

ecoled



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Luz Negra is a pioneer in the design of led strips, offering excellent quality since 2006. We were the first Spanish company to incorporate silicone as an IP protection system and later on to develop our **“DUO System” (unique on the market)** which guarantees total water-tightness yet maintaining the same flexibility and width of the PCB.

The exclusive water-tightness system, the double layer PCB, the power stabilizer, the high CRI, the thickness of the PCB, the tin silver in the welding, the quality of the phosphorous in the white leds, the brand name of the chip used, the quality of the adhesive tape, amongst other details, make our leds stand out from other makes, **because not all led strips are the same.**

Not all led strips are alike.

Some of the characteristics which make our **ecoled** strips unique;

1. Spanish idea and design.
2. Exclusive “Waterproof DUO” system which guarantees IP67 without widening the PCB and maintains the same flexibility.
3. Double layer PCB (with 3 and 4 ounces) for lower voltage drops and greater cooling of the strip.
4. Adhesive thermal conductive tape on the lower part which quickly transfers the heat to the profile.
5. Stabilizers with Heat Control system which prevent the strip from blowing through overload.



6. Strips with up to 5700 lumens per metre.
7. Full colour strips with CRI greater than 97.
8. COB strips with a steel sheet in the PCB which prevents any breaking due to bending.
9. Very high quality strips directly at 230V which offer a worldwide patent.
10. Special covering in the waterproof strips which prevents yellowing and inflexibility over time.
11. Led strips up to 170 lm/W.

* Please refer to the technical data sheet for each model.

Colour °KELVIN



Custom made led strips

Our vast experience in the design of flexible led strips (since 2006) allows us to manufacture totally customised led strips (according to the order); where the customer can choose from a variety of features, such as the following:

PCB width: minimum 4mm.

Type of led: front or side lighting, SMD 3014-3528-5050-2835-3327, etc.

Water-tightness: from IP20 to IP67. Our waterproof DUO system can also be provided on request.

PCB quality: single or double sided, the thickness can vary, light reflecting properties, etc.

Led Quality: CREE, NICHIA, OSRAM, EPISTAR, etc.

CRI (Colour Rendering Index).

Led colour: warm, cool or neutral white, red, green, blue, amber, RGB, RGB+W, CW+WW.

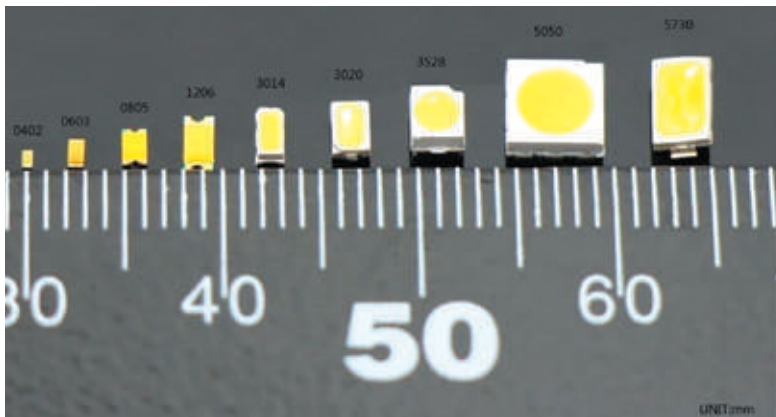
Voltage: 12V-24V.

Led power: from 2.5W up to 40W per metre.

Lighting performance: from 80 up to 100 lumen/W or even greater values.

Length of the roll: 5, 10 or 15 metre. The length of the led strip can be shortened on request.

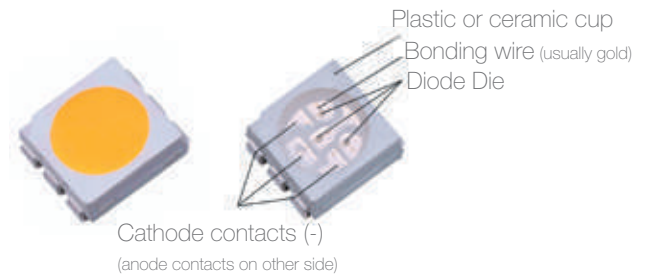
Other elements include **voltage stabiliser**, PCB with the company's logo or printed brand, thermal conductive tape, etc.



Manufacturing process for our flexible led strips

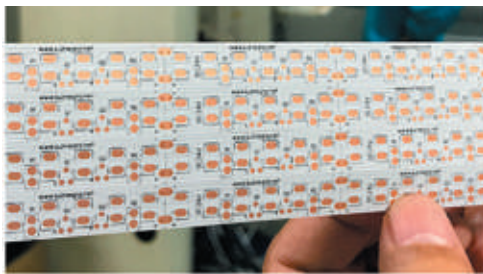


Surface Mounted Device led

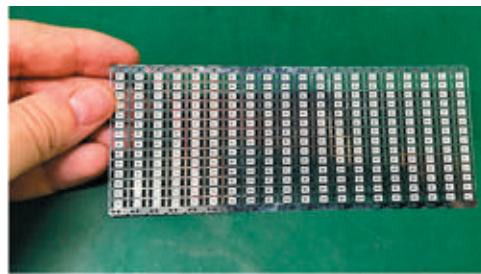


Although the majority of led strips look alike, what makes the difference is the way in which they are manufactured and their components and this is directly reflected in their luminosity, performance, stability, light loss and life span.

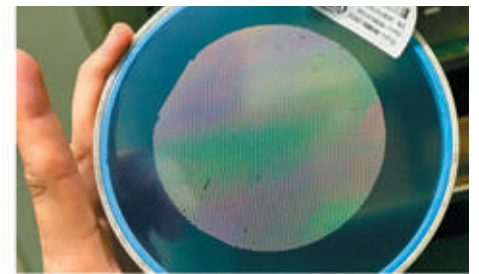
As follows, we highlight the basic steps which are taken in the manufacturing of our led strips:



PCB



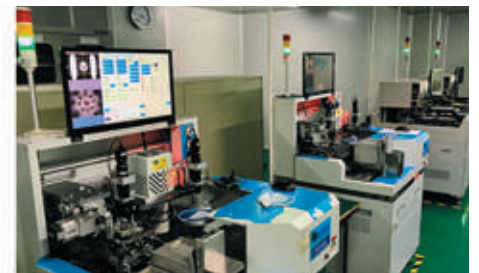
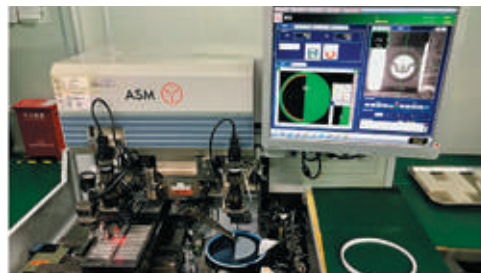
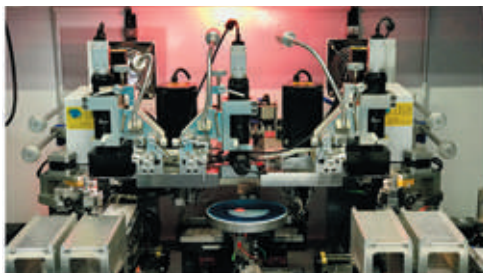
Diodes where the chips are mounted



Base plate with more than 15.000 chips (diodes)

In order to manufacture a led strip we need a base (PCB), on top of which we can find a circuit which generates electrical current and feeds the components which we place on top, such as the SMD leds, power resistors and the current stabilisers. This base is made up of one or two layers which are between one or two ounces (oz) in thickness. A PCB with two layers and increased ounces allows us to achieve a reduced voltage drop and all our strips have two layers.

We also need to mention the die where the chip is placed (the diode which emits the light). This die will be soldered onto the PCB. There are many different types of diode die and can be determined by the quantity of chips to be housed inside and their shape. The most common are 3528-2838-5050-3014-3030-3535-2216-3527.



The machines used have one or two heads, which take the chips from the base plate and then stick them onto the die with a special glue.

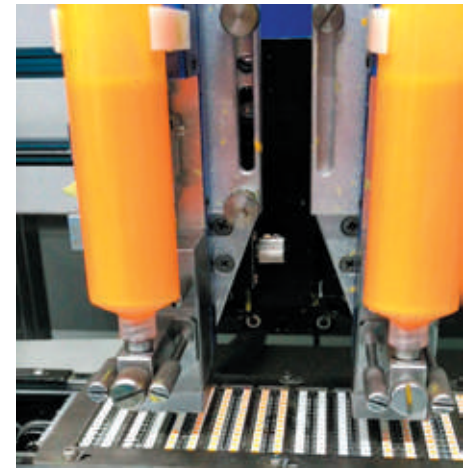


Machine soldering with gold wires

Next the chips wires are soldered onto the die (at Luz Negra we use a high purity gold wire which gives us improved conductivity).

In order to obtain white leds we need to apply a phosphorus layer on top of the blue led. Depending on the composition of this phosphorus we will achieve different tones of white.

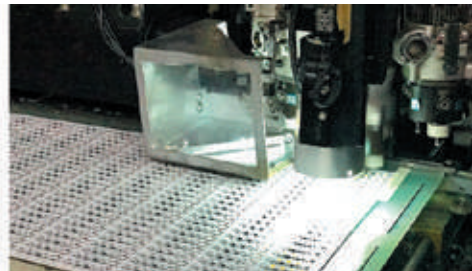
Phosphorus is the yellow layer which we can see in the white leds when they are turned off. If the colour is "lemon" yellow then it will mean cold white (approx 6000°K). If it is "orange-coloured" then it will mean warm white (approx 3000°K).



