

Datasheet

LuxaLight LED-strip Deep Red 660nm Protected 2835 (24 Volt, 140 LEDs, 2835, IP64)

LS24DR2140X2835PLX

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Product description

The LuxaLight LED Strip Deep Red Protected provides intense 660 nm illumination for industrial applications such as photochemistry, machine vision, inspection, and signaling. With 140 efficient 2835 LEDs per meter and IP64-rated silicone protection, it is built for continuous use in harsh environments. Its flexible design (5 m reels, cuttable every 50 mm) integrates easily into production lines, reactors, and inspection systems. An **optional** NTC sensor can be added for thermal monitoring via the MaNima Pollux Industrial System.

Key Specifications

Property	Value / Description
Wavelength	Deep Red 660 nm
Irradiance (5 cm)	83 W/m ² (total)
Illuminance (5 cm)	5,968 lx
PPFD (5 cm)	424 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 processes & reactors** – curing and surface activation
- **Machine vision & inspection** – improved contrast on reflective or dark materials
- **Industrial signaling & status indication** – deep red for warnings or process status feedback
- **Horticulture & agriculture** – supports flowering and photosynthesis where deep red is required
- **Biological & medical research** – suitable for photobiomodulation and related studies
- **R&D & laboratory setups** – experiments requiring precise deep-red illumination

Also applicable in R&D and specialized lighting setups.

Benefits for Engineers

- High, consistent 660 nm output with uniform 120° distribution
- Flexible, modular design (cuttable every 50 mm) for easy integration
- Industrial-grade IP64 construction for continuous operation
- Expandable with **optional** NTC sensor for thermal monitoring via Pollux
- Simple 24 V integration and low maintenance
- Reliable performance for production environments

Integration with MaNima Pollux Industrial System

- Real-time thermal monitoring via **optional** NTC sensor
- Pulse and strobe modes for flexible output control
- Automatic thermal protection through system control
- Seamless PLC/SCADA integration
- 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	4.00 mm
PCB color	White
Mantle material	Silicon
Mounting	3M tape VHB4905
Warranty	5 years
Lifetime	70000 hours

Lighting

Wave length	660 nm
BIN	3 SDCM
Beam angle	120 °
LB waarde	L90B50

Measurement results

Illuminance (Lux)
(Object length: 200 mm)

	24V
5cm	5968 lx
10cm	2172 lx
15cm	1120 lx
20cm	680 lx
25cm	457.1 lx
30cm	346.2 lx

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

	24V
5cm	424.25 umol/m2
10cm	155.63 umol/m2
15cm	81.35 umol/m2
20cm	50.41 umol/m2
25cm	34.04 umol/m2
30cm	25.79 umol/m2

Peak wavelength
(Object length: 200 mm)

656 nm

Peak irradiance (Object length: 200 mm)		24V
5cm		3.3 W/sqm
10cm		1.2 W/sqm
15cm		0.62 W/sqm
20cm		0.38 W/sqm
25cm		0.26 W/sqm
30cm		0.2 W/sqm

Total irradiance (Object length: 200 mm)		24V
5cm		82.91 W/sqm
10cm		30.21 W/sqm
15cm		15.58 W/sqm
20cm		9.41 W/sqm
25cm		6.29 W/sqm
30cm		4.8 W/sqm

Electronics

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

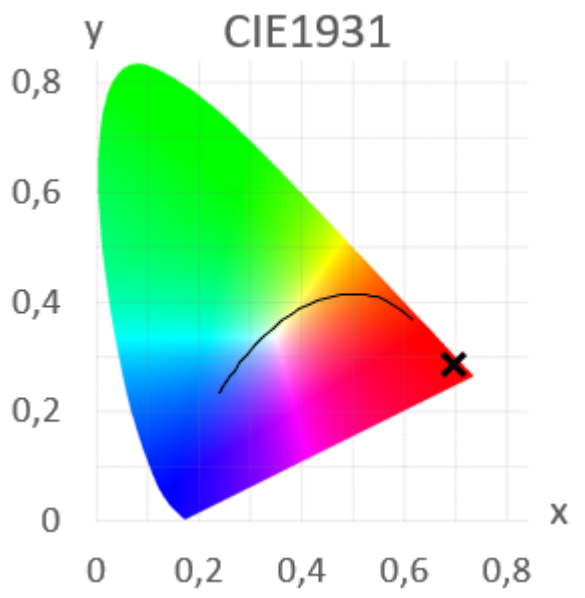
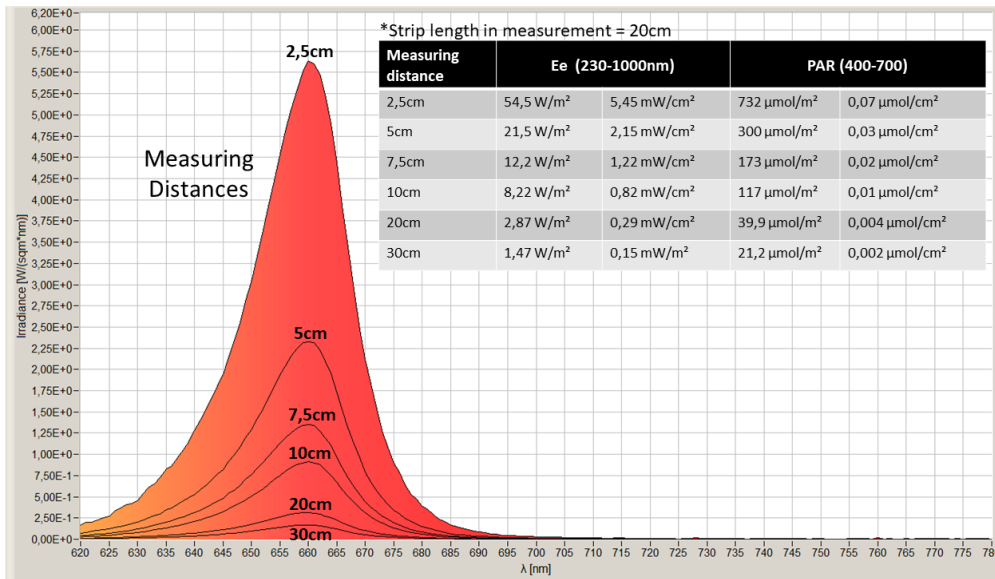
Environmental

