

Datasheet

LuxaLight LED-strip Red Waterproof (24 Volt, 140 LEDs, 2835, IP68)

LS24R140X2835WLX

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Product description

The **LuxaLight Professional LED Strip** is designed for lighting purposes where bright red lighting is required. The strip produces light with a wavelength of 625 nm, resulting in a powerful red glow that gives the space a robust and functional appearance. This professional LED strip is equipped with a **fully vulcanized silicone sleeve**, providing an **IP68 protection rating**, which means it is fully dustproof and protected against immersion in water up to a depth of 1 meter. This makes the strip highly suitable for use in both demanding indoor and outdoor applications, even under harsh conditions.

With a **light intensity of 284.4 $\mu\text{mol}/\text{m}^2$ at 5 cm distance**, this LED strip is perfect for **horticulture** (plant cultivation). The red light promotes photosynthesis and is ideal for use in greenhouses, vertical gardens, and other cultivation environments where plants require specific light wavelengths for optimal growth.

Key Features:

- **Red Lighting (625 nm):** The strip delivers a powerful red glow with a wavelength of 625 nm, ideal for industrial and horticultural applications that require specific light wavelengths.
- **Light Intensity of 284.4 $\mu\text{mol}/\text{m}^2$ at 5 cm distance:** This light intensity makes the LED strip ideal for promoting photosynthesis in plants, making it perfect for horticultural and cultivation environments.
- **Fully Vulcanized Silicone Sleeve with IP68 Protection:** The silicone sleeve provides full protection against dust and water, even when immersed in water up to 1 meter deep (IP68). This makes the strip perfect for use in harsh industrial environments and outdoor applications.
- **140 2835 LEDs per Meter:** The strip contains 140 2835 LEDs per meter, ensuring high light density and an even light distribution across the surface.
- **24V Connection:** The LED strip operates on a standard 24V power supply for stable and reliable performance.
- **Flexible Design:** The flexible design makes the LED strip suitable for installation in various configurations, such as profiles, fixtures, or as a direct lighting source for custom systems.
- **PCB Thickness:** The PCB has a thickness of 3 oz/ft², providing robust support and efficient heat dissipation, extending the lifespan of the LED strip and maintaining consistent performance.
- **Passive Cooling Required:** As the LED strip requires passive cooling, it should be integrated into a suitable system that efficiently dissipates heat to ensure optimal performance and longer lifespan.
- **3M 4905 VHB Tape:** The LED strip is equipped with 3M 4905 VHB tape, ensuring strong and durable adhesion to various surfaces. This makes it easy to install in various applications.

Applications:

- **Horticulture (Plant Cultivation):** The LED strip with a light intensity of 284.4 $\mu\text{mol}/\text{m}^2$ at 5 cm distance is ideal for promoting photosynthesis in plants. It is suitable for use in greenhouses, vertical gardens, and other cultivation environments where plants benefit from specific light wavelengths for optimal growth.
- **Industrial Lighting:** The LED strip is perfect for industrial applications where a robust, flexible, and reliable light source is required. It can be used in workshops, warehouses, factories, or production environments that need to withstand harsh conditions such as dust, water, or extreme temperatures.
- **Outdoor Applications (with IP68 Protection):** Thanks to the IP68 protection, the LED strip is ideal for use in outdoor applications such as horticultural systems, industrial areas, and other environments exposed to water or dust.

Benefits:

- **Excellent Color Rendering:** The bright red lighting provides accurate color rendering, making it ideal for applications where color perception is crucial.
- **Efficient for Photosynthesis:** The LED strip promotes photosynthesis in plants, making it essential for horticultural applications such as greenhouses and cultivation environments.
- **Even Light Distribution:** With 140 2835 LEDs per meter, the strip offers consistent and even light distribution, ensuring pleasant and efficient illumination without harsh shadows.
- **Reliable Performance:** The LED strip operates on a standard 24V power supply, providing efficient, stable performance, making it an ideal choice for long-term use in industrial and commercial environments.
- **Strong Adhesion:** The 3M 4905 VHB tape offers reliable adhesion for easy and durable installation on various surfaces.

Technical specifications

General

Brand	LuxaLight
LEDs / meter	140
LED type	2835
Length per reel	10 m
Length per segment	50 mm
LED strip width	12.00 mm
LED strip thickness	5.00 mm
PCB color	White
Mantle material	Silicon
Warranty	5 years
Lifetime	70000 hours

Lighting

Luminous Flux	593 lm
Wave length	620~630 nm
BIN	3 SDCM
Beam angle	120 °
LB waarde	L90B50

Measurement results

PPFD	Value	Measuring distance
	124 µmol/m2	100 mm
	41 µmol/m2	200 mm
	22 µmol/m2	300 mm