Machine placing phosphorus in the leds



Test 1x1 placing on reel



Machine "revolver" applying leds to the PCB

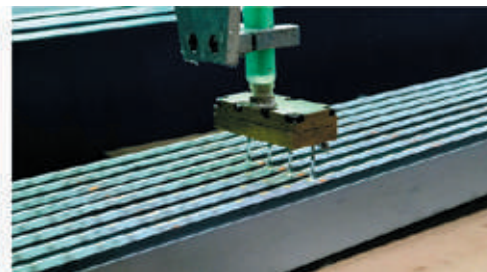


Drying oven for sealing soldered parts

Afterwards another machine carries out a test on the leds (one-by-one) in order to classify them via their BIN code and it packages them onto a reel to be later used in the SMT machines. Then the machine applies the leds and other components such as power resistors and current stabilisers to the PCB. Once we have the PCB completed with all the elements, it is placed into an oven to make sure that all the soldered parts between the components and the PCB are completely fixed.



Quality control and luminosity



Placing of silicone



DUO waterproofing shrink tunnels

Next we come to the quality process, where the strips are checked (in lengths of 50cm) with different power intensities and with white filters, in order to detect any anomalies. Then the 50cm lengths are soldered together to make final lengths of 5m (supplied in rolls). The waterproof models are placed onto special 5m racks and here they are treated with a layer of silicone to achieve IP65. As for the models with our Waterproof DUO system (silicone and shrink wrap tube which offer us IP67), they will have a shrink wrap casing applied and then finished in the shrink tunnels. This system gives us IP67 protection without increasing the width of the led strip and at the same time maintains its flexibility in 100%.

Afterwards 3M tape is placed on the back of the strips and they are placed in the AGE TESTING chamber where the final quality testing is carried out. At the end of this process machines roll the strips onto 5m reels and then they are packaged.

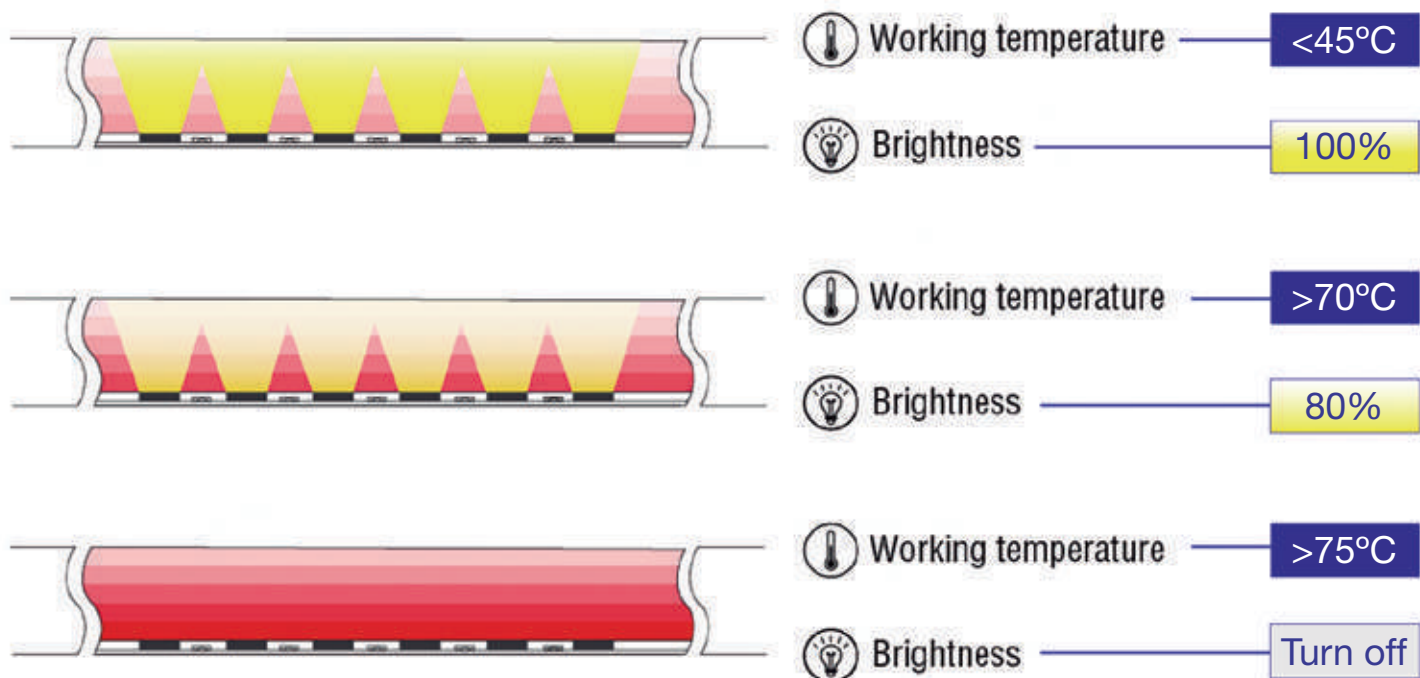
Flexible led strips with HEAT CONTROL by Luz Negra

Leds are very sensitive to temperature and if we overload, or don't apply suitable dissipation or if the outside environment is warmer than desired, then the led acquires a temperature higher than appropriate. This means it will enter into a loop where it heats up more and more until it ends up burning out and reducing its luminosity to zero.

To avoid these situations, here at Luz Negra we have incorporated our HEAT CONTROL system in some of our flexible strips (PRO series). The heat control works as follows: if the strip is working at its normal temperature (normally below 45°C), the luminous flux and its performance is 100%, but, if for any reason the strip gets hotter, the intelligent Heat Control system reduces the luminous flux to preserve the led. If the temperature is too high, the led will turn off to avoid burning out.

The flexible strips which incorporate the Heat Control system are the following:

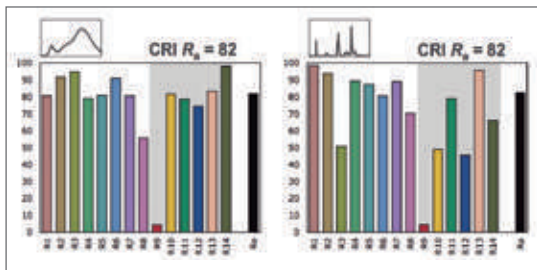
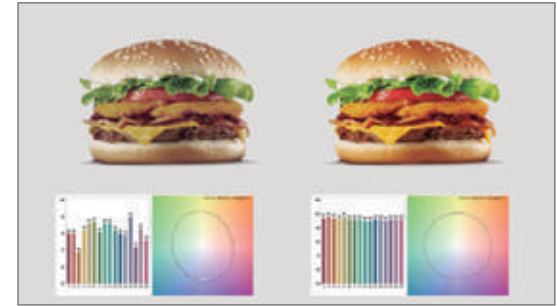
- Vizcaya
- Elite 5
- Elite 10
- Elite 15
- Elite 20
- Palma
- Tenerife
- Hierro
- Lanzarote
- Gomera



TM30-18 or CRI ¿Which is more important?

The Colour Rendering Index (CRI) is a numerical value from 0 - 100, which indicates the quality of light with respect to the sun. A light source with a CRI of 100, supposedly offers a chromatic reproduction similar to that of the sun which means that any product exposed to that light will be seen with its natural colours, as if it were illuminated by sunlight.

In the photo we can observe that the hamburger with a high CRI reflects the real colours more accurately, the value of R9 (red) being the most important of all.

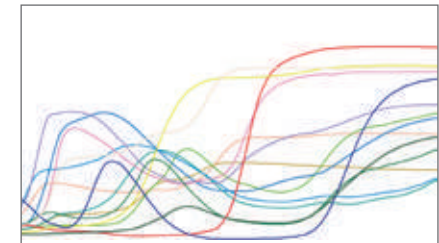


The CRI with its 15 values (colours) isn't complete enough to be able to carry out the best quality testing. This is due to the fact that with only 15 values we could reach a false assumption. The CRI can't prevent us from designing a light source with the specific idea of having a high result with these 15 colours, while the existing colour spectrum is poor in general (see the photo where we have 2 values with identical CRI and yet both luminous spectrums are very different).

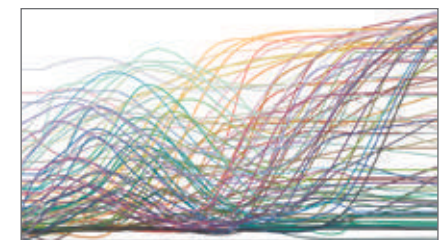
Therefore the TM-30-18 is a new standard which can tackle this problem. It has been proposed by leading organizations in USA, the IES (Illuminating Engineering Society) and the DOE (Department of Energy in USA). The TM-30-18 offers the Colour Fidelity Index (Rf) with the same quality scale up to 100, but with much higher levels of precision due to its increase in test colours (from 15 to 99 colours).

As the test colours have been substantially increased, it's practically impossible to have false readings. Only those light sources which have similarities with daylight or with the standard illuminant in the full spectrum, will obtain values greater than 90 or 95.

