

Index

TECHNICAL SPECIFICATIONS	2
BENDING RADIUS	2
PHOTOMETRIC INFORMATION	3
POWER CONSUMPTION	3
POWER AND CONNECTION DIAGRAM	4
MAXIMUM CABLE LENGTH	5
SYMBOLS	6

PCB Deco Colour

The liniLED® PCB Deco LED strip (IP00) is a high quality, flexible LED strip equipped with 3M double sided tape. Thanks to its small dimensions the PCB LED strip is ideal for usage in small (indoor) spaces.

In addition to the colours red, green, blue and amber, the liniLED® PCB Deco LED strips are also available in white colours: Ultra Warm White 2400K, Extra Warm White 2700K, Warm White 3000K, Natural White 4000K and Cold White 6500K.

In order to power liniLED® products safely, it is absolutely necessary to operate them with an electronically stabilized power supply protected against short circuits, overload and overheating.

To ease the luminaire/ installation approval, electronic control gear for liniLED® products should carry the CE mark. Preferably a controller from the liniLED® Control Range. In Europe, the declarations of conformity must include the following standards: CE: EN 55015, IEC 61547 and IEC 61000-3-2.

For the latest version of this datasheet, visit our website: www.liniLED.com

USPs

- Made in Europe
- Very flexible (bend radius > 20 mm)
- Ideal for small indoor spaces
- Dimmable with PWM technology
- Effective heat dissipation
- Excellent lumen/ Watt ratio
- Available in long lengths
- Available in various colours
- Extensive range of accessories
- Plug & Play

Available colours

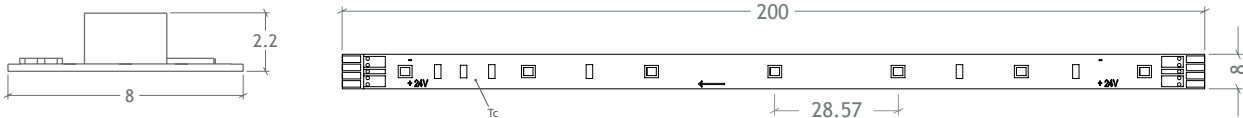
Colour	Description
Red	liniLED® PCB Deco Red
Green	liniLED® PCB Deco Green
Blue	liniLED® PCB Deco Blue
Amber	liniLED® PCB Deco Amber



Technical specifications

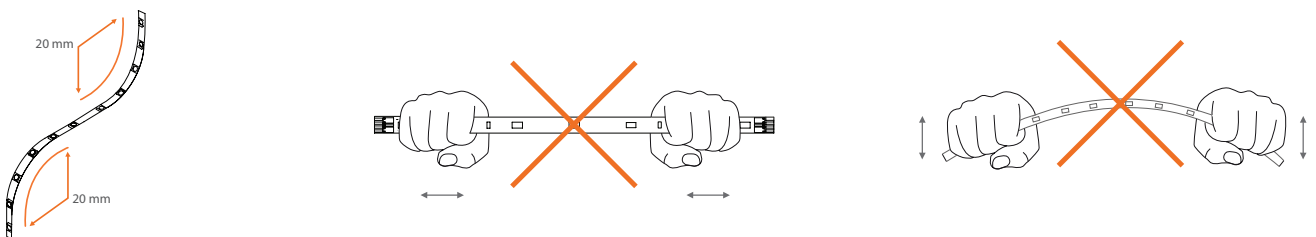
	Red	Green	Blue	Amber
Product code [m]	12182	12183	12184	12181
Power (24 V DC)	4.4 W/m	2.5 W/m	1.7 W/m	4.4 W/m
Power (25 V DC)	4.6 W/m	2.6 W/m	1.8 W/m	4.6 W/m
Luminous flux	52 lm/m	135 lm/m	26 lm/m	38 lm/m
Luminous efficiency	12 lm/W	54 lm/W	15 lm/W	9 lm/W
Wave length	617 nm	469 nm	525 nm	587 nm
Spool length	Max. 50 m			
Section length	20 cm			
LED	TopLED® long life			
Number of LEDs	7 per section/35 per metre			
Max. connection length	20 m			
Operating voltage	24 V DC			
Max. operating voltage	25 V DC			
Beam angle	120°			
Dimensions	8 x 2.2 mm			
Dimmable	PWM dimming, 24 V DC Common Anode			
Weight	9 gram per metre			
Expected lifetime	B50/L50 > 50,000 hours @ $T_c = 40\text{ °C}$			
Degree of protection (IP)	IP00			
Storage temperature	-30 °C ... 85 °C			
Operating temperature ¹	-30 °C ... 55 °C			
Minimal bending radius	20 mm			

