

# Datasheet

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

**LS24B140X2835WLX**

**Version: 2025-07-09.1**

## Product description

The **LuxaLight Professional LED Strip** is designed for lighting purposes where powerful blue lighting is required. The strip produces light with a wavelength of 455 nm, resulting in a bright blue glow that gives the space a functional and visually appealing appearance. This professional LED strip is equipped with a **vulcanized silicone sleeve** and offers **IP68 protection**, meaning the strip is fully dustproof and resistant to immersion in water, making it suitable for use in a wide range of applications, both indoors and outdoors.

With a **light intensity of 351  $\mu\text{mol}/\text{m}^2$  at 5 cm distance**, this LED strip is perfect for **horticulture** (plant cultivation). The blue light promotes photosynthesis and is ideal for use in greenhouses, vertical gardens, and other cultivation environments where plants require a specific light wavelength for optimal growth and health.

### Key Features:

- **Blue Lighting (455 nm):** The strip delivers a powerful blue glow with a wavelength of 455 nm, ideal for industrial and horticultural applications requiring specific light wavelengths.
- **Light Intensity of 351  $\mu\text{mol}/\text{m}^2$  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.
- **Vulcanized Silicone Sleeve with IP68 Protection:** The LED strip is equipped with a vulcanized silicone sleeve, providing **IP68 protection**, making the strip fully dustproof and resistant to immersion in water. This makes it suitable for both indoor and outdoor applications, even in harsh 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.
- **PCB Thickness:** The PCB has a thickness of 3 oz/ft<sup>2</sup>, providing robust support and efficient heat dissipation, extending the lifespan of the LED strip and maintaining consistent performance.
- **3M 4905 VHB Tape:** The LED strip is equipped with 3M 4905 VHB tape, ensuring reliable adhesion for easy and durable installation on various surfaces.

### Applications:

- **Horticulture (Plant Cultivation):** The LED strip with a light intensity of 351  $\mu\text{mol}/\text{m}^2$  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.
- **Visual Inspection in Production:** Blue light is used for visual inspection in manufacturing processes to make details of products more visible that are difficult to see under regular lighting. It is applied in the electronics and automotive industries for quality control.
- **Color Recognition in Manufacturing Environments:** Blue lighting aids in recognizing color variations in product manufacturing in the food industry or when sorting products sensitive to color nuances.
- **UV-sensitive Applications:** Blue light is used in applications like the printing industry to activate certain inks or coatings without actually using UV light.
- **Robotics and Automation:** Blue light is used for visual marking in automated production processes and robotics, helping identify objects that robots need to move.
- **Storage of Sensitive Materials:** In the industry, blue light is used for storing sensitive materials, such as in the chemical or pharmaceutical sectors, without affecting the products.
- **Drying and Curing Processes:** Blue light is used to quickly dry or cure certain materials in the production of adhesives, paints, and coatings.

### Benefits:

- **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 provides consistent and even light distribution, ensuring pleasant and efficient lighting without harsh shadows.
- **Reliable Performance:** The LED strip operates on a standard 24V power supply and delivers efficient, stable performance, making it an ideal choice for long-term use in industrial and commercial environments.
- **Strong Adhesion:** The 3M 4905 VHB tape ensures 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	1608 lm									
Wave length	455~470 nm									
BIN	3 SDCM									
Beam angle	120 °									
LB waarde	L90B50									
Measurement results										
Illuminance (Lux) (Object size: 1 piece)										
Total PPFD umol/m2 (PAR 400-700nm) (Object size: 1 piece)										
Peak wavelength (Object size: 1 piece)	nm									
Peak irradiance (Object size: 1 piece)										
Total irradiance (Object size: 1 piece)										
PPFD	<table><tr><th>Value</th><th>Measuring distance</th></tr><tr><td>128 µmol/m2</td><td>100 mm</td></tr><tr><td>46 µmol/m2</td><td>200 mm</td></tr><tr><td>26 µmol/m2</td><td>300 mm</td></tr></table>		Value	Measuring distance	128 µmol/m2	100 mm	46 µmol/m2	200 mm	26 µmol/m2	300 mm
	Value	Measuring distance								
	128 µmol/m2	100 mm								
	46 µmol/m2	200 mm								
26 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										

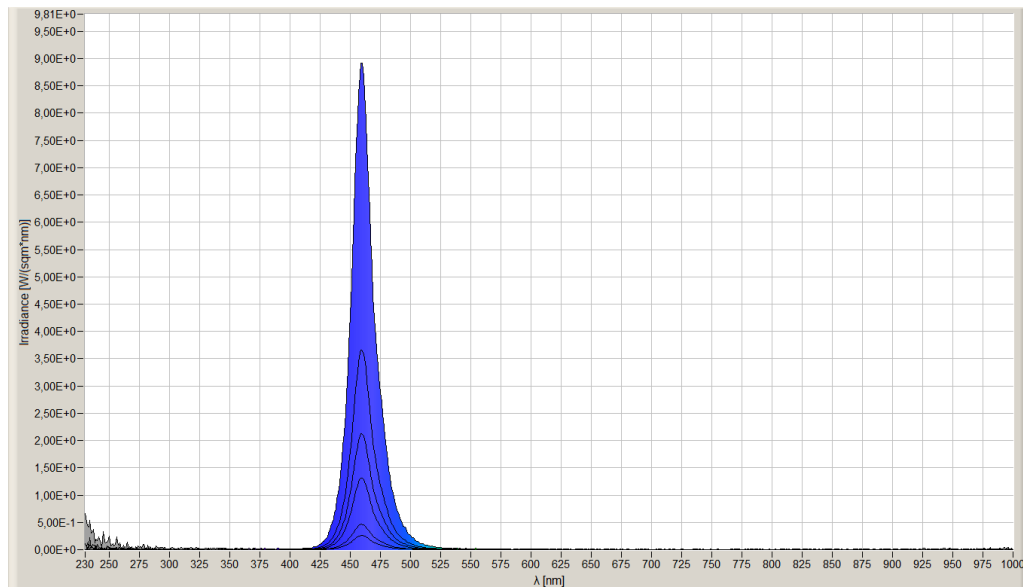
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 68

