# Datasheet

## LuxaLight LED-strip Red Indoor (24 Volt, 140 LEDs, 2835, IP20)

### LS24R140X2835ILX

**Version: 2025-03-10.4**

LuxaLight B.V.
Hastelweg 260B
5652 CN Eindhoven
Nederland

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

Email: info@luxalight.eu
Website: www.luxalight.eu
Tel.: +31 (0)40 - 202 49 04

## 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 **silicone sleeve**, making it suitable for use in indoor environments.

With a **light intensity of 284.4 µmol/m² 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 µmol/m² 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.
- **140 2835 LEDs per Meter:** The strip contains 140 2835 LEDs per meter, ensuring high light density and 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 µmol/m² 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, but no exposure to water.
- **Outdoor Applications (only under dry conditions):** The strip is suitable for use in outdoor environments where there is no direct exposure to water, such as under canopies or in dry industrial environments.

**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.
- **Flexible and Customizable:** Thanks to its flexible design, the strip can easily be integrated into various industrial lighting systems or cultivation systems.
- **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.
- **Durable and Energy-efficient:** The LED technology is energy-efficient, making the strip cost-effective and contributing to a more sustainable lighting solution.
- **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 | 10.00 mm |
| LED strip thickness | 3.00 mm |
| PCB color | White |
| Warranty | 5 years |
| Lifetime | 70000 hours |

| Lighting | |
|---|---|
| Luminous Flux | 593 lm |
| Wave length | 620~630 |
| BIN | 3 SDCM |
| Beam angle | 120 ° |
| LB waarde | L80B10 |

**Measurement results**

PPFD

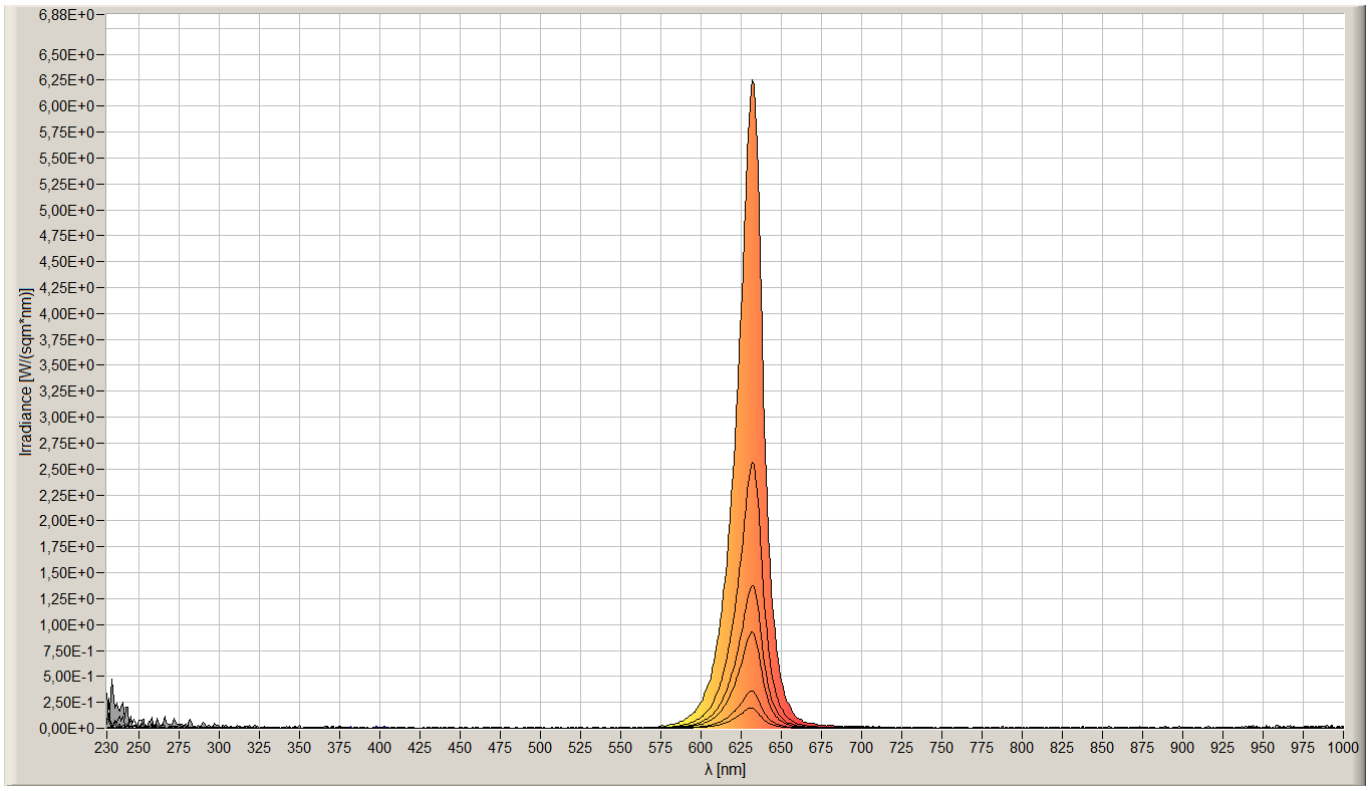
| Value | Measuring distance |
|---|---|
| 124 µmol/m2 | 100 mm |
| 41 µmol/m2 | 200 mm |
| 22 µmol/m2 | 300 mm |