¹Max. connection length between -30 °C and -20 °C is 14 metres.



Bending radius

Maximum bending radius is 20 mm. Solely bend up or downward. Do not compress, stretch or bend the LED strip sideways.

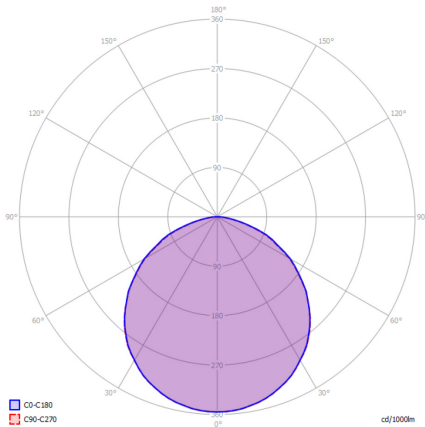


Photometric information

In the process of lighting design and calculations, the luminous flux and beam angle alone are not enough information to create a representative and realistic calculation or render. There is one set of photometric files for a one metre length of LED strip and one for a segment length, that corresponds to the cutting length of each LED strip type. Using the one metre data, quick calculations and long lengths can be simulated with photometric software. The segment data allows very detailed simulations, even curved lines can be approached in high detail.

The information on the website is available in two different file formats:

- Eulumdat (*.ldt)
- IES LM-63-1995 (*.ies)



Power consumption

To power the liniLED® LED strips and lighting fixtures, a power supply from the liniLED® Power assortment can be selected. Selection of the correct power supply must be done by taking the total requested power and the environment into account.

The total power consumption can be calculated by summing the requested power of all connected products. To calculate the power consumption of a single length of LED strip, use the equation below. The typical equation is valid if the product is supplied by a 24 V DC constant voltage power supply. If the output voltage of a power supply is increased, the power consumption will increase with the same ratio and needs to be corrected by using the optional part of the equation found between brackets.