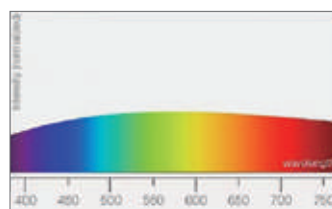
Our ecoled Full Colour strips, Sevilla model (see page 266), offer a luminous spectrum which is almost identical to sunlight, therefore achieving an excellent chromatic reproduction. Our laboratory (in our Barcelona installations) offers the most technologically advanced systems and with our spectroradiometer, equipped with an integrated sphere, we can carry out corresponding measurements for TM30-18 in order to guarantee the most rigorous and exact readings for our clients.



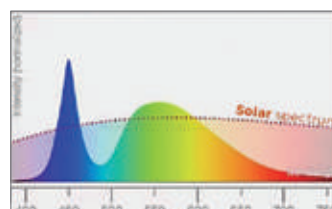
Spectrum, considering 15 values



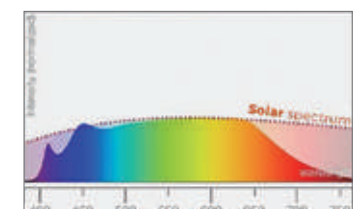
Spectrum, considering 99 values



Luminous spectrum with sunlight



Luminous spectrum with sunlight



Luminous spectrum with Sevilla ecoled

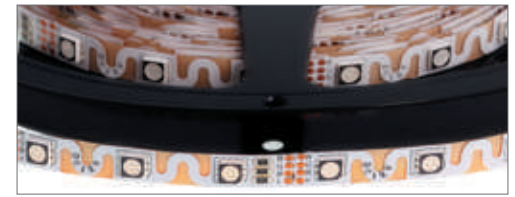
SPECIAL SERIES



PCB SLIM



SIDE LIGHTING



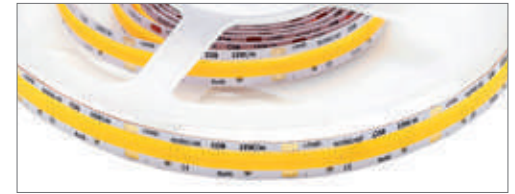
ZIG-ZAG



FLEXIBLE PANEL



GHOST PROFILE



COB

Please note: all our flexible led strips are supplied in their original lengths (5m/10m/100m) or can be customised according to requested needs (with a small additional fee).

5V

Page	ecoled	Series	Colour (°Kelvin)	Power	Lumens (Lm/m)	IP	Leds/m	PCB width	Cuttable	Connector
293	FIJI	DIGITAL	RGB	11.5W/m	308 Lm	IP20	60	5mm	16.54mm	-

12V

Page	ecoled	Series	Colour (°Kelvin)	Power	Lumens (Lm/m)	IP	Leds/m	PCB width	Cuttable	Connector
275	JADE	BASIC	6500 3500	4.8W/m	500 Lm / 6500K	IP20	60	8mm	50mm	42.069
275	RUBI PRO	BASIC	6000 2800	4.8W/m	438 Lm / 6000K	IP65	60	10mm	50mm	42.068
275	IBIZA PRO	PRO	6300 4000 2800	4.8W/m	441 Lm / 6300K	IP67 DUO	60	10mm	50mm	42.004
277	TOPACIO	BASIC	6000 2800	11.5W/m	864 Lm / 6000K	IP20	144	10mm	20mm	42.068
279	BARCELONA	PRO	6500 4000 3000	19.2W/m	1600 Lm / 6500K	IP20	240	10mm	12.5mm	42.068
281	CIES PRO	PRO SLIM	6000 4000 3000	10W/m	1358 Lm / 6000K	IP20	198	5mm	15 mm	42.069
283	MENORCA	PRO SIDE LIGHTING	5000 4000 2800	7.7W/m	600 Lm / 5500K	IP67 DUO	96	10mm	31mm	-
283	GETAFE	PRO SIDE LIGHTING	6000 4000 2800	10W/m	953 Lm / 6500K	IP20	120	6mm	25mm	42.069
285	AVILA PRO	PRO "ZIG-ZAG"	6000 4400 3000	12W/m	1071 Lm / 6000K	IP54	60	6mm	50mm	42.069
287	ESMERALDA RGB	BASIC "RGB"	RGB	7.2W/m	221 Lm / white	IP65	30	10mm	100mm	-
287	AGATA RGB	BASIC "RGB"	RGB	14.4W/m	350 Lm / white	IP65	60	10mm	50mm	-
283	IRUN RGB	PRO SIDE LIGHTING	RGB	13.8W/m	400 Lm / white	IP20	180	6mm	50 mm	-
285	JEREZ RGB	PRO "ZIG-ZAG"	RGB	11.5W/m	400 Lm / white	IP20	48	8.5mm	60mm	-
281	ALICANTE RGB	PRO SLIM	RGB	14.4W/m	400 Lm / white	IP20	60	6mm	50mm	-
270	PINK 10	PINK "neon effect"	PINK	10W/m	200 Lm	IP20	120	5mm	25mm	42.069
294	COZUMEL RGB	DIGITAL	RGB	5W/m	112 Lm	IP20	30	10mm	33.2mm	-
293	HAWAI RGB	DIGITAL	RGB	9W/m	260 Lm	IP20	60	10mm	16.8mm	-
294	BALI	DIGITAL	7000 3000	14.4W/m	1000 Lm / 7000K	IP20	60	10mm	50mm	-
294	MALDIVAS RGB+W	DIGITAL	RGB + W	20W/m	500 Lm	IP20	60	10mm	16.8mm	-

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24V

Page	ecoled	Series	Colour (°Kelvin)	Power	Lumens (Lm/m)	IP	Leds/m	PCB width	Cutttable	Connector
268	ÉLITE 5	ÉLITE SAMSUNG	6500 4000 3000	5W/m	700 Lm / 6500°K	IP20	140	10mm	50mm	42.068
272	PALMA	PREMIUM RETAIL	4200 3200 2850	4.8W/m	480 Lm / 4200°K	IP20	56	10mm	125mm	42.068
272	TENERIFE	PREMIUM RETAIL	4200 3200 2850	9.6W/m	960 Lm / 4200°K	IP20	112	10mm	62.5mm	42.068
269	ÉLITE 10	ÉLITE SAMSUNG	6500 4000 3000	10W/m	1250 Lm / 6500°K	IP20	140	10mm	50mm	42.068
277	VIZCAYA	PRO	6500 4000 3000 2800	10W/m	1100 Lm / 6500°K	IP67 DUO	144	10mm	42mm	42.004
277	ZAFIRO PRO	BASIC	7800 4000 2800	15W/m	1203 Lm / 7800°K	IP65	60	10mm	100mm	42.004
263	COB	COB	6500 4000 3000 2500	15W/m	1530 Lm / 6500°K	IP20	480	10mm	50mm	42.068
269	ÉLITE 15	ÉLITE SAMSUNG	6500 4000 3000 2700 2400 2100	15W/m	1770 Lm / 6500°K	IP20	140	10mm	50mm	42.068
273	HIERRO	PREMIUM RETAIL	4200 3200 2850	16W/m	1850 Lm / 4200°K	IP20	126	10mm	55.55mm	42.068
273	LANZAROTE	PREMIUM RETAIL	4200 3200 2850	18W/m	2100 Lm / 4200°K	IP20	196	10mm	35.7mm	42.068
279	CANOVELLES PRO	PRO	6000 4000 2800	19.2W/m	11631 Lm / 6500°K	IP67 DUO	240	10mm	25mm	42.004
266	SEVILLA	PRO	4000 2700	20W/m	2258 Lm / 4000°K	IP20	160	10mm	50mm	42.068
269	ÉLITE 20	ÉLITE SAMSUNG	6500 4000 3000	20W/m	2060 Lm / 6500°K	IP20	140	10mm	50mm	42.068
273	GOMERA	PREMIUM RETAIL	4200 3200 2850	21W/m	2450 Lm / 4200°K	IP20	238	10mm	29.4mm	42.068
281	GRANADA	PRO OSRAM	6500 4000 2700	21W/m	3150 Lm / 6500°K	IP20	128	5mm	62.5mm	42.069
267	CORDOBA	PRO	4000 2700	40W/m	5732 Lm / 4000°K	IP20	192	10mm	41mm	-
287	GERONA PRO ^{RGB}	PRO "RGB"	RGB	23W/m	1150 Lm / blanco	IP20	244	12mm	31.25mm	-
289	MARBELLA PRO ^{RGBW}	PRO "RGBW"	RGB + W 3000	19W/m	800 Lm / white	IP20	60	10mm	100mm	-
289	NERJA	PRO "DUAL" ^{ww-cw}	6500 3100	19.2W/m	1500 Lm / 6500°K-3100°K	IP20	120	10mm	50mm	-
291	TREVELEZ	FOOD "meat"	2100	20W/m	1600 Lm / 2100°K	IP54	192	10mm	41.6mm	42.068
291	MOTRIL	FOOD "pastries"	2500	20W/m	1800 Lm / 2500°K	IP65	192	10mm	41.6mm	42.068
291	ANTEQUERA	FOOD "vegetables"	6000	20W/m	2200 Lm / 6000°K	IP65	192	10mm	41.6mm	42.068
270	PINK 20	PINK "neon effect"	PINK	20W/m	420 Lm	IP20	168	10mm	42mm	42.068
193	SEYCHELLES	DIGITAL	RGB	28.8W/m	592 Lm	IP20	120	12mm	50mm	-

