2x16mm (24 Volt, 2835, IP64)

LF-24-640-24.2X16-TC

Version: 2025-07-11.4

KvK-nummer: 57580561 BTW-nummer: NL852642209B01 IBAN: NL87 INGB 0007 8159 75 BIC/SWIFT code: INGBNL2A



## **Product description**

The LuxaLight Industrial LED Fixture is specifically engineered for demanding industrial applications that require high radiation intensity. With a wavelength of 640nm, this LED fixture is a reliable and efficient solution for a variety of industrial processes, including material curing, biological research, and more. The 640nm wavelength is ideal for applications such as plant growth stimulation, biological studies, and other specific industrial needs that benefit from red light.

#### **Key Features:**

- 640nm Wavelength: The 640nm wavelength is perfect for a range of industrial and scientific applications, including plant growth enhancement, material curing, and biological research, where red light is essential.
- 24V Power Supply: Powered by a reliable 24V power supply, ensuring stable operation across demanding industrial
  environments.
- Aluminum Housing with Transparent Cover for Mechanical Protection: The durable aluminum housing provides robust
  protection against physical impacts, and the transparent cover ensures the LED fixture remains protected while allowing the
  640nm wavelength to pass through effectively, 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:

- Industrial Material Curing (Non-UV): The 640nm wavelength is ideal for curing specific materials and coatings that respond to red light, ensuring faster and more efficient curing processes in industrial manufacturing.
- Plant Growth Stimulation: The 640nm wavelength promotes robust plant growth, making it ideal 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 640nm light stimulates cell and tissue regeneration for faster recovery.
- Food Industry: The deep red light is utilized in food production environments to stimulate growth or assist in processes such as pasteurization of certain food products.
- Cosmetic Industry: In the cosmetic industry, 640nm light is beneficial for reducing wrinkles, enhancing skin tone, and promoting
  collagen production, offering 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 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 640nm LED ensures fast processing speeds, ideal for high-throughput industrial applications such as material curing and large-scale production processes.

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# **Technical specifications**