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

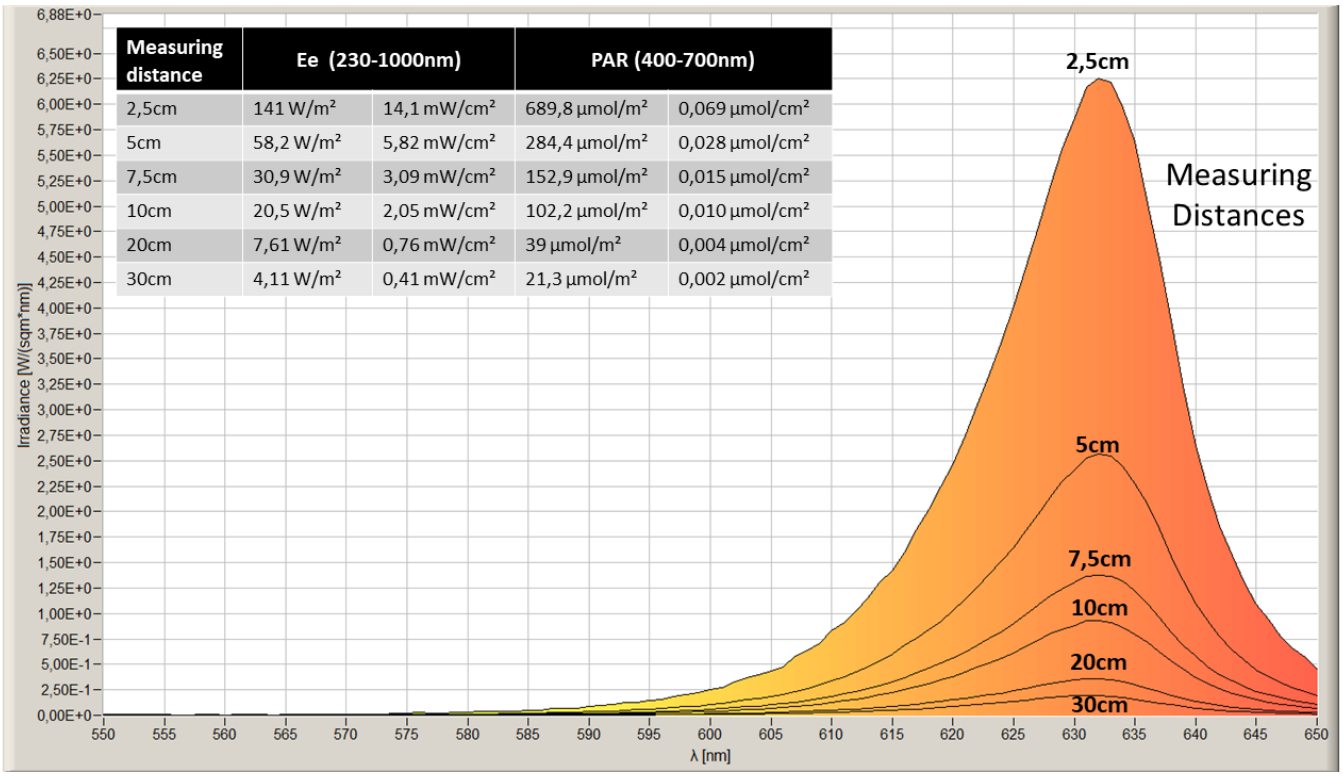
| Environmental | |
|---|---|
| Operating temperature | -20 ~ +60 °C |
| Storage temperature | -40 ~ +80 °C |
| IP class | IP 20 |

