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## PCB RGBW 700/1300 3000K

The liniLED® PCB RGBW 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 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](http://www.liniLED.com)

## USPs

- Extra long lifetime - 60,000 h (L70B50)
- Full Single bin on each colour and white
- Up to 6 metres per reel
- Max. 2 mm high
- Built-in ESD protection up to 2 kV
- CRI 85
- Separate White LED chip
- < 3 SDCM

## Available outputs

Colour	Description
RGBW	liniLED® PCB RGBW 700 3000K
RGBW	liniLED® PCB RGBW 1300 3000K



## Technical specifications

	RGBW 700	RGBW 1300
Product code [m]	12171	12172
Power (24 V DC)	9.8 W/m	17.9 W/m
Power (25 V DC)	10.2 W/m	18.6 W/m
Luminous flux	697 lm/m (R 80, G 196, B 21, W 400 lm/m)	1293 lm/m (R 132, G 328, B 33, W 800 lm/m)
Luminous efficiency	71 lm/W	70 lm/W
Max. connection length	6 m	3.9 m
Expected lifetime	L70/B50 > 60,000 hours @ Tc = 40°C	
Spool length	Max. 6 m	Max. 3.9 m
Section length <sup>1</sup>	15 cm	10 cm
Number of LEDs	12 (6 RGB/6 White) per section/80 per metre	12 (6 RGB/6 White) per section/120 per metre
Operating voltage	24 V DC	
Max. operating voltage	25 V DC	
Beam angle	120°	
Dimensions	10 x 2 mm	
Dimmable	Pulse width modulation (PWM)	
Binning	Full single bin both RGB and White (< 3 SDCM)	
Weight	10.6 gram per metre	18.7 gram per metre
Degree of protection (IP)	IP00	
Storage temperature	-40°C ... 85°C	
Operating temperature <sup>2</sup>	-30°C ... 85°C	
Minimal bending radius	20 mm	
Power per colour incl. tape	RGBW 700	RGBW 1300
Red (24 V DC)	2.8 W/m	4.7 W/m
Green (24 V DC)	2.6 W/m	4.6 W/m
Blue (24 V DC)	1.1 W/m	1.7 W/m
White (24 V DC)	3.3 W/m	6.9 W/m

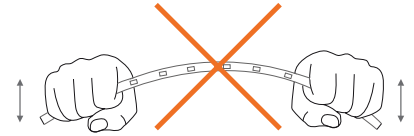
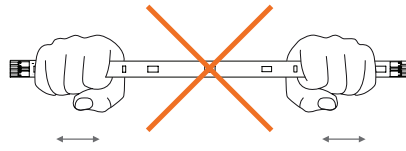
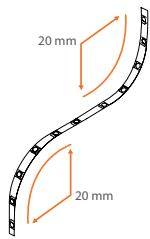
<sup>1</sup> Full spool lengths come with factory assembled wires on both ends.

<sup>2</sup> Max. connection length between -30°C and -20°C is RGBW 700 4.2 metres and RGBW 1300 is 2.7 metres



## Bending radius

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

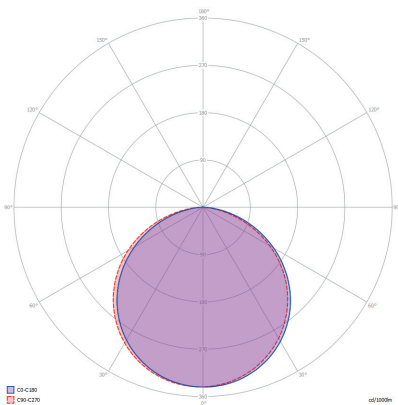


## Photometric information

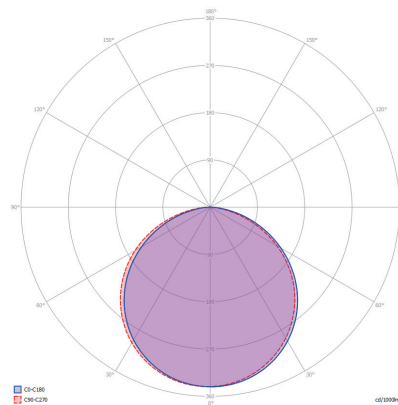
In the process of lighting design and calculations, the luminous flux and beam angle alone are not enough information to create a representative and realistic calculation or render. The information on the website is available in two different file formats:

