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PCB Power Colour

The liniLED® PCB Power 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 Power 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

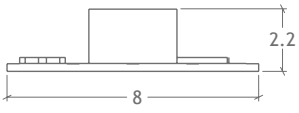
Available colours

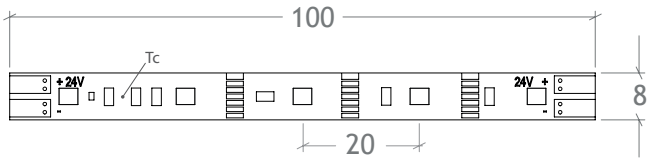
Colour	Description
Red	liniLED® PCB Red Power
Green	liniLED® PCB Green Power
Blue	liniLED® PCB Blue Power
Amber	liniLED® PCB Amber Power

Technical specifications

	Red	Green	Blue	Amber
Product code [m]	12176	12178	12177	12179
Power (24 V DC)	8.3 W/m	4.9 W/m	7.2 W/m	8.3 W/m
Power (25 V DC)	8.6 W/m	5.1 W/m	7.5 W/m	8.6W/m
Luminous flux	140 lm/m	195 lm/m	67 lm/m	115 lm/m
Luminous efficiency	17 lm/W	40 lm/W	9 lm/W	14 lm/W
Wave length	467 nm	625 nm	525 nm	587 nm
Spool length	max. 10 m			
Section length	10 cm			
LED	TopLED® long life			
Number of LEDs	5 per section/50 per metre			
Max. connection length	10 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/L70 > 60,000 hours @ T_c = 40 °C			
Degree of protection (IP)	IP00			
Storage temperature	-20 °C .. 80 °C			
Operating temperature	-20 °C .. 75 °C[1]			
Minimal bending radius	20 mm			

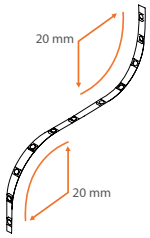
[1] Max. connection length between -30 °C and -20 °C is 7 metres.