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 68

Directives - standards - certificates

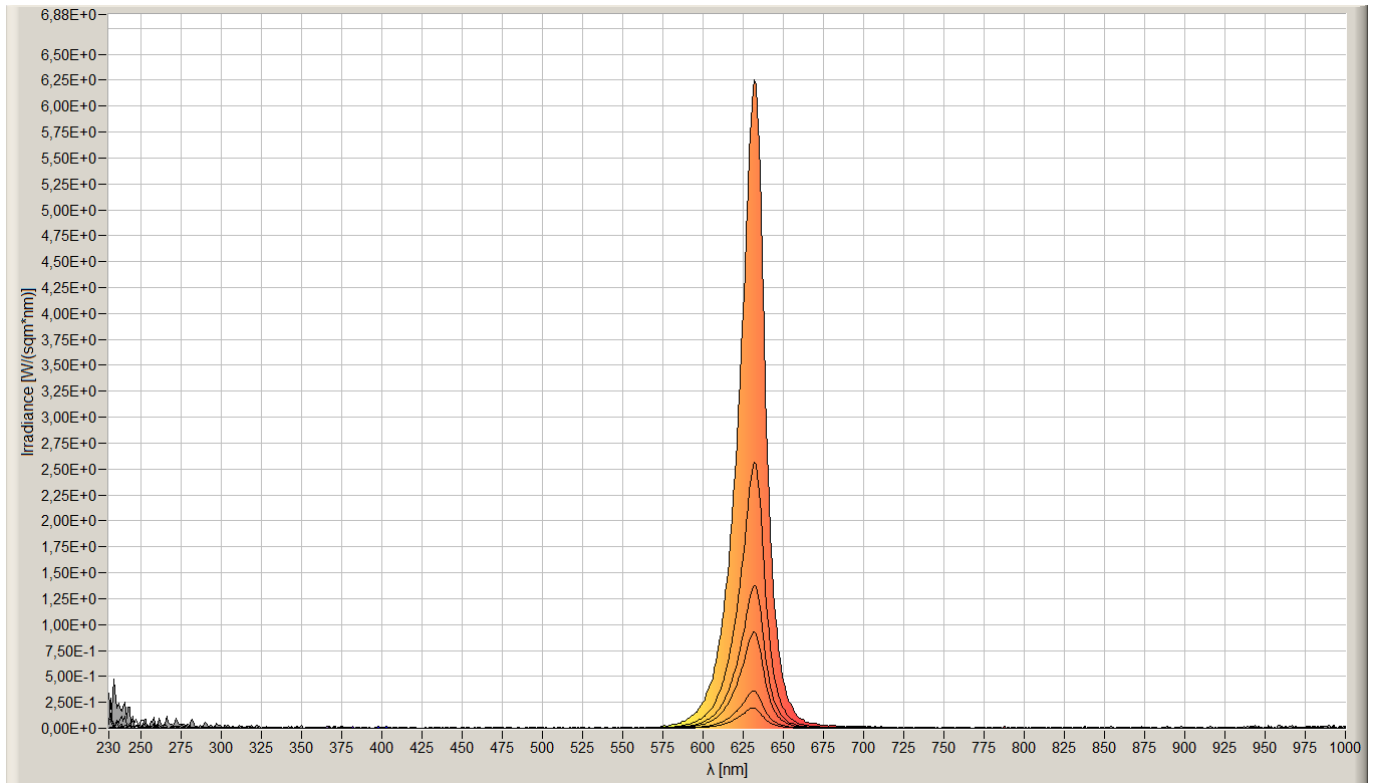
Directives	RoHS CE
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Safety standards