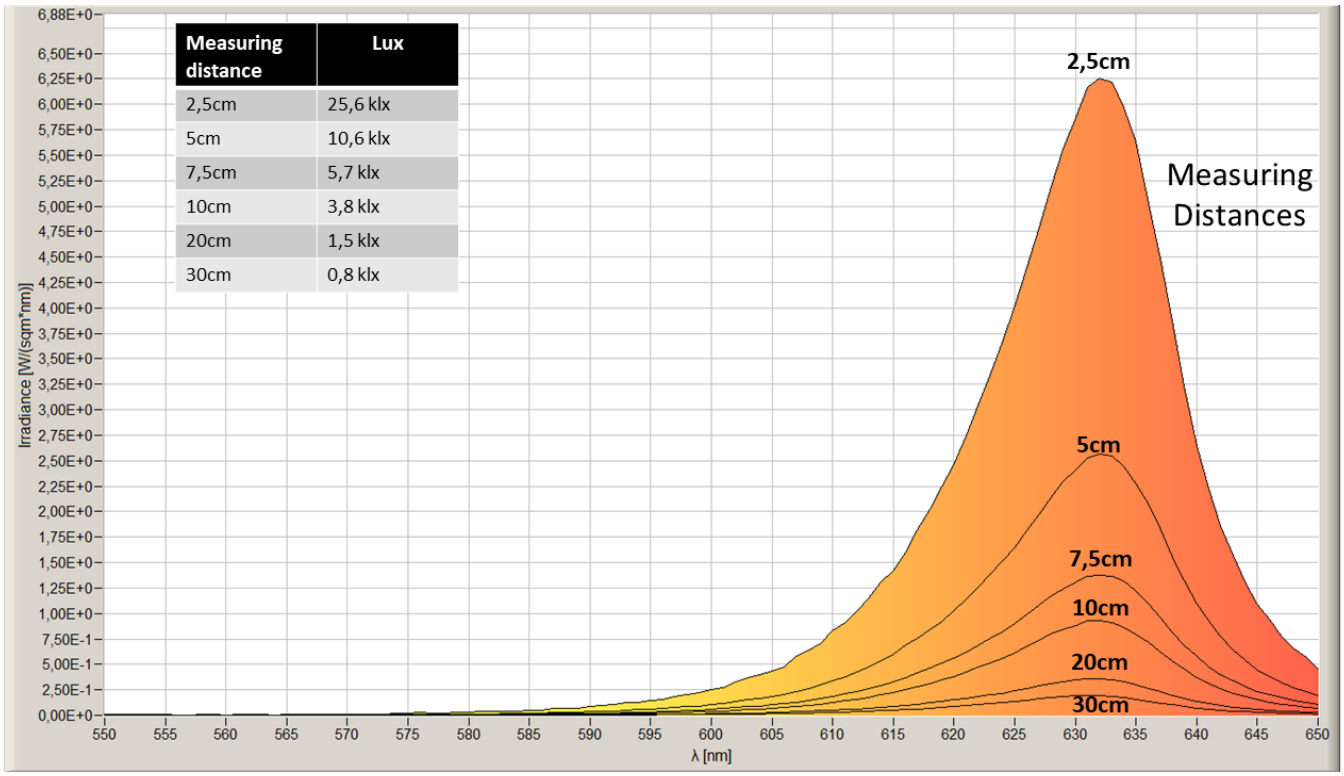
| Directives - standards - certificates | |
|---|---|
| Directives | RoHS<br>CE |
| Safety standards | EN60598-1<br>EN62031<br>IEC62471 |

## Measurement results



| Measuring distance | Ee (230-1000nm) | | PAR (400-700nm) | |
|---|---|---|---|---|
| 2,5cm | 141 W/m² | 14,1 mW/cm² | 689,8 µmol/m² | 0,069 µmol/cm² |
| 5cm | 58,2 W/m² | 5,82 mW/cm² | 284,4 µmol/m² | 0,028 µmol/cm² |
| 7,5cm | 30,9 W/m² | 3,09 mW/cm² | 152,9 µmol/m² | 0,015 µmol/cm² |
| 10cm | 20,5 W/m² | 2,05 mW/cm² | 102,2 µmol/m² | 0,010 µmol/cm² |
| 20cm | 7,61 W/m² | 0,76 mW/cm² | 39 µmol/m² | 0,004 µmol/cm² |
| 30cm | 4,11 W/m² | 0,41 mW/cm² | 21,3 µmol/m² | 0,002 µmol/cm² |



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