

Datasheet

LuxaLight Deep Red LED-strip 700nm Protected (24 Volt, 140 LEDs, 2835, IP64)

LS24DR140X2835PLX

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Product description

The LuxaLight LED Strip Deep Red 700 nm delivers stable and powerful illumination in the deep-red spectrum, ideal for industrial processes such as photochemistry, machine vision, and horticulture. With 140 efficient 2835 LEDs per meter and durable IP64 silicone protection, the strip is designed for continuous use in harsh environments. Its flexible design (5 m reels, cuttable every 50 mm) allows easy integration into production lines, reactors, and R&D setups.

An optional NTC sensor can be added for thermal monitoring via the MaNima Pollux Industrial System.

Key Specifications

Property	Value / Description
Wavelength	Deep Red 700 nm
Irradiance (5 cm)	82 W/m ² (total)
Illuminance (5 cm)	577 lx
PPFD (5 cm)	238 µmol/m ² /s
Beam Angle	120°
LED Specifications	140 LEDs/m, 2835 SMD
Dimensions	5 m per reel; cuttable every 50 mm; width 10 mm; height 4 mm
Power & Consumption	24 V DC; ±1 A/m; ±24 W/m
Protection	IP64 – silicone coating, dust- and splash-resistant
Thermal Monitoring	Optional via external NTC sensor (Pollux-compatible)
Mounting	3M VHB-4905 tape
Operating Temp.	–20 °C ... +60 °C (storage –40 °C ... +80 °C)
Standards	RoHS, CE, EN60598-1, EN62031, IEC62471

Applications

- Photochemical and industrial processes – curing and surface activation
- Machine vision and inspection – enhanced contrast on dark or reflective surfaces
- Horticulture and plant development – influences R:FR ratio, growth, and flowering
- Photobiological and medical research – applied in photobiomodulation and tissue regeneration
- Signaling and process status – vivid deep-red light for clear process indication
- R&D and laboratory setups – spectroscopy and photochemical experiments

Also applicable in R&D and specialized lighting setups.

Benefits for Engineers

- High deep-red intensity with uniform 120° distribution
- Flexible, cuttable design (50 mm segments) for easy customization
- Robust IP64 construction for demanding industrial environments
- Expandable with optional NTC sensor for thermal monitoring
- Easy integration with standard 24 V systems
- Reliable operation for continuous industrial use

Integration with MaNima Pollux Industrial System

- Real-time thermal monitoring via optional NTC sensor
- Pulse and strobe modes for flexible deep-red output

- Automatic thermal protection for safe long-term operation
- Full PLC/SCADA compatibility for industrial automation
- Open UDP API for advanced control and logging

Technical specifications

General

Brand	LuxaLight
LEDs / meter	140
LED type	2835
Length per reel	5 m
Length per segment	50 mm
LED strip width	10.00 mm
LED strip thickness	3.00 mm
PCB color	White
Mantle material	Silicon
Warranty	5 years
Lifetime	70000 hours

Lighting

Luminous Flux	4.32 lm
Wave length	705
Beam angle	120 °

Measurement results

Illuminance (Lux)
(Object length: 200 mm)

	24V
5cm	576.5 lx
10cm	197.1 lx
15cm	94.85 lx
20cm	51.3 lx
25cm	36.5 lx
30cm	25.74 lx

Total PPFD umol/m2 (PAR 400-700nm)
(Object length: 200 mm)

	24V
5cm	237.6 umol/m2
10cm	83.73 umol/m2
15cm	42.29 umol/m2
20cm	25.75 umol/m2
25cm	17.27 umol/m2
30cm	12.66 umol/m2

Peak wavelength
(Object length: 200 mm)

702 nm

Peak irradiance
(Object length: 200 mm)

	24V
5cm	3.4 W/sqm
10cm	1.21 W/sqm
15cm	0.62 W/sqm
20cm	0.38 W/sqm
25cm	0.25 W/sqm
30cm	0.19 W/sqm

Total irradiance
(Object length: 200 mm)

	24V
5cm	81.57 W/sqm
10cm	29.19 W/sqm
15cm	14.59 W/sqm
20cm	8.92 W/sqm
25cm	6 W/sqm
30cm	4.45 W/sqm

