

# Datasheet

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

**LS24DR2140X2835PLX**

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## Product description

The LuxaLight Industrial LED Strip is designed for intensive industrial and commercial applications that require high radiation intensity and precise light distribution. With a 660nm wavelength, this LED strip provides a powerful solution for processes that benefit from deep red light, such as plant growth stimulation, biological research, and more.

The LED strip features 140 LEDs per meter, ensuring high light density and uniform coverage for maximum performance. This strip is ideal for applications that require a flexible, space-saving light source, such as greenhouses, medical therapies, research environments, and other specialized industries. The strip can easily be integrated into custom fixtures or housing systems to meet specific application needs.

### Key Features:

- **660nm Wavelength:** The 660nm wavelength is ideal for applications that require deep red light, such as horticulture, biological research, and specific industrial processes.
- **140 LEDs per Meter:** With 140 LEDs per meter, the strip delivers high light density, ensuring even light distribution across the surface for effective coverage and maximum performance.
- **24V Power Supply:** The LED strip operates on a reliable 24V power supply, ensuring stable and consistent performance, perfect for demanding environments and applications.
- **Flexible Design:** The LED strip is flexible and can be easily adjusted or bent to fit into custom systems or enclosures, making it highly versatile for various configurations and applications.
- **High Radiation Intensity:** The LED strip provides high radiation intensity, ideal for applications requiring significant light output, such as plant growth and biological processes.
- **Passive Cooling Required:** The LED strip is designed to be passively cooled, meaning it must be integrated into a suitable enclosure or system that efficiently dissipates heat. Ensure the product does not overheat to maintain optimal performance and extend its lifespan.
- **Semi-Finished Product for Customization:** The LED strip is designed to be integrated into custom fixtures, housings, or systems depending on your specific needs. As a semi-finished product, it offers flexibility for a wide range of applications.

### Applications:

- **Horticulture & Agriculture:** The 660nm wavelength is highly effective for stimulating plant growth, making it ideal for use in greenhouses, vertical farming, and other agricultural applications where plant health is crucial.
- **Biological Research:** This LED strip is effective in scientific and medical applications requiring deep red light, such as promoting tissue regeneration, cell cultivation, and photobiomodulation (PBM) therapy, which helps with pain relief and wound healing.
- **Medical Therapy:** 660nm light is used in phototherapy treatments, such as skin healing, anti-aging treatments, and muscle recovery, where red light stimulates cells and tissues.
- **Food Industry:** The LED strip can be used to stimulate growth in food production environments or in the pasteurization of certain food items that require exposure to red light.
- **Industrial Material Curing (Non-UV):** The deep red light can be used to cure coatings and materials that react to red wavelengths, ensuring effective curing processes in industrial environments.
- **Cosmetic Industry:** The LED strip is ideal for use in the cosmetic industry for skin treatments such as wrinkle reduction, skin tone improvement, and collagen production stimulation.

### Benefits:

- **High Radiation Intensity:** The LED strip provides high radiation intensity, helping to accelerate processes that require deep red light, improving productivity and performance.
- **Flexible and Customizable:** The flexible design of the strip allows easy integration into custom systems or housings, making it a versatile solution for a wide range of industrial, research, and medical applications.
- **Even Light Distribution:** With 140 LEDs per meter, the strip provides uniform and consistent light distribution, ensuring the light intensity is spread evenly across the surface for optimal results.
- **Efficient Performance:** The LED strip operates on a 24V power supply and delivers efficient, stable performance, making it ideal for environments requiring continuous and reliable light delivery.
- **Passive Cooling for Reliable Performance:** As the LED strip requires passive cooling, it's essential to ensure proper ventilation and heat dissipation to prevent overheating and extend the lifespan of the product.