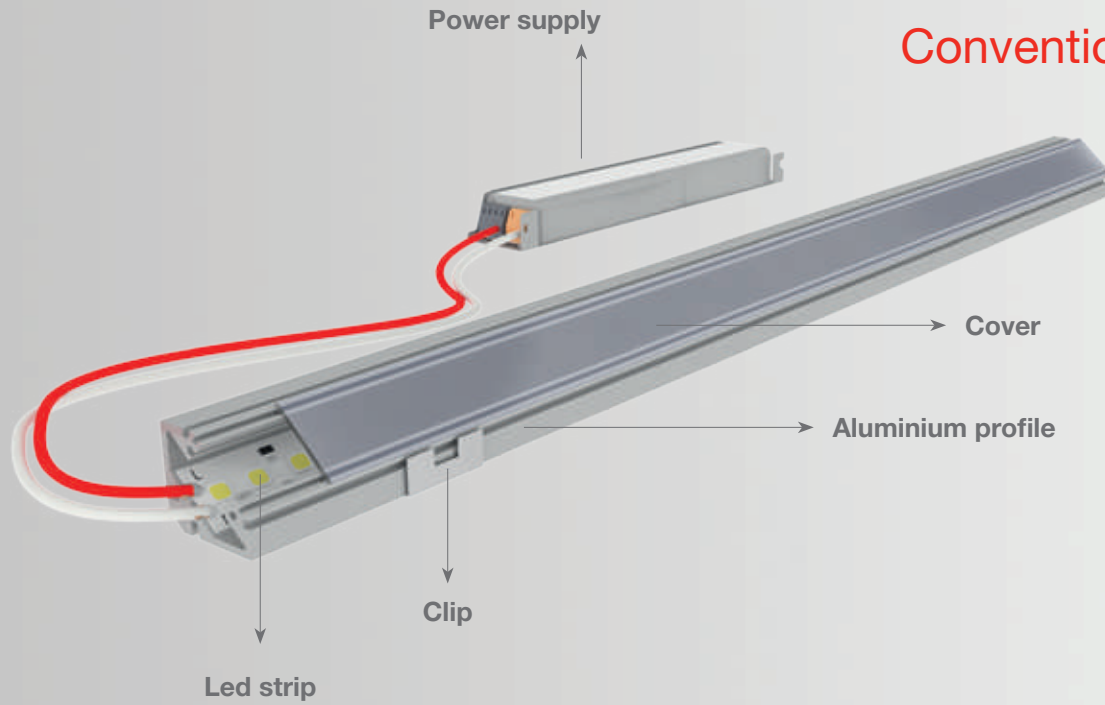
48V

Page	ecoled	Series	Colour (°Kelvin)	Power	Lumens (Lm/m)	IP	Leds/m	PCB width	Cutttable	Connector
264	CASTELLON	48V	6000 4000 2800	12.8W/m	1327 Lm / 6000°K	IP20	150	10mm	100mm	42.068

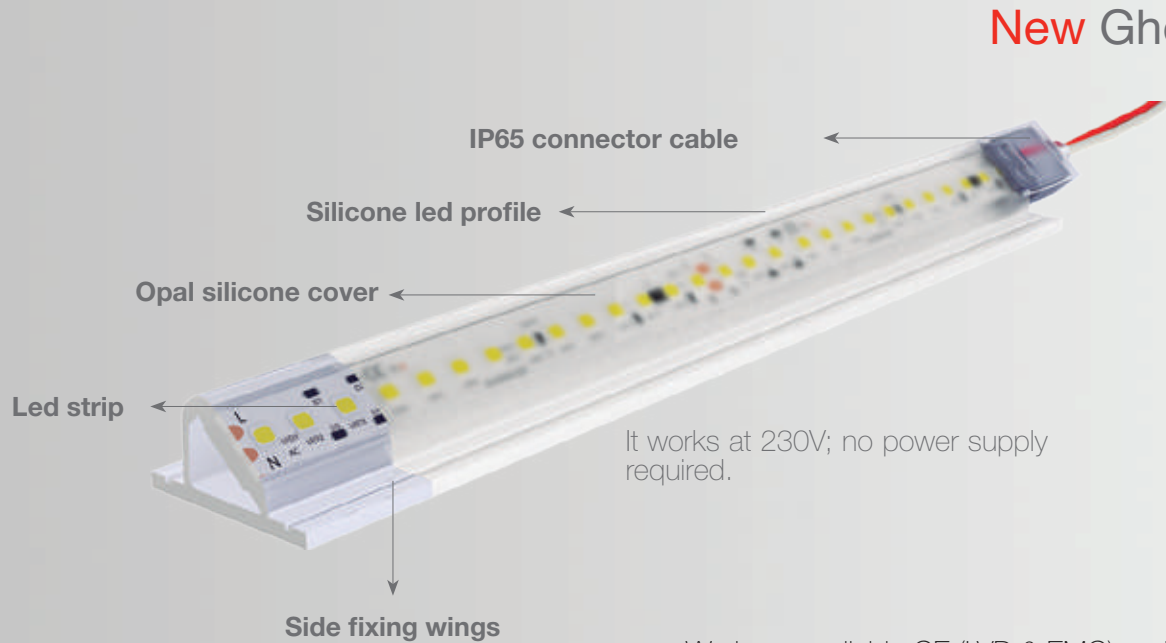
230V

Page	ecoled	Series	Colour (°Kelvin)	Power	Lumens (Lm/m)	IP	Leds/m	PCB width	Cutttable	Connector
262	INFINITY 14	230V	6500 4500 3000 2700	14W/m	1600 Lm / 6500°K	IP67	140	12	100mm	42.004
256	GHOST MILANO	230V	6000 4000 3000	14W/m	1500 Lm / 6000°K	IP67	140	26	100mm	42.004
257	GHOST MILANO DOBLE	230V	4000 3000	34W/m	3750 Lm / 4000°K	IP67	280	26	50mm	42.004
258	GHOST AMSTERDAM	230V	6000 4000 3000	14W/m	1500 Lm / 6000°K	IP67	140	14	100mm	42.004
259	GHOST SOPHIA	230V	6000 4000 3000	14W/m	1500 Lm / 6000°K	IP67	140	24	100mm	42.004

COMPARATIVE



Conventional Profile kit

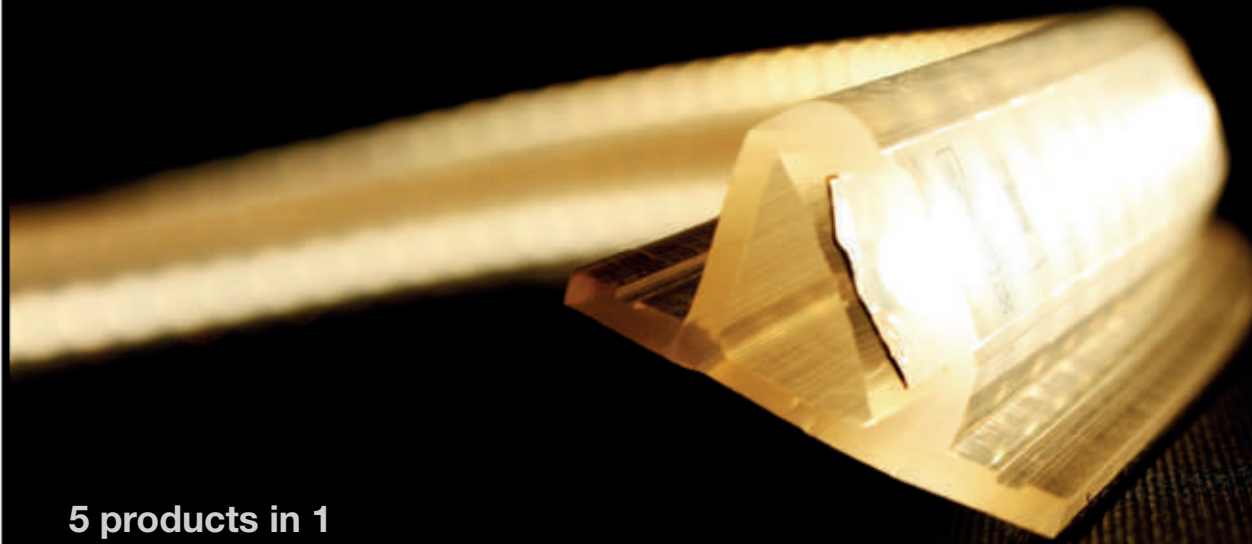


New Ghost Profiles

We have available CE (LVD & EMC) and RoHS certification

Ghost Profile; our revolutionary product

Our Ghost profile is made of opal coloured silicone, which has been manufactured via a cold extrusion process and has a led strip inside which works directly at 230V. Its 140 leds/m and 0.6W of power, use only 0.1W (16% of its nominal). This means they work more relaxed at a lower power level. They do not require any aluminium profile for heat dissipation. This means we can do installation of up to 50 metre with electric feed from only one end and without any junction boxes or drop in tension. Thanks to its waterproofing of IP67 it is ideal for outdoor use. It has IP67 waterproof connectors which can be screwed in place and do not need any welding. Our Ghost Profile has a very low flicker and is dimmable by means of triac. Supplied in metre or in 100m rolls. We offer up to 3 years guarantee.