Electronics

Working voltage	24V
Current / meter	1.00 A / meter
Power consumption per meter	24.00 W / meter
PCB material	Copper

Pinout

Symbol	Function
V+	V+
GND	Ground

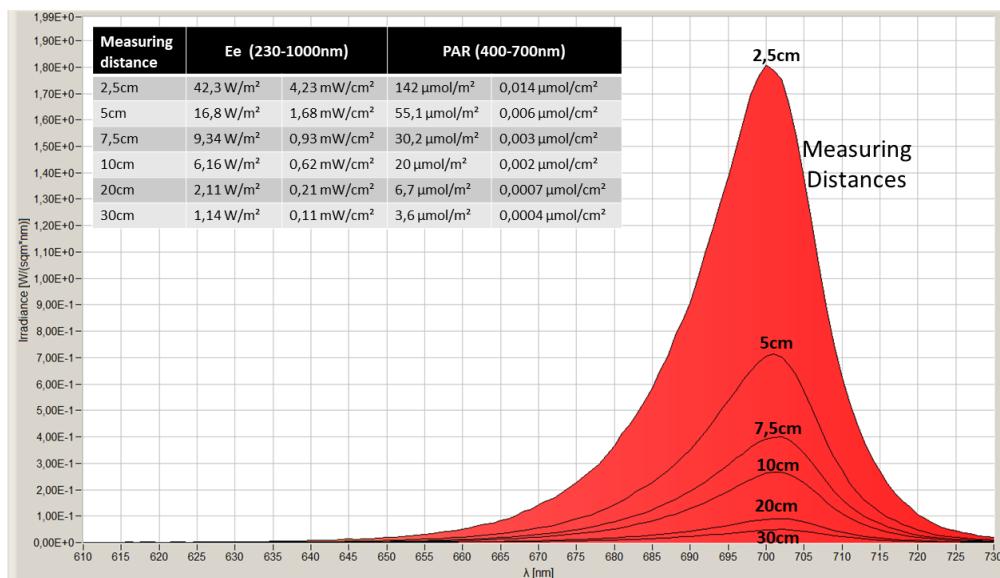
Environmental

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

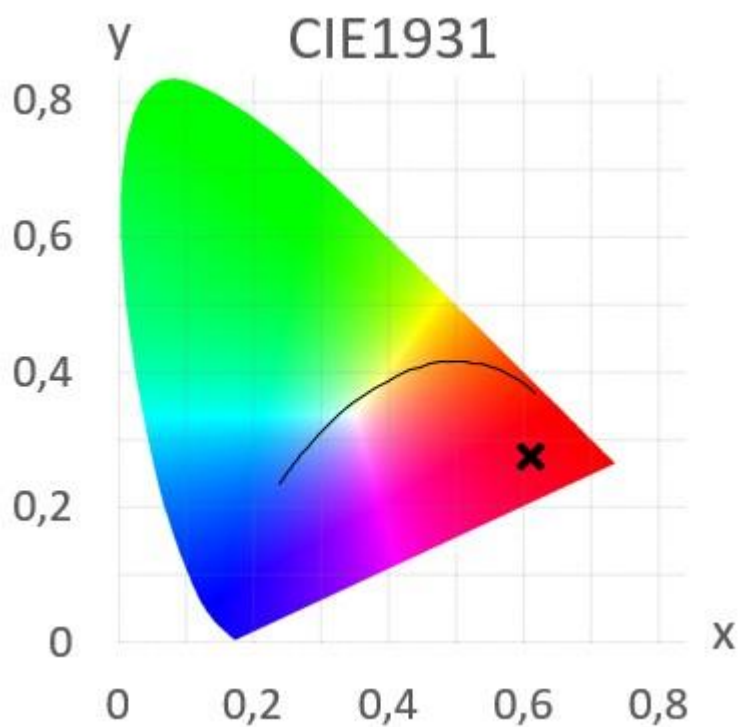
Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