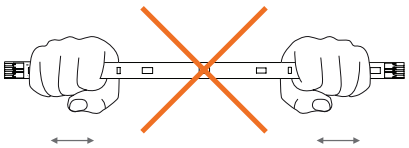


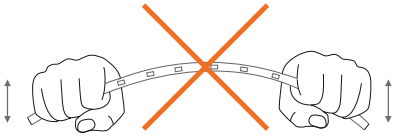


Bending radius

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





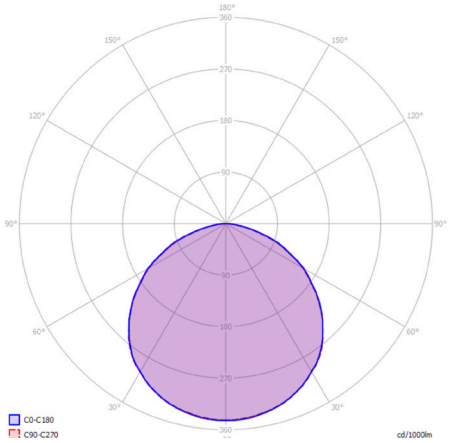


Photometric information

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

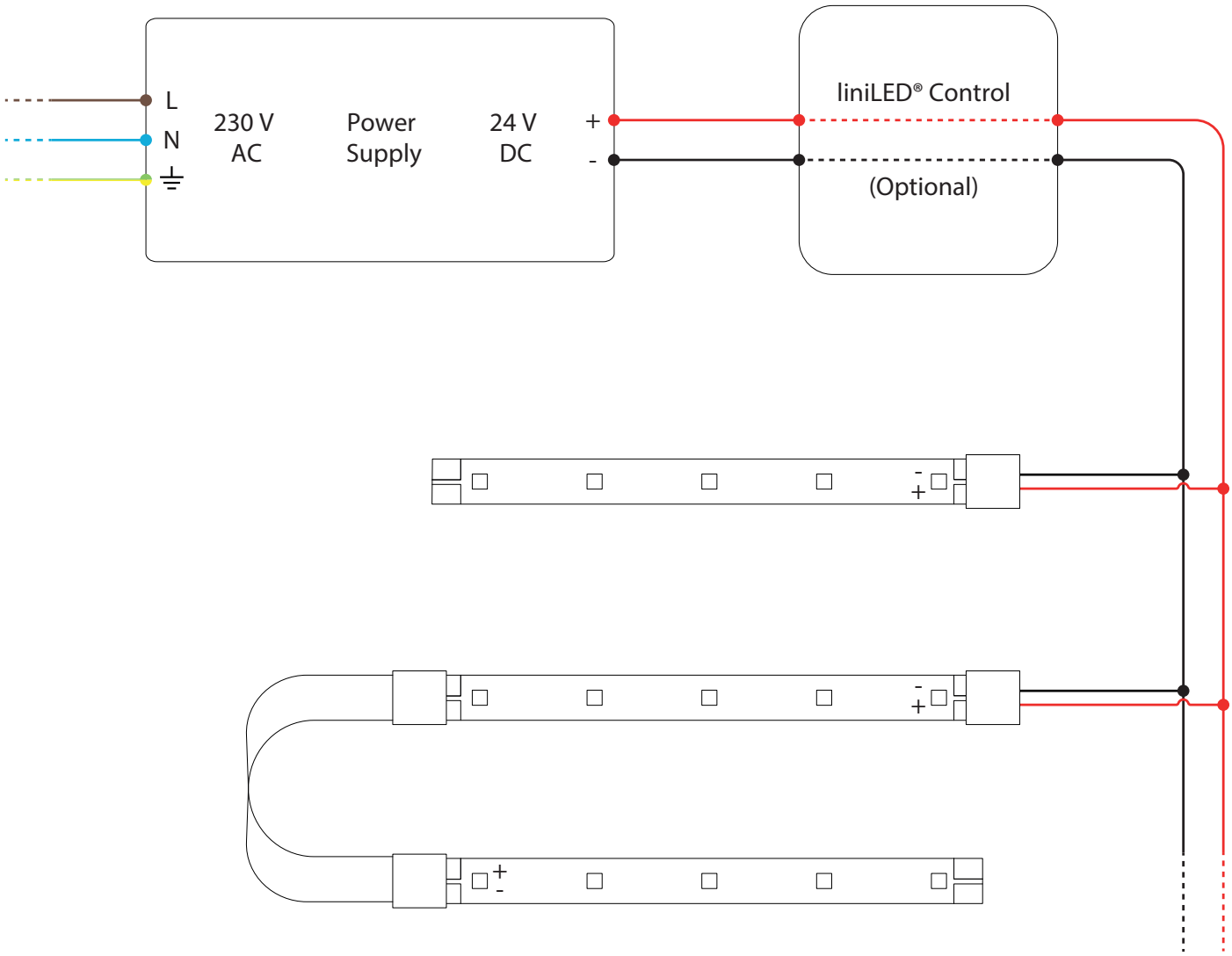
To power the liniLED® LED strips and lighting fixtures, a power supply from the liniLED® Power assortment can be selected. Selection of the correct power supply must be done by taking the total requested power and the environment into account.

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.