24h working

Installing in half the time.

Up to 50m without any power supply or junction boxes.

5 products in 1



PROFILE: Its silicone structure imitates the aluminium profiles. It does not require thermal dissipation from aluminium as it works only at 16% of its nominal. Its flexibility allows us to adapt to irregular shapes.



COVER: It is manufactured in opal coloured silicone which diffuses the led dots and which can't be seen once the light bounces back onto surfaces like walls and ceilings.



LED STRIP: Our Ghost profile is manufactured via a cold extrusion process and has a led strip inside. It has 140 leds/m SMD 2835 (14W/m) with 1500 lumens/m, offering almost 110 lumens/W.



POWER SUPPLY: Its electronic design (Spanish worldwide patent) permits us to work directly at 230V without needing any power supply or external rectifying box.



FIXING CLIP: Ghost profile has side wings with grooves for fixing the screws or nails onto the desired surface.

MILANO GHOST PROFILE

High quality silicone opal profile, manufactured with a 230V led strip inside. It allows us to illuminate cavities and cornises etc. and offers up to 50 metre without luminosity drops. It has 2 side grooves which means we can screw or nail the profile onto the desired surface. Aluminium is not required for heat dissipation and it can work for 24h non stop. It can be cut every 10cm, consumption 14W/m, offering 1500 Lm/W. It can be regulated with triac dimmer.

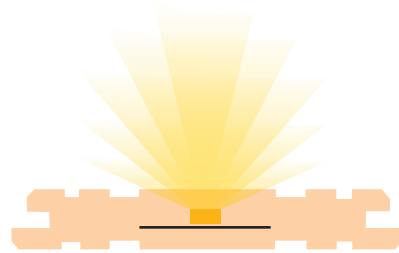
Thanks to its screwable connection kit, welding is not necessary. Its waterproofing of IP67 and UV protection turn it into an ideal product for outdoor use and also humid zones (it is extremely necessary to completely seal the connector and end cap with the recommended silicone).

Supplied in 100m rolls, or cut to requested length (MOQ 1m).

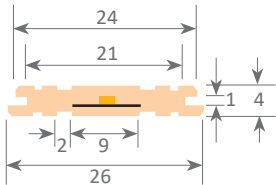
We offer a 2 year guarantee which can be extended to 3 years if the requested connections are carried out by Luz Negra. Spanish design and patent.



Scale 1:2



Scale 1:1



Power (W)	14W/m
Voltage (V)	230V
Light emission	120°
Waterproofing	IP67
N° leds/m	140
Cutable	every 100mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	by metre
Guarantee	3 years



Ghost profile Milano

34.005	white	6000°K	14W/m	1500 Lm
34.006	white	4000°K	14W/m	1450 Lm
34.007	white	3000°K	14W/m	1400 Lm



Connector IP65

42.005	connector with cable of 100cm
42.004	kit (connector with cable of 10cm, closing endcap, cap with connector neck, screws and silicone)



Connector IP20

42.007	connector (without cable), suitable for screwing with cables
--------	--



Cap with connector neck

19.251	transparent silicone
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Closure endcaps

19.181	transparent silicone
--------	----------------------



Silicone

22.033	High quality dielectric silicone	100ml
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High quality silicone opal profile, manufactured with a 230V led strip inside. It allows us to illuminate cavities and cornises etc. and offers up to 25 metre without luminosity drops. It has 2 side grooves which means we can screw or nail the profile on to the desired surface. Aluminium is not required for heat dissipation and it can work for 24h non stop. It can be cut every 5cm, consumption 34W/m, offering 3750 Lm/W. It can be regulated with triac dimmer.

Thanks to its screwable connection kit, welding is not necessary. Its waterproofing of IP67 an UV protection turns it into a ideal product for outdoor use and also humid zones (it is extremely necessary to completely seal the connector and end cap with the recommended silicone).

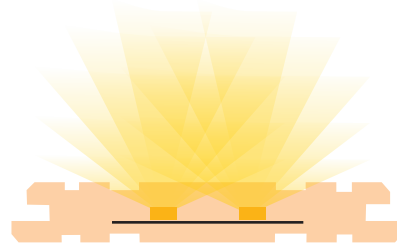
Supplied in 100m rolls, or cut to requested length (MOQ 1m).

We offer a 2 year guarantee which can be extended to 3 years if the requested connections are carried out by Luz Negra. Spanish design and patent.

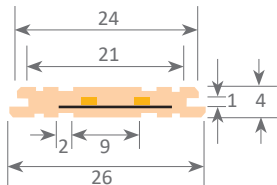
MILANO GHOST PROFILE DOUBLE



Scale 1:2



Scale 1:1



Power (W)	34W/m
Voltage (V)	230V
Light emission	120°
Waterproofing	IP67
N° leds/m	280
Cutable	every 50mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	by metre
Guarantee	3 years



Ghost profile Milano doble

34.009 white 4000°K 34W/m 3750 Lm
34.010 white 3000°K 34W/m 3650 Lm



Connector IP65

42.005 connector with cable of 100cm
42.004 kit (connector with cable of 10cm, closing endcap, cap with connector neck, screws and silicone)



Connector IP20

42.007 connector (without cable), suitable for screwing with cables



Cap with connector neck

19.251 transparent silicone



Closure endcaps

19.181 transparent silicone



Silicone

22.033 High quality dielectric silicone 100ml



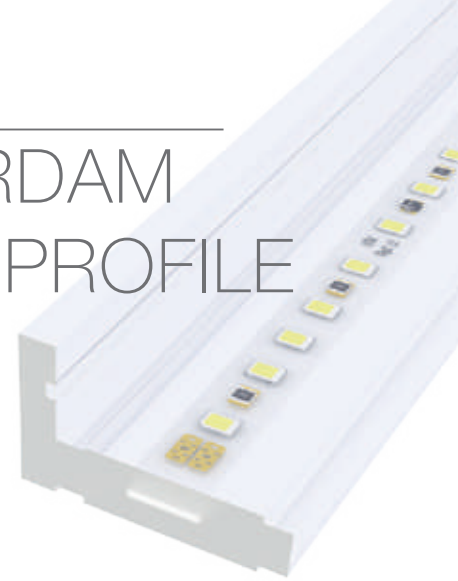
High quality silicone opal profile, manufactured with a 230V led strip inside. It allows us to illuminate cavities and cornises etc. and offers up to 50 metre without luminosity drops. It has 2 side grooves which means we can screw or nail the profile onto the desired surface. Aluminium is not required for heat dissipation and it can work for 24h non stop. It can be cut every 10cm, consumption 14W/m, offering 1500 Lm/W. It can be regulated with triac dimmer.

Thanks to its screwable connection kit, welding is not necessary. Its waterproofing of IP67 and UV protection turn it into an ideal product for outdoor use and also humid zones (it is extremely necessary to completely seal the connector and end cap with the recommended silicone).

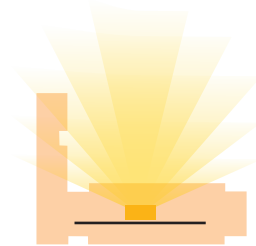
Supplied in 100m rolls, or cut to requested length (MOQ 1m).

We offer a 2 year guarantee which can be extended to 3 years if the requested connections are carried out by Luz Negra. Spanish design and patent.

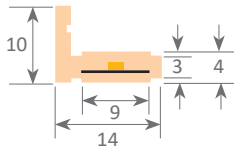
AMSTERDAM GHOST PROFILE



Scale 1:2



Scale 1:1



Power (W)	14W/m
Voltage (V)	230V
Light emission	120°
Waterproofing	IP67
N° leds/m	140
Cutable	every 100mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	by metre
Guarantee	3 years



Ghost profile Amsterdam

34.011	white	6000°K	14W/m	1500 Lm
34.012	white	4000°K	14W/m	1450 Lm
34.013	white	3000°K	14W/m	1400 Lm



Connector IP65

42.005	connector with cable of 100cm
42.004	kit (connector with cable of 10cm, closing endcap, cap with connector neck, screws and silicone)



Connector IP20

42.007	connector (without cable), suitable for screwing with cables
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Cap with connector neck

19.251	transparent silicone
--------	----------------------



Closure endcaps

19.181	transparent silicone
--------	----------------------



Silicone

22.033	high quality dielectric silicone	100ml
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High quality silicone opal profile, manufactured with a 230V led strip inside. It allows us to illuminate cavities and cornises etc. and offers up to 50 metre without luminosity drops. It has 2 side grooves which means we can screw or nail the profile onto the desired surface. Aluminium is not required for heat dissipation and it can work for 24h non stop. It can be cut every 10cm, consumption 14W/m, offering 1500 Lm/W. It can be regulated with triac dimmer.

Thanks to its screwable connection kit, welding is not necessary. Its waterproofing of IP67 and UV protection turn it into an ideal product for outdoor use and also humid zones (it is extremely necessary to completely seal the connector and end cap with the recommended silicone).

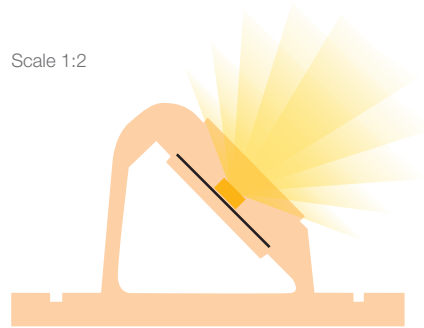
Supplied in 100m rolls, or cut to requested length (MOQ 1m).