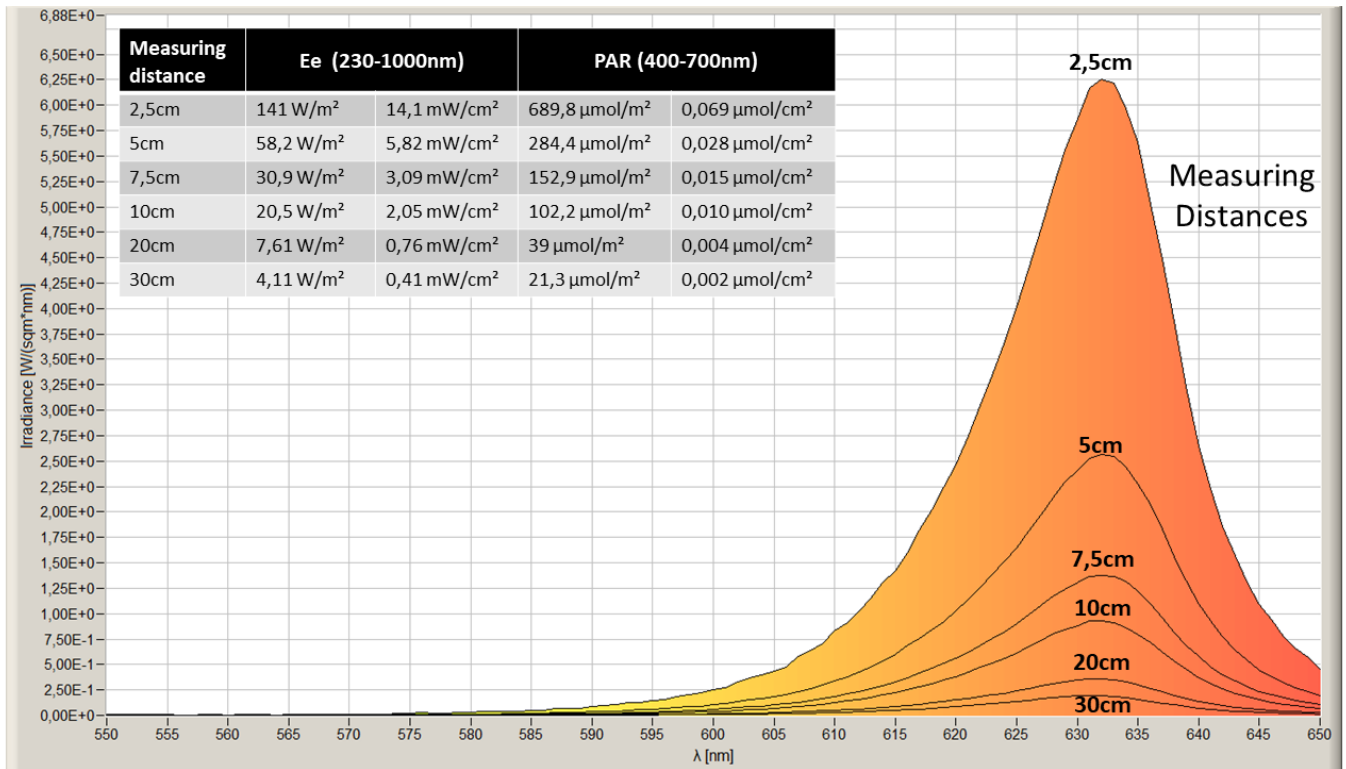
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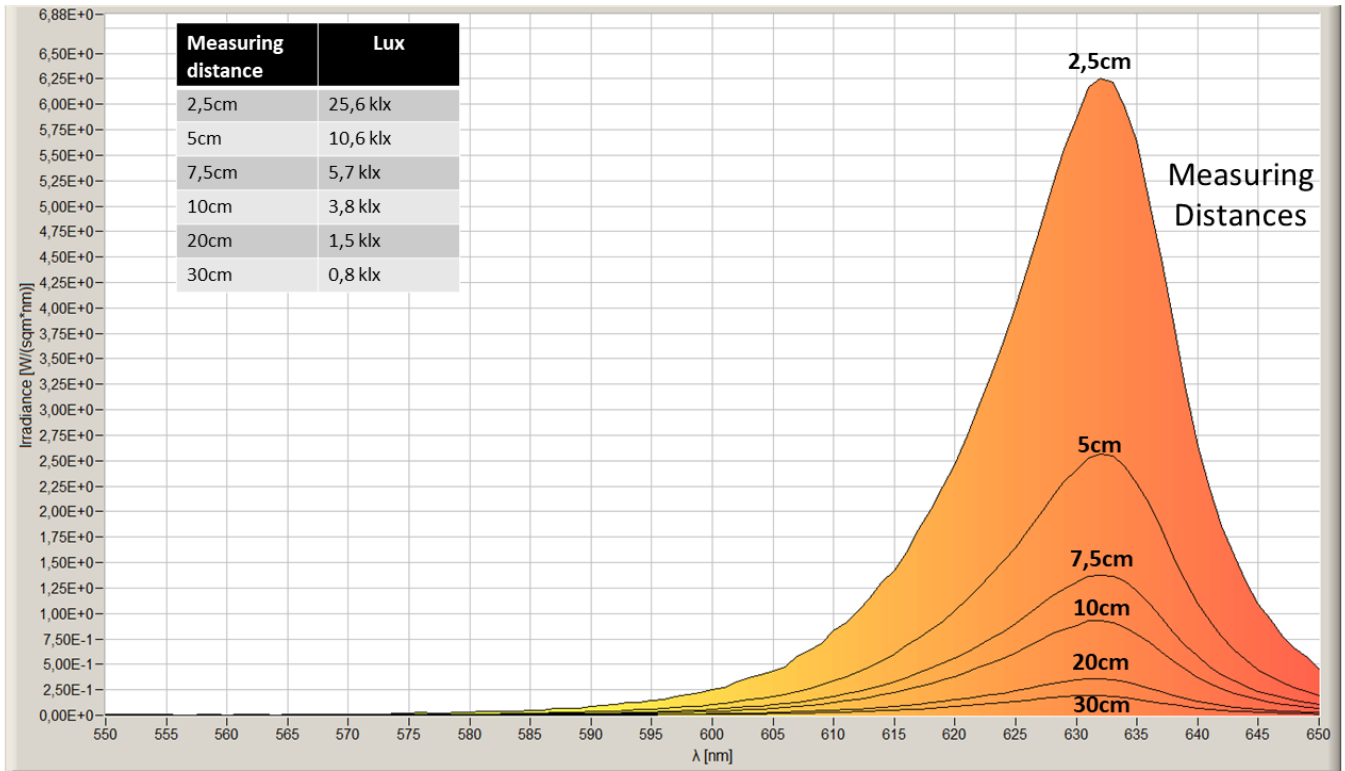
Measurement results

CIE1931



Wave Length





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