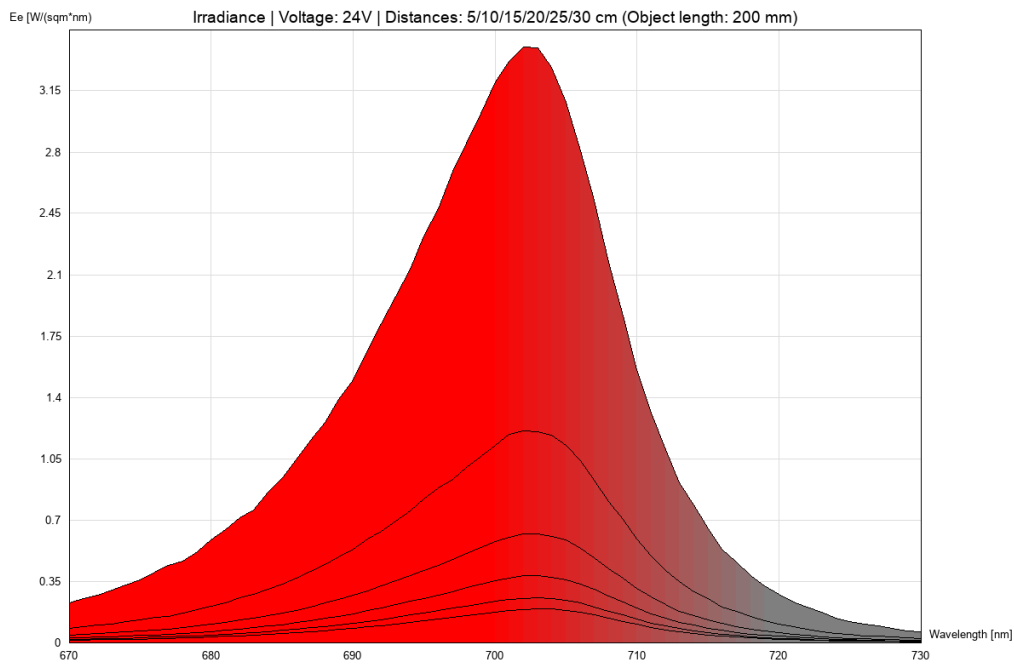
Measurement results



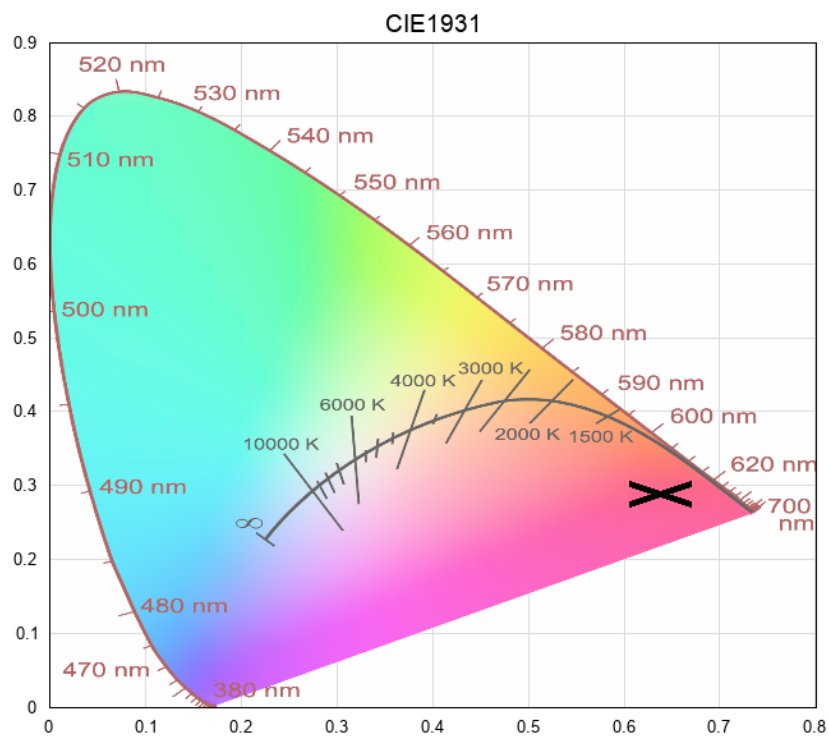
CIE1931



irradiance - 670-730-reddeepfarred (24V)



cie1931



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