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

### RGBW 700



### RGBW 1300



## 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.

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

$P_{\text{STRIP}}$  Calculated power consumption of one LED strip in Watt

$P_{\text{PRODUCT}}$  Typical power consumption in Watt per metre of the selected LED strip, this value can be found under 'Product characteristics' on page 2

$X_{\text{LENGTH}}$  Length of the connected LED strip in metres

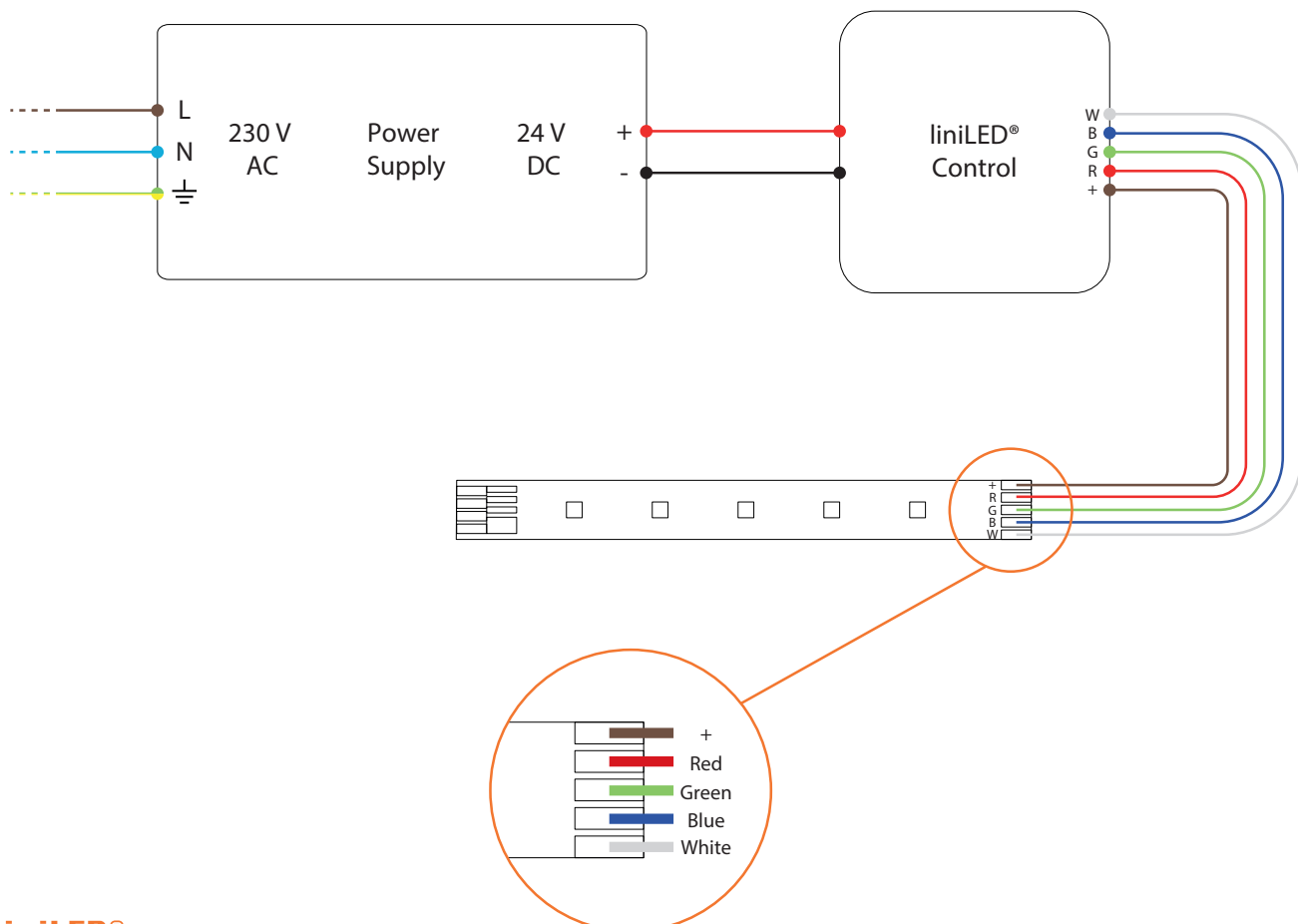
110% Safety margin to buffer differences over all production batches