We offer a 2 year guarantee which can be extended to 3 years if the requested connections are carried out by Luz Negra. Spanish design and patent.

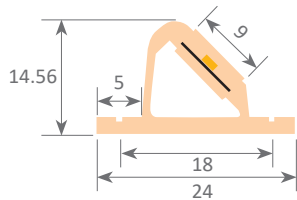
SOPHIA GHOST PROFILE



Scale 1:2



Scale 1:1



Power (W)	14W/m
Voltage (V)	230V
Light emission	120°
Waterproofing	IP67
N° leds/m	140
Cutable	every 100mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	by metre
Guarantee	3 years



Ghost profile Sophia

34.014	white	6000°K	14W/m	1500 Lm
34.015	white	4000°K	14W/m	1450 Lm
34.016	white	3000°K	14W/m	1400 Lm



Connector IP65

42.005	connector with cable of 100cm
42.004	kit (connector with cable of 10cm, closing endcap, cap with connector neck, screws and silicone)



Connector IP20

42.007	connector (without cable), suitable for screwing with cables
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Cap with connector neck

19.251	transparent silicone
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Closure endcaps

19.181	transparent silicone
--------	----------------------



Silicone

22.033	High quality dielectric silicone	100ml
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CHANGE

¿Do you know the advantages of using INFINITY which works directly at 230V?

1. Compared with other Asian models, Infinity uses only 17% of its leds nominal power; we use a 0.6W led that works at only 0.1W; even working 24h continuously it does not heat up and does not need any type of aluminum profile for heat dissipation.
2. We can connect up to 50m from one end, without a drop in luminosity.
3. We offer a range of connectors, joints and IP67 leads, which can be screwed on without any welding.
4. Power supplies are not needed.
5. With only a power of 14W/m, it offers 1500 lumens per metre, so we obtain more than 100W/m (something new in led strips at 230V).
6. It offers 140 leds/m SMD 2835, which guarantees an excellent dot free effect.
7. It is made of high quality silicone (UC class F1 UL94 and VOC free), which is more flexible compared to PVC led strips (Shore 85 flexibility). This material permits outdoor use without yellowing or cracking. Moreover, its weight is lower than that of PVC strips.
8. It can be introduced in almost all standard led profiles due to its reduced size.
9. We include the bridge rectifier in the PCB and not in an external box, so the cable output is clean without other components.
10. Its chips have the unique double welding process in its wire, so they are much more resistant.
11. The silicone inside this strip offers a real IP67 waterproofing, tested in salt mist chambers, so it can be installed even in places near the sea.
12. Allows us to control luminosity by using triac dimmers.
13. It has a low flicker, almost impossible to be seen.
14. It offers a Spanish patent and design.

We have available CE (LVD & EMC) and RoHS certification



INFINITY our new led strip at 230V



Available in 100m rolls. Also available in single metre (same price).



Available in warm white 3000°K, neutral white 4500°K and cool white 6500°K.



Range of connectors, joints and IP67 junction boxes, which can be screwed on without welding.



INFINITY 14



Ref: 34.001	6500°K
Ref: 34.002	4500°K
Ref: 34.003	3000°K
Ref: 34.004	2700°K

Single-coloured flexible led strip of medium luminosity at 230V, IP67 with 140 leds/metre and cuttable every 100mm.

12mm PCB.

Daily recommended use: 24h
Maximum connection per section: 50m

Power (W)	14W/m
Voltage (V)	230V
Led type	SMD2110
Lumens ^(6500°K)	1600 Lm/m
Lumens ^(4500°K)	1450 Lm/m
Lumens ^(3000°K)	1350 Lm/m
Lumens ^(2700°K)	1350 Lm/m
Light emission	120°
Waterproofing	IP67
N° leds/m	140
Measurements	12x4mm
Cuttable	every 100mm
PCB	12mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	by metre
Guarantee	3 years waterproofed by Luz Negra
Guarantee	2 years waterproofed by client



Connector IP65

- 42.005 connector with cable of 100cm
- 42.004 kit (connector with cable of 10cm, closure endcap, cap with connector neck, screws and silicone)



Silicone

- 22.033 Silicone tube 100ml



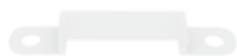
Connector IP20

- 42.007 connector (without cable), suitable for screwing with cables



Cap with connector neck

- 19.251 transparent silicone



Clip

- 20.041 silicone

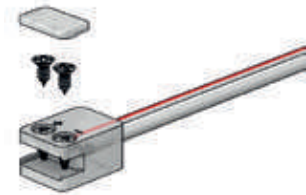


Closure endcaps

- 19.181 transparent silicone



- Photometric curves available and files IES & LDT for DIALux and RELUX carried out in our laboratory under petition.

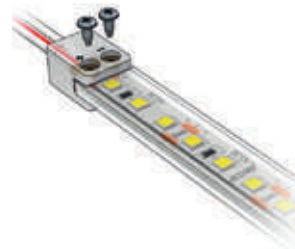
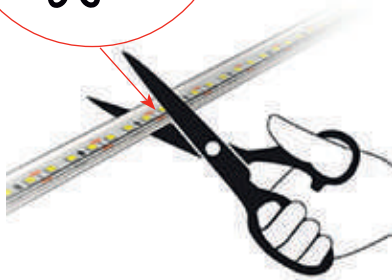
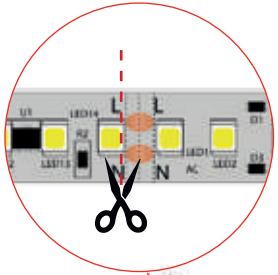


Connectors for waterproof strips (with screw system, no need for welding)

Our new IP67 connectors make led strip connections easier, as there is no soldering involved. Only 2 screws are required like in conventional terminal blocks. We can achieve a waterproofing of IP67 by using silicone and caps.

42.005 connector with cable of 100cm

42.004 kit (connector with cable of 10cm, closure endcap, cap with connector neck, screws and silicone)

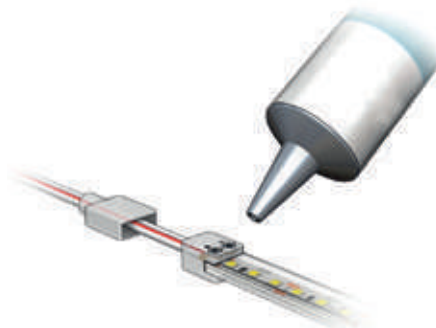
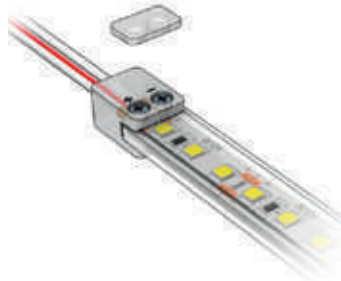


1. We cut the led strip where indicated.

2. We place the strip inside the connector.

3. We tighten the screws on the connector.

4. We apply silicone on top of the screws.



5. We put the plastic trim on top of the screws.

6. We apply silicone to cover the connector and then we attach the cap.

7. We apply silicone to the end of the strip and we fix the endcap.

Connectors compatible with our led strips:

- INFINITY 14
- SOPHIA GHOST PROFILE
- MILANO GHOST PROFILE
- MILANO DOBLE GHOST PROFILE
- AMSTERDAM GHOST PROFILE
- IBIZA PRO
- ZAFIRO
- VIZCAYA
- CANOVELLES

This can be used with the majority of IP20 led strips with a 10mm PCB (single-coloured).

Connectors compatible with led Profile:

- BERNA
- OSLO
- NEW YORK
- PHILADELPHIA
- DUBLÍN XL.
- TORINO with ref: 18.039
- KANSAS
- PARÍS XL
- ROMA XL
- BERLÍN XL
- SOPHIA XL
- VERSALLES
- INFERNO
- BUDAPEST