#### Directives - standards - certificates

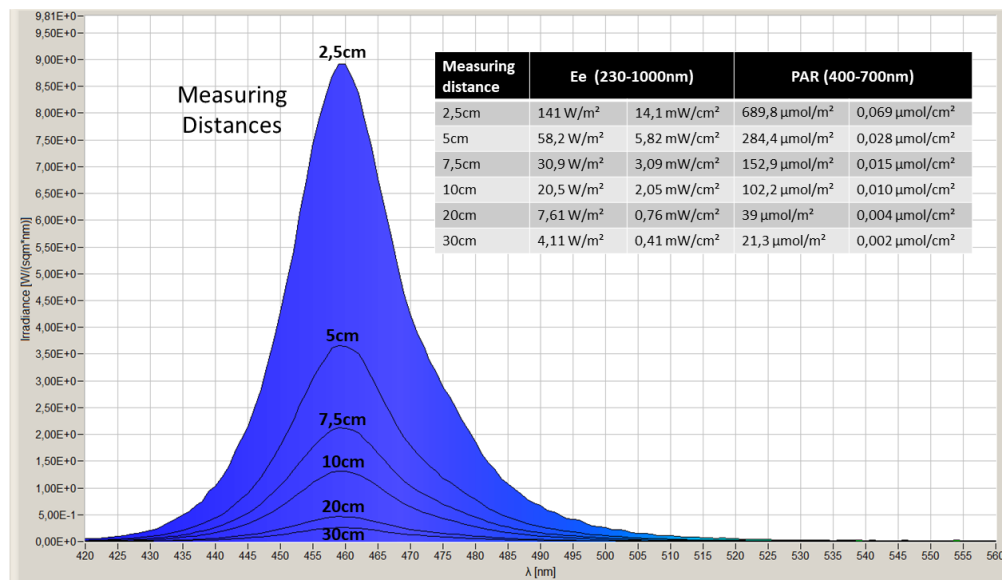
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

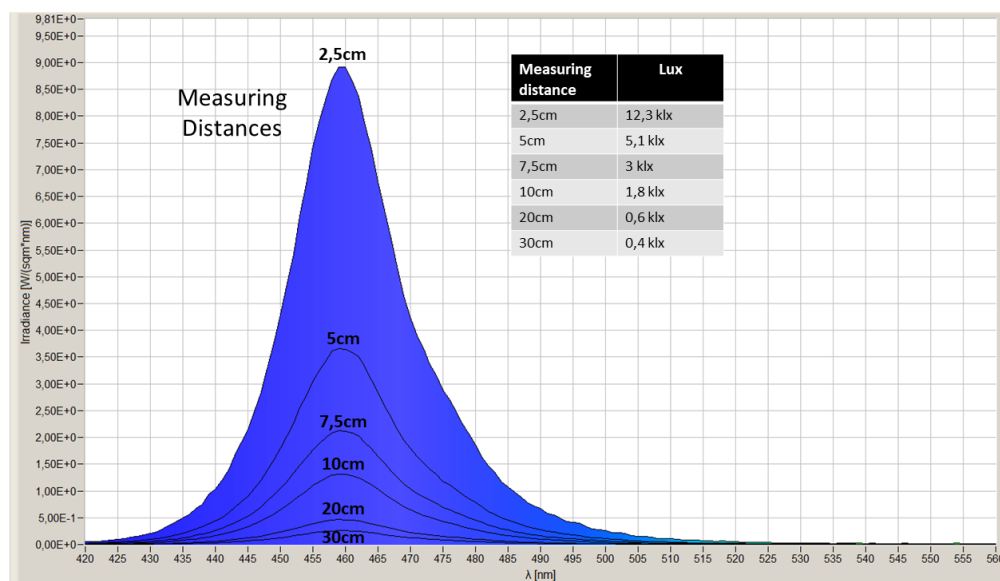
## Measurement results

### CIE1931



### Wave Length





While LuxaLight has made every reasonable effort to ensure the accuracy of the information in this brochure, LuxaLight does not guarantee that it is error - free, nor does LuxaLight make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. LuxaLight reserves the right to make any adjustments to the information contained herein at any time without notice. LuxaLight expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalogue are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult LuxaLight for the latest dimensions and design specifications.