## 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	424.251 umol/m2
10cm	155.629 umol/m2
15cm	81.3488 umol/m2
20cm	50.4094 umol/m2
25cm	34.0392 umol/m2
30cm	25.7914 umol/m2

Peak wavelength  
(Object length: 200 mm)

656 nm

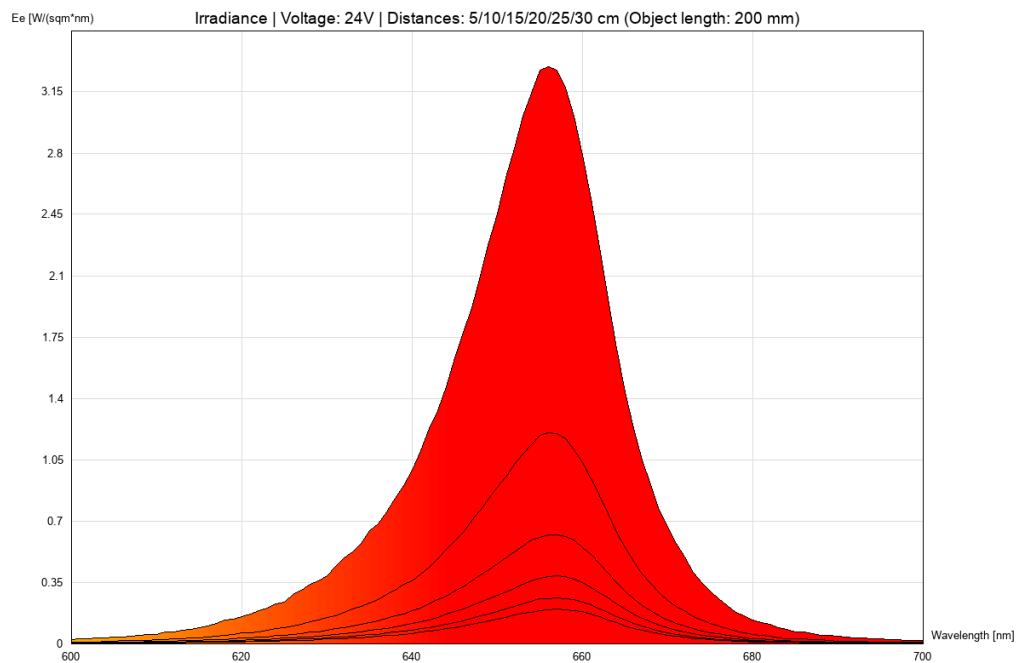
### Electronics

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

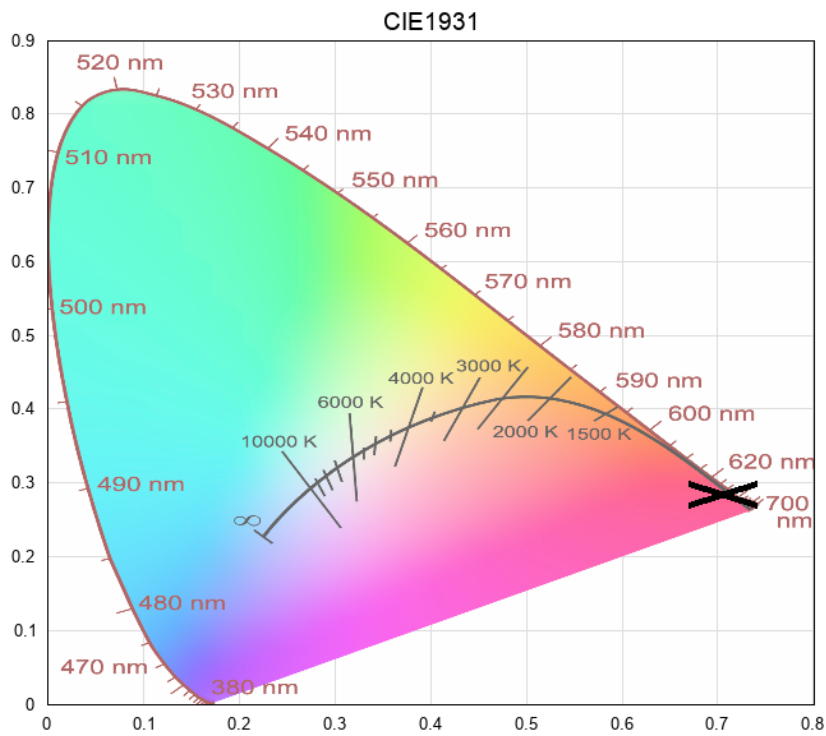
PCB material	Copper
<b>Environmental</b>	
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64
<b>Directives - standards - certificates</b>	
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

## Measurement results

### irradiance - 600-700-red (24V)



## cie1931



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