UP TO 30 METRES electric feed from only one end



UP TO 50 METRES electric feed from both ends



CASTELLÓN 48V

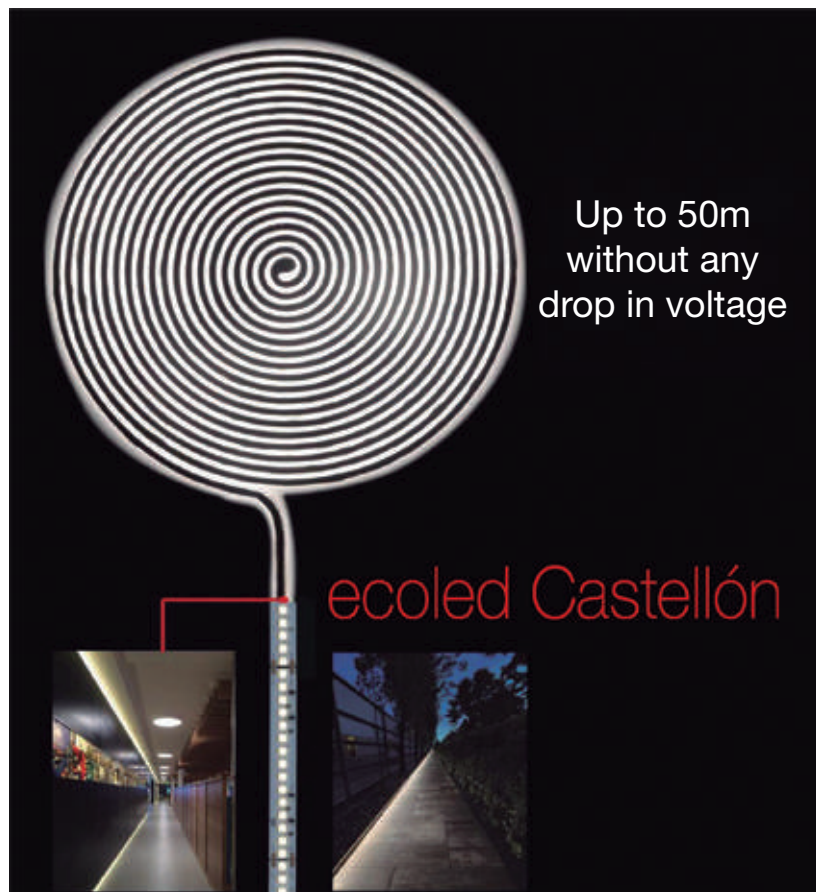


Ref: 33.036 6000°K
 Ref: 33.037 4000°K
 Ref: 33.038 2800°K

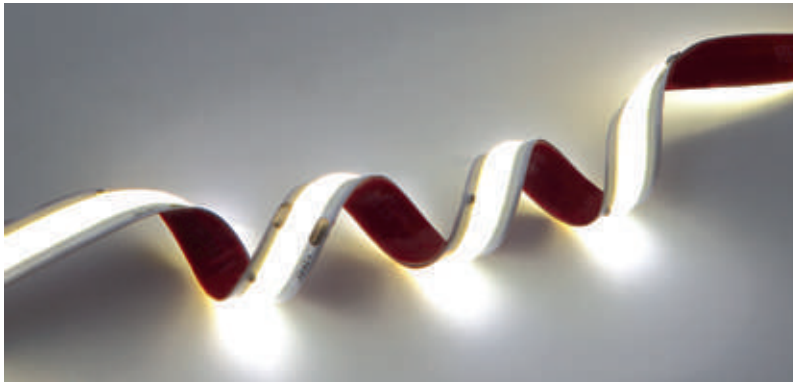
Single-coloured flexible strip “PRO”
 IP20 with 150 leds/metre 2835SMD.
 Requires use with led profile to permit dissipation.

10mm PCB

Daily recommended use: 18h
 Maximum connection in open circuit: 30m
 Maximum connection in closed circuit: 50m



Power (W)	12.8W/m
Voltage (V)	48V
Led type	SMD2835
Lumens (6000°K)	1327 Lm/m
Lumens (4000°K)	1270 Lm/m
Lumens (2800°K)	1190 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	150
Measurements	10000x10x1.2mm
Cutable	every 100mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/10m
Guarantee	3 years



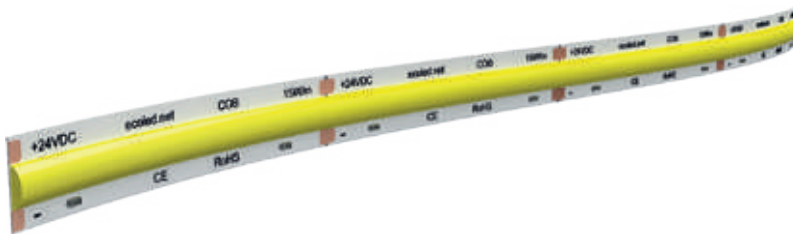
COB



Ref: 31.001	6500°K
Ref: 31.002	4000°K
Ref: 31.003	3000°K
Ref: 31.004	2500°K

Our new flexible led strips with COB technology, allow us to light up luminaires achieving a non-dotting effect. Compared with other conventional ones, our COB strips have the chip directly fixed on the PCB, without requiring a SMD frame. This way, as it is fixed directly to the base of the strip, it offers improved thermal dissipation but its structural strength is normally less. However, our COB led strips have a small iron strip incorporated at the back of the PCB which improves heat dissipation. Its strong point is that it offers 80% more in resistance compared with the rest of COB strips on the market.

Maximum connection in open circuit: 5m
Maximum connection in closed circuit: 10m

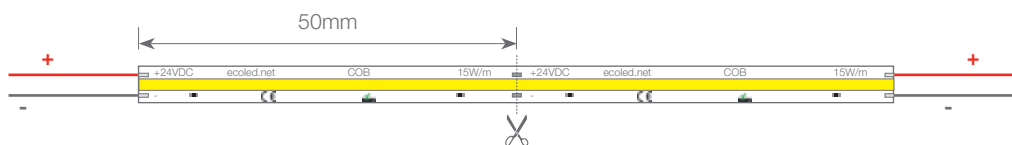
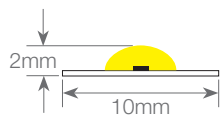


3M VHB adhesive thermal tape

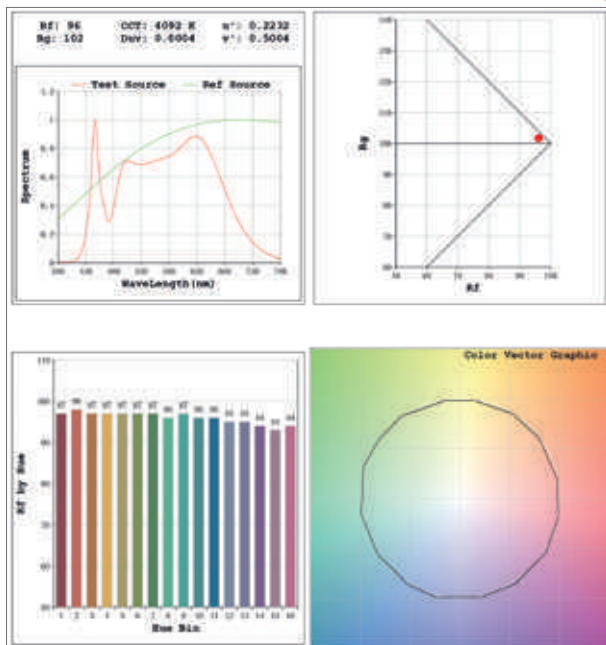
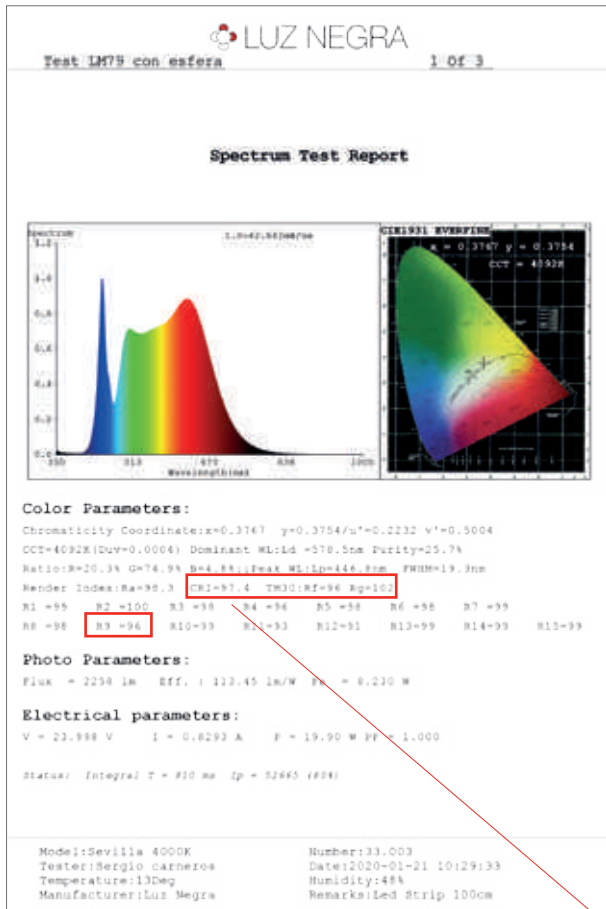
PCB

iron strip

phosphorous



Power (W)	15W/m
Voltage (V)	24V
Led type	COB
Lumens (6500°K)	1530 Lm/m
Lumens (4000°K)	1500 Lm/m
Lumens (3000°K)	1400 Lm/m
Lumens (2500°K)	1330 Lm/m
Light emission	180°
Waterproofing	IP20
N° chips/m	480
Measurements	2x10x5000mm
Cuttable	every 50mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	2 years



SEVILLA FULL COLOUR



Ref: 33.003 4000°K
 Ref: 33.004 2700°K

Single-coloured flexible strip **"PRO"**
 IP20 with 160 leds/metre 2835SMD.
 Requires use with led profile to permit dissipation.
10mm PCB
 Daily recommended use: 18h
 Maximum connection in open circuit: 5m
 Maximum connection in closed circuit: 10m

Power (W)	20W/m
Voltage (V)	24V
Led type	SMD2835
Lumens (4000°K)	2258 Lm/m
Lumens (2700°K)	2017 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	160
Measurements	5000x10x1.2mm
Cuttable	every 50mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

FULL COLOUR LED:
very high quality chromatic reproduction

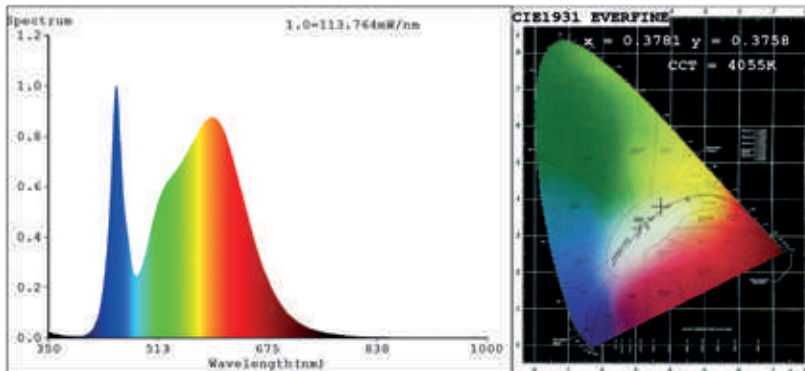
Full spectrum refers to the completeness of a light source's spectral energy, particularly when compared to natural light sources such as natural daylight. The colours of all objects are highlighted as closely as possible to their real colour as the light closely mimics that of natural daylight. The colour rendering index (CRI) tells us about the way colours appear under a light source and its highest score is at 100, meaning that natural daylight has a CRI value of 100. Thanks to the very high CRI (97-100) in our Sevilla led strip, we achieve a chromatic reproduction which is almost perfect, mimicking how we perceive the objects in sunlight.