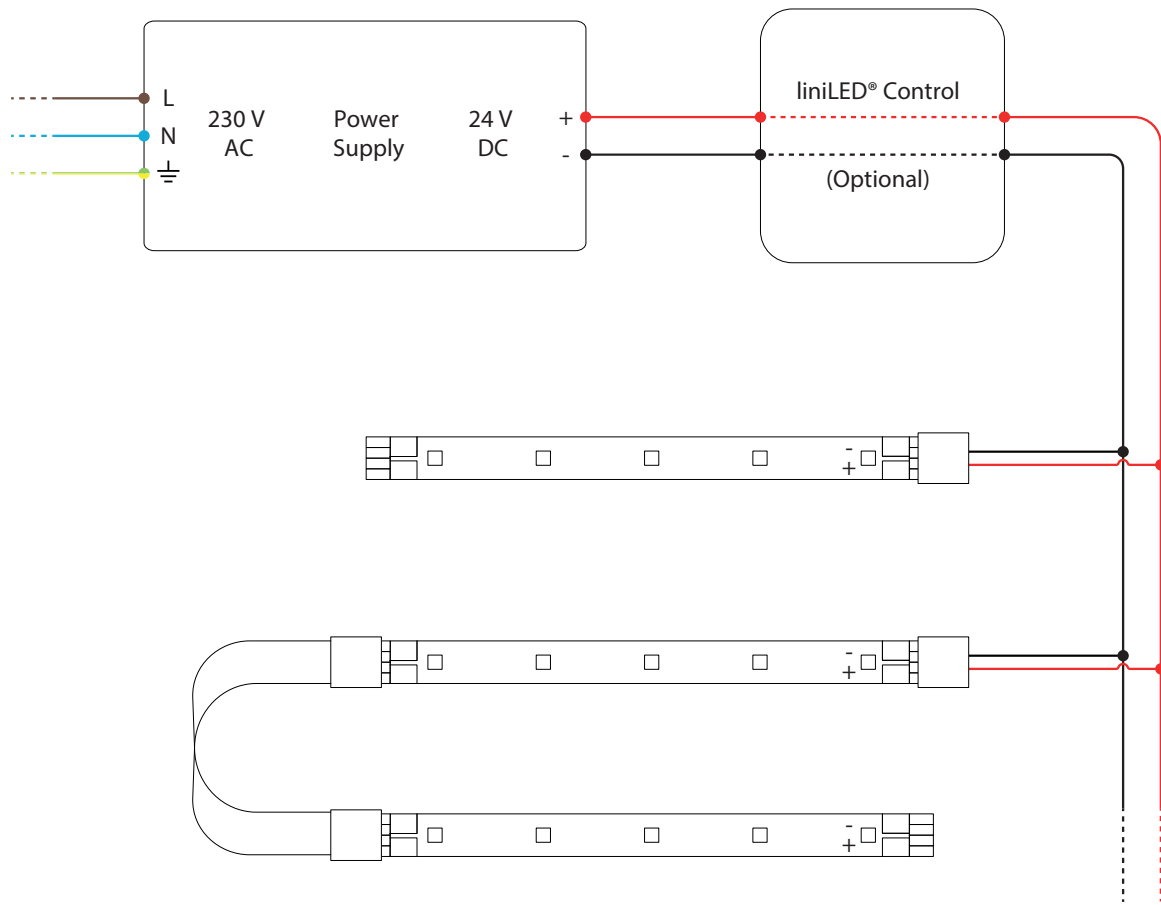
$$P_{STRIP} = P_{PRODUCT} \times X_{LENGTH} \times 110\% \left[\times \frac{U_{SUPPLY}}{24} \right]$$

- P_{STRIP}** Calculated power consumption of one LED strip in Watt
- $P_{PRODUCT}$** Typical power consumption in Watt per metre of the selected LED strip
This value can be found under 'Product characteristics' on page 2
- X_{LENGTH}** Length of the connected LED strip in metres
- 110% Safety margin to buffer differences over all production batches

Optional:

- U_{SUPPLY}** Set supply voltage of the power supply in Volt
- 24** Nominal supply voltage of liniLED® in Volt

Power and connection diagram



Maximum cable length

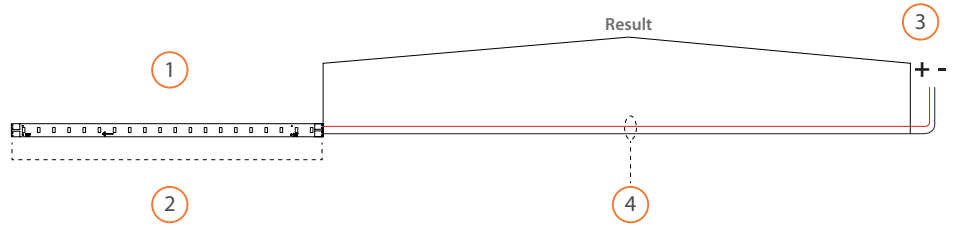
1 = Select colour temperature.

2 = Select LED strip length.

3 = Select output voltage.

4 = Select cable cross section.

Result = Maximum cable length based on the cable thickness and power supply voltage.