Period   Description   Desc	General				
Machine Valien	Brand	LuxaLight			
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           Upting         Wave length         640 nm           BIN         3 SDCM           Bean angle         120 °           LB wande         180850           Measurement results           Illumnance (Lux)         Coppet size: 1 pieces           (Object size: 1 pieces)         5cm         4290 lx           15cm         9855 lx         100           15cm         9855 lx         100           25cm         340 lx         100           (Object size: 1 piece)         5cm         224 lx           (Coppet size: 1 piece)         231.677 umol/m2           20cm         213.677 umol/m2           20cm         213.67	Application		Barcode Scanning		
Dimensions   220 × 24.2 × 16 mm	LED type	2835			
Mounting         Surface mounted           Warranty         5 years           Cover type         PMMA transparent           LEDs per piece         108.00           Lifetime         70000 hours           Lighting           Wave length           Bin         3 SDCM           Bean angle         120°           LB warde         1,80850           Measurement results           Illuminance (LLX) (Object 8288 1 peccs)           COSER 1288 1 peccs)         64290 lx           15cm         9855 lx           20cm         57.96 lx           25cm         3840 lx           30cm         2843 lx           Total PPFD umol/m2 (PAR 400-700nm) (Object 8282 1 peccs)         56m         2315.41 umol/m2           10cm         71.99.09 umol/m2         15cm         356.42 umol/m2           20cm         2315.41 umol/m2         20cm         2315.41 umol/m2           20cm         213.677 umol/m2         20cm         2315.41 umol/m2           20cm         213.677 umol/m2         20cm         213.677 umol/m2           20cm         19cot 1 pecc)         356.42 umol/m2         20cm         20cm         20cm         20cm <td>Material</td> <td>Aluminum</td> <td colspan="3">Aluminum</td>	Material	Aluminum	Aluminum		
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Mare length		7 0000 Hours			
BIN   3 SDCM	Lighting				
Beam angle	Wave length	640 nm	640 nm		
Neasurement results	BIN	3 SDCM	3 SDCM		
	Beam angle	120 °	120 °		
Muminance (Lux) (Object size: 1 piece)   5cm   64290 lx     10cm   19860 lx     15cm   9855 lx     20cm   5796 lx     25cm   3840 lx     30cm   2843 lx     25cm   3340 lx     30cm   2843 lx     25cm   2315.41 umol/m2 (PAR 400-700nm) (Object size: 1 piece)   5cm   2315.41 umol/m2     10cm   713.909 umol/m2     15cm   356.442 umol/m2     25cm   141.164 umol/m2     25cm	LB waarde	L80B50	L80B50		
Scm   64290 k	Measurement results				
10cm			24V		
15cm   9855 lx     20cm   5796 lx     25cm   3840 lx     30cm   2843 lx     Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)		5cm	64290 lx		
20cm   3840 lx   3840 lx   2843 lx		10cm	19860 lx		
25cm   3840  x   2843  x   2843  x   2847   2848  x		15cm	9855 lx		
Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)  5cm 2315.41 umol/m2 10cm 713.909 umol/m2 15cm 356.442 umol/m2 20cm 213.677 umol/m2 25cm 141.164 umol/m2 30cm 104.545 umol/m2  Peak wavelength (Object size: 1 piece)  639 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					
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Scm   2315.41 umol/m2   10cm   713.909 umol/m2   15cm   356.442 umol/m2   20cm   213.677 umol/m2   25cm   141.164 umol/m2   30cm   104.545 umol/m2   25cm   25cm			24V		
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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		639 nm			
Working voltage 24V		resulting in higher output  • We have the expertise a	resulting in higher output.  • We have the expertise and equipment to perform measurements tailored to the specific requirements of		
	Electronics				
Current per piece 1.25 A / piece	Working voltage	24V			
	Current per piece	1.25 A / piece			



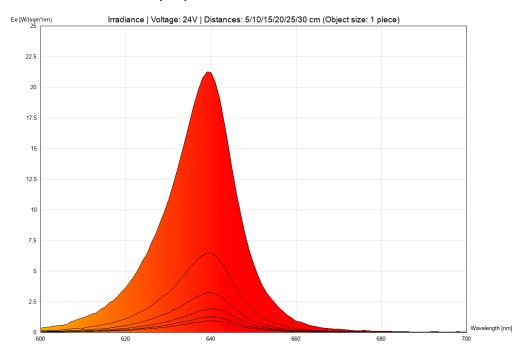
Power consumption per piece	30.00 W / piece		
PCB material	Aluminium		
Pinout	Symbol	Function	
	V+	V+	
	GND	Ground	
	NTC	NTC sensor	
	NTC_GND	NTC ground	
NTC parameters	Resistance: 5000 Ohm Beta value: 3950		
Environmental			
Operating temperature	-20 ~ +60 °C		
Storage temperature	-40 ~ +80 °C		
IP class	IP 64		
Directives - standards - certificates			
Directives	RoHS CE		
Safety standards	EN60598-1 EN62031 IEC62471		

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## **Measurement results**

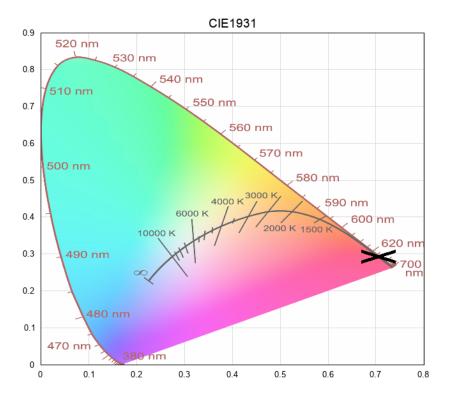
## irradiance - 600-700-red (24V)



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