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

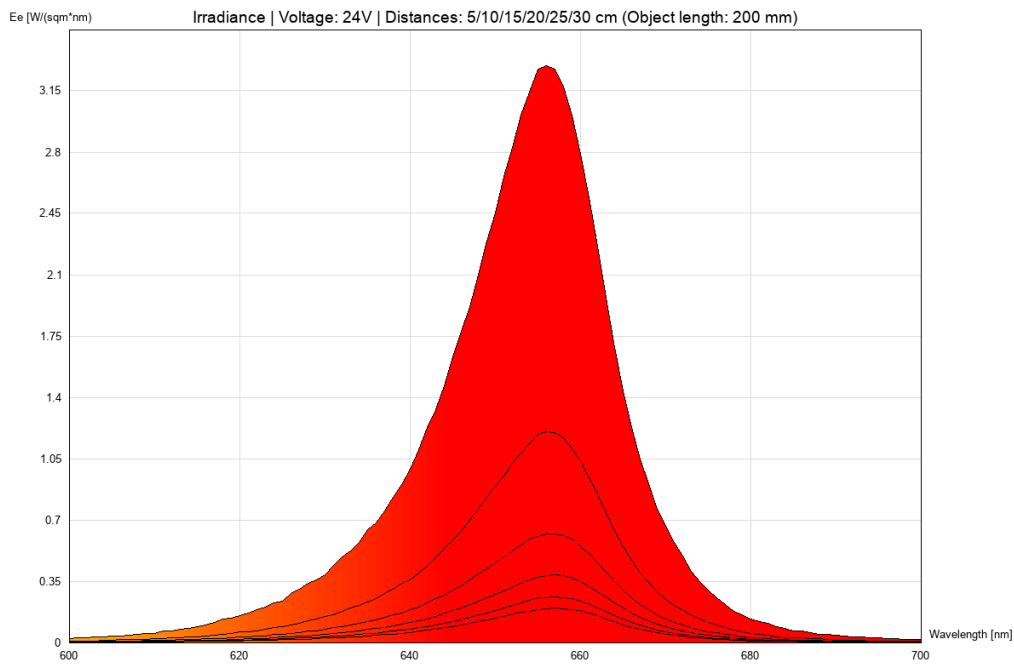
Directives - standards - certificates

Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

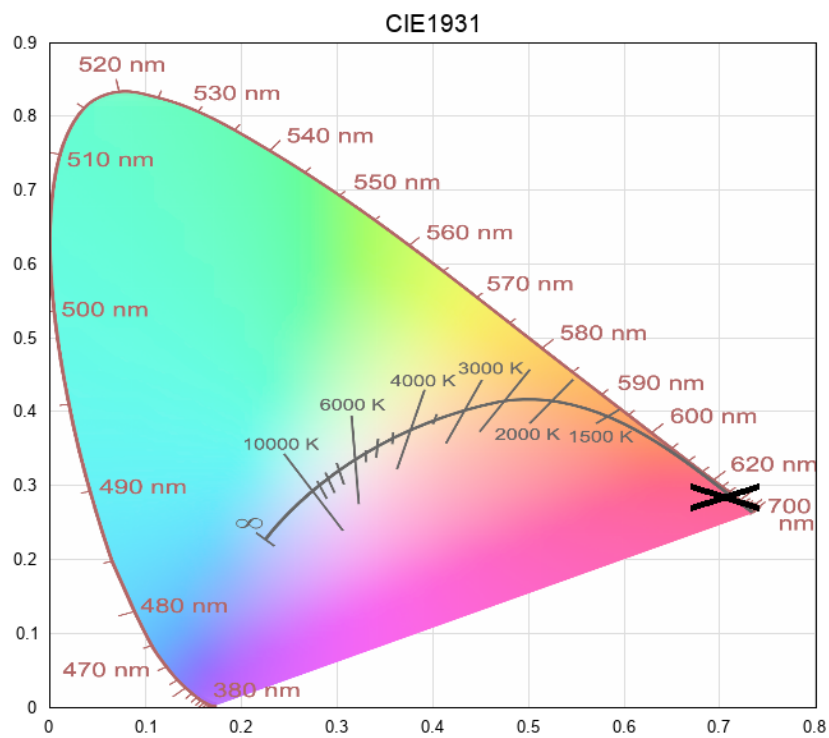
Measurement results



irradiance - 600-700-red (24V)



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