1. Colour temperature **Red - Amber**

2. LED strip length		1 m		2 m		5 m		10 m	
3. Output voltage		24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC
4. Cable cross section	0.50 mm ² - 0.035 Ω/m	69.1 m	133.9 m	12.8 m	25.7 m	5.7 m	12.2 m	2.2 m	5.4 m
	0.75 mm ² - 0.023 Ω/m	104.0 m	201.5 m	19.2 m	38.7 m	8.6 m	18.4 m	3.3 m	8.2 m
	1.00 mm ² - 0.018 Ω/m	138.3 m	267.9 m	25.6 m	51.5 m	11.5 m	24.4 m	4.4 m	10.9 m
	1.50 mm ² - 0.012 Ω/m	208.0 m	403.0 m	38.5 m	77.5 m	17.3 m	36.8 m	6.7 m	16.4 m
	2.50 mm ² - 0.007 Ω/m	346.2 m	670.7 m	64.1 m	128.9 m	28.8 m	61.2 m	11.2 m	27.4 m

1. Colour temperature **Blue**

2. LED strip length		1 m		2 m		5 m		10 m	
3. Output voltage		24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC
4. Cable cross section	0.50 mm ² - 0.035 Ω/m	181.0 m	348.7 m	35.1 m	68.7 m	16.9 m	33.7 m	7.8 m	16.2 m
	0.75 mm ² - 0.023 Ω/m	272.3 m	524.6 m	52.9 m	103.3 m	25.4 m	50.7 m	11.7 m	24.3 m
	1.00 mm ² - 0.018 Ω/m	362.0 m	697.4 m	70.3 m	137.4 m	33.8 m	67.4 m	15.6 m	32.4 m
	1.50 mm ² - 0.012 Ω/m	544.6 m	1049.2 m	105.8 m	206.7 m	50.9 m	101.4 m	23.5 m	48.7 m
	2.50 mm ² - 0.007 Ω/m	906.3 m	1746.1 m	176.1 m	344.0 m	84.8 m	168.8 m	39.2 m	81.2 m

1. Colour temperature **Green**

2. LED strip length		1 m		2 m		5 m		10 m	
3. Output voltage		24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC
4. Cable cross section	0.50 mm ² - 0.035 Ω/m	122.6 m	236.7 m	23.5 m	46.3 m	11.1 m	22.5 m	4.9 m	10.6 m
	0.75 mm ² - 0.023 Ω/m	184.5 m	356.1 m	35.3 m	69.6 m	16.7 m	33.8 m	7.3 m	15.9 m
	1.00 mm ² - 0.018 Ω/m	245.3 m	473.4 m	47.0 m	92.6 m	22.2 m	45.0 m	9.8 m	21.2 m
	1.50 mm ² - 0.012 Ω/m	369.0 m	712.2 m	70.7 m	139.3 m	33.4 m	67.7 m	14.7 m	31.9 m
	2.50 mm ² - 0.007 Ω/m	614.2 m	1185.3 m	117.7 m	231.9 m	55.6 m	112.7 m	24.6 m	53.1 m

⚠ **Note:** Calculations are based on a standard connector with 1 metre cable (0.5 mm²).

Symbols



Electro Static Discharge (ESD) sensitive device, apply standard ESD precautions when handling the product.



Manufacturer's declaration that the product meets the applicable EC directives.



Suitable for mounting on all surfaces and suitable to cover with insulating material.



Restriction of Hazardous Substances (RoHS): product complies with the RoHS directive and each homogeneous material does not exceed the limits for the materials mentioned under the RoHS directive (Pb, Hg, Cd, Cr6+, PBB and PBDE).



Not protected against ingress of solid foreign objects. Not-protected against ingress of water.



Bending of the LED strip is possible with a radius of ≥ 20 millimetres in the specified direction.



Electrical appliance class III: this product is designed to be supplied from an extra-low voltage (≤ 60.0 V DC or ≤ 42.4 V AC).



System guarantee of 5 years when the complete system consist of liniLED® products with the 5 years system warranty logo. Terms & conditions apply.



Operating voltage of 24 V DC.

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