*Optional:*

$U_{\text{SUPPLY}}$  Set supply voltage of the power supply in Volt

24 Nominal supply voltage of liniLED® in Volt

## Power and connection diagram



## Maximum cable length

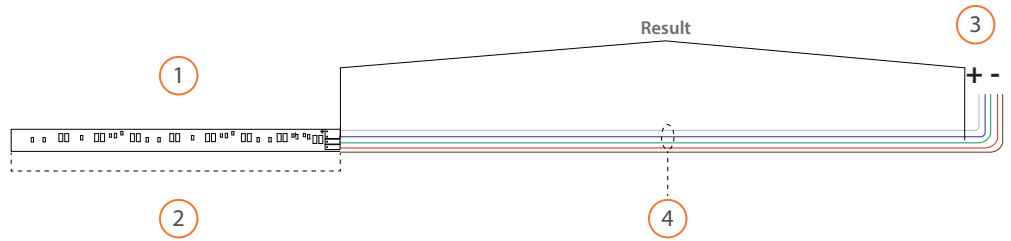
1 = Select colour temperature.

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

#### RGBW 700

2. LED strip length		1 m		2 m		4 m		6 m	
3. Voltage		24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC
4. Cable cross section	0.50 mm <sup>2</sup> - 0.035 Ω/m	45.7 m	89.2 m	22.0 m	43.8 m	10.2 m	21.1 m	6.2 m	13.5 m
	0.75 mm <sup>2</sup> - 0.023 Ω/m	68.7 m	134.2 m	33.1 m	65.9 m	15.3 m	31.7 m	9.4 m	20.3 m
	1.00 mm <sup>2</sup> - 0.018 Ω/m	91.3 m	178.4 m	44.0 m	87.6 m	20.4 m	42.1 m	12.5 m	27.0 m
	1.50 mm <sup>2</sup> - 0.012 Ω/m	137.4 m	268.4 m	66.2 m	131.7 m	30.6 m	63.4 m	18.8 m	40.6 m
	2.50 mm <sup>2</sup> - 0.007 Ω/m	228.7 m	446.6 m	110.2 m	219.2 m	51.0 m	105.5 m	31.2 m	67.6 m

### 1. Colour temperature

#### RGBW 1300

2. LED strip length		1 m		2 m		3 m		3.9 m	
3. Voltage		24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC	24 VDC	25 VDC
4. Cable cross section	0.50 mm <sup>2</sup> - 0.035 Ω/m	23.3 m	46.3 m	10.8 m	22.3 m	6.6 m	14.3 m	4.7 m	10.6 m
	0.75 mm <sup>2</sup> - 0.023 Ω/m	35.1 m	69.7 m	16.3 m	33.6 m	10.0 m	21.5 m	7.1 m	16.0 m
	1.00 mm <sup>2</sup> - 0.018 Ω/m	46.6 m	92.6 m	21.6 m	44.6 m	13.3 m	28.6 m	9.4 m	21.2 m
	1.50 mm <sup>2</sup> - 0.012 Ω/m	70.1 m	139.3 m	32.5 m	67.1 m	20.0 m	43.1 m	14.2 m	31.9 m
	2.50 mm <sup>2</sup> - 0.007 Ω/m	116.7 m	231.8 m	54.1 m	111.7 m	33.3 m	71.7 m	23.7 m	53.2 m

## Symbols

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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.



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  $\geq 20$  millimetres in the specified direction.



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



The binning tolerance of this product is 3 MacAdam.



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.

## Disclaimer

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