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

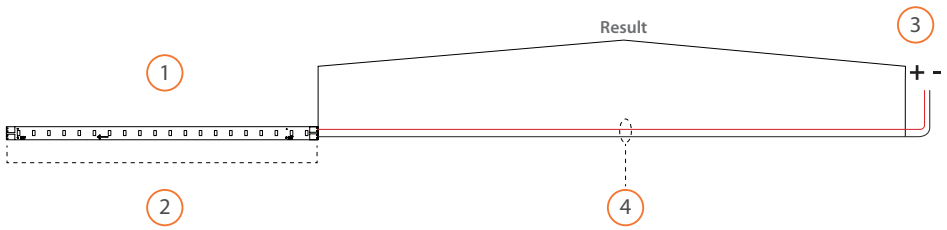
P_{STRIP}	Calculated power consumption of one LED strip in Watt
$P_{PRODUCT}$	Typical power consumption in Watt per metre of the selected LED strip This value can be found under 'Product characteristics' on page 2
X_{LENGTH}	Length of the connected LED strip in metres
110%	Safety margin to buffer differences 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 V DC*	*25 V DC*	*24 V DC*	*25 V DC*	*24 V DC*	*25 V DC*	*24 V DC*	*25 V DC*
4. Cable cross section	**0.50 mm²** - 0.035 Ω/m	36.0 m	70.4 m	17.3 m	34.5 m	6.1 m	13.0 m	2.4 m	5.8 m
	0.75 mm² - 0.023 Ω/m	54.2 m	105.9 m	26.1 m	51.9 m	9.3 m	19.6 m	3.6 m	8.8 m
	1.00 mm² - 0.018 Ω/m	72.1 m	140.8 m	34.7 m	69.1 m	12.3 m	26.1 m	4.8 m	11.7 m
	1.50 mm² - 0.012 Ω/m	108.4 m	211.8 m	52.3 m	103.9 m	18.6 m	39.2 m	7.3 m	17.7 m
	2.50 mm² - 0.007 Ω/m	180.5 m	352.5 m	87.0 m	173.0 m	30.9 m	65.3 m	12.2 m	29.4 m

1. Colour temperature		Blue							
2. LED strip length		1 m		2 m		5 m		10 m	
3. Output voltage		*24 V DC*	*25 V DC*	*24 V DC*	*25 V DC*	*24 V DC*	*25 V DC*	*24 V DC*	*25 V DC*
4. Cable cross section	**0.50 mm²** - 0.035 Ω/m	41.7 m	81.3 m	20.2 m	40.0 m	7.3 m	15.2 m	3.0 m	6.9 m
	0.75 mm² - 0.023 Ω/m	62.8 m	122.3 m	30.4 m	60.2 m	11.0 m	22.9 m	4.5 m	10.5 m
	1.00 mm² - 0.018 Ω/m	83.5 m	162.7 m	40.4 m	80.0 m	14.6 m	30.4 m	6.0 m	13.9 m
	1.50 mm² - 0.012 Ω/m	125.6 m	244.7 m	60.8 m	120.4 m	22.0 m	45.8 m	9.0 m	21.0 m
	2.50 mm² - 0.007 Ω/m	209.0 m	407.3 m	101.3 m	200.4 m	36.6 m	76.3 m	15.1 m	34.9 m

1. Colour temperature		Green							
2. LED strip length		1 m		2 m		5 m		10 m	
3. Output voltage		*24 V DC*	*25 V DC*	*24 V DC*	*25 V DC*	*24 V DC*	*25 V DC*	*24 V DC*	*25 V DC*
4. Cable cross section	**0.50 mm²** - 0.035 Ω/m	61.9 m	120.1 m	30.3 m	59.4 m	11.3 m	23.0 m	5.0 m	10.8 m
	0.75 mm² - 0.023 Ω/m	93.2 m	180.7 m	45.6 m	89.4 m	17.0 m	34.6 m	7.5 m	16.3 m
	1.00 mm² - 0.018 Ω/m	123.9 m	240.3 m	60.6 m	118.8 m	22.7 m	46.0 m	10.0 m	21.7 m
	1.50 mm² - 0.012 Ω/m	186.4 m	361.4 m	91.2 m	178.8 m	34.1 m	69.2 m	15.1 m	32.6 m
	2.50 mm² - 0.007 Ω/m	310.2 m	601.6 m	151.9 m	297.5 m	56.9 m	115.1 m	25.2 m	54.3 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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