Test LM79 con esfera

1 OF 3

Spectrum Test Report



Color Parameters:

Chromaticity Coordinate: x=0.3781 y=0.3758/u'=0.2240 v'=0.5008
 CCT=4055K(Duv=0.0002) Dominant WL:Ld =578.7nm Purity=26.3%
 Ratio:R=18.0% G=78.5% B=3.5%;;Peak WL:Lp=450.8nm FWHM=21.6nm
 Rander Index:Ra=82.2 CRI=75.3 TM30:Rf=81 Rg=95
 R1 =80 R2 =88 R3 =94 R4 =81 R5 =80 R6 =84 R7 =86
 R8 =64 R9 =5 R10=72 R11=80 R12=61 R13=82 R14=97 R15=74

Photo Parameters:

Flux = **5732 lm** Eff. : 145.22 lm/W Fe = 17.46 W

Electrical parameters:

V = 23.998 V I = 1.645 A P = 39.47 W PF = 1.000

Status: Integral T = 250 ms Ip = 47757 (73%)

Model:Córdoba 4000K Number:33.001
 Tester:Sergio Carneros Date:2020-01-21 11:44:02
 Temperature:13Deg Humidity:48%
 Manufacturer:Luz Negra Remarks:Led Strip 100cm

CORDOBA HIGH LUMINOSITY



Ref: 33.001 4000°K
 Ref: 33.002 2700°K

Single-coloured flexible strip "PRO"
 IP20 with 192 leds/metre 3040SMD.
 Requires use with led profile to permit dissipation.
10mm PCB
 Daily recommended use:18h
 Maximum connection in open circuit: 3m
 Maximum connection in closed circuit: 6m

Power (W)	40W/m
Voltage (V)	24V
Led type	SMD3040
Lumens (4000°K)	5732 Lm/m
Lumens (2700°K)	5355 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	192
Measurements	3000x10x1.2mm
Cutttable	every 41mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/3m
Guarantee	3 years

**HIGH LUMINOSITY LED:
 more than 5700 lumens/metre**

Our new ecoled strip, Córdoba model, with a PCB of 10mm is probably the brightness flexible strip on the market. Its high luminosity can be compared with constant current rigid strips, used for large luminaires. Due to its high power, it is of utmost importance to apply thermal conductive tape (Ref: 42.039, see page 332), and to be used with aluminum profiles with a high thermal dissipation capacity, such as our Inferno, Versailles, Berlin XL, Roma XL and similar models.

Our new ÉLITE series represents a “before and after” in the understanding of flexible led strips.

Up to now, depending on the power and luminosity of the strip, we would use a different quantity of leds, meaning a different cutting length and often different voltages (12V - 24V). We could also see differences in the type of led (SMD3528 - SMD2835 - SMD5050, etc...).

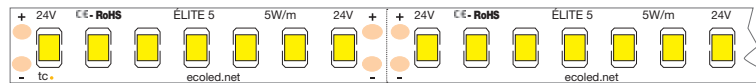
However our new ÉLITE series (with high quality SAMSUNG led) offers a brightness uniformity unseen so far on the market, where all the parameters remain the same even if power and luminosity vary.

We would like to highlight that the ÉLITE 5 model is the only led strip on the market which, apart from offering only 5W/m, gives a totally dot free effect with conventional led profiles.

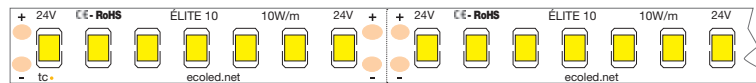
The ÉLITE 15 model is available also in the additional warm tones: 2100°K - 2400°K - 2700°K.

- One led: 2835 SMD **SAMSUNG**
- The same quantity of leds: 140 leds/metre
- The same cutting length: 50mm / every 7 leds
- The same voltage: 24V

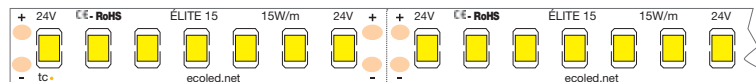
ÉLITE 5 5W Medium luminosity flexible strip, 24V. Can be cut every 7 leds.



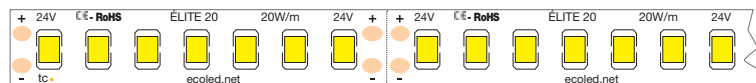
ÉLITE 10 10W Medium luminosity flexible strip, 24V. Can be cut every 7 leds.



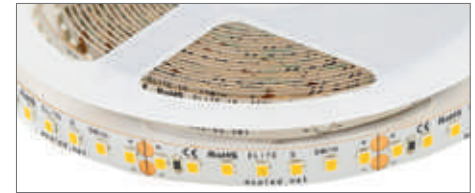
ÉLITE 15 15W Medium luminosity flexible strip, 24V. Can be cut every 7 leds.



ÉLITE 20 20W Medium luminosity flexible strip, 24V. Can be cut every 7 leds.



ÉLITE 5



Ref: 31.005 6500°K
 Ref: 31.006 4000°K
 Ref: 31.007 3000°K

Single-coloured flexible strip **ÉLITE**
 IP20 with 140 leds/metre 2835SMD.

10mm PCB.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

CRI >80.

Daily recommended use: 18h

Maximum connection in open circuit: 12m

Maximum connection in closed circuit: 20m

Power (W)	5W/m
Voltage (V)	24V
Led type	SMD2835
Lumens (6500°K)	700 Lm/m
Lumens (4000°K)	705 Lm/m
Lumens (3000°K)	680 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	140
Measurements	5000x10x1.2mm
Cuttable	every 50mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

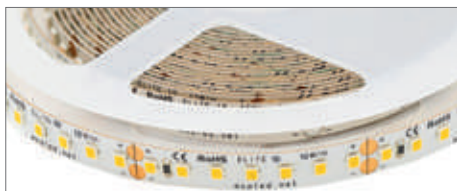
4

POWERS

MAXIMUM

UNIFORMITY

ÉLITE 10



Ref: 31.008 6500°K
 Ref: 31.009 4000°K
 Ref: 31.010 3000°K

Single-coloured flexible strip **ÉLITE**
 IP20 with 140 leds/metre 2835SMD.

10mm PCB.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

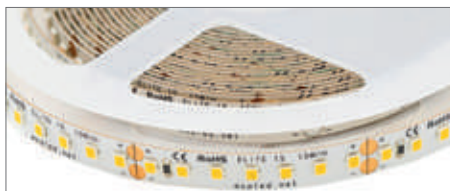
CRI >80.

Daily recommended use: 18h

Maximum connection in open circuit: 10m

Maximum connection in closed circuit: 18m

ÉLITE 15



Ref: 31.011 6500°K
 Ref: 31.012 4000°K
 Ref: 31.013 3000°K
 Ref: 31.014 2700°K
 Ref: 31.015 2400°K
 Ref: 31.016 2100°K

Single-coloured flexible strip **ÉLITE**
 IP20 with 140 leds/metre 2835SMD.

10mm PCB.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

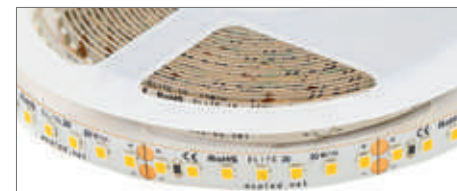
CRI >80.

Daily recommended use: 18h.

Maximum connection in open circuit: 8m

Maximum connection in closed circuit: 15m

ÉLITE 20



Ref: 31.017 6500°K
 Ref: 31.018 4000°K
 Ref: 31.019 3000°K

Single-coloured flexible strip **ÉLITE**
 IP20 with 140 leds/metre 2835SMD.

10mm PCB.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

CRI >80.

Daily recommended use: 18h

Maximum connection in open circuit: 5m

Maximum connection in closed circuit: 10m

Power (W)	10W/m
Voltage (V)	24V
Led type	SMD2835
Lumens ^(6500°K)	1250 Lm/m
Lumens ^(4000°K)	1200 Lm/m
Lumens ^(3000°K)	1150 Lm/m
Led type	120°
Waterproofing	IP20
N° leds/m	140
Measurements	5000x10x1.2mm
Cutttable	every 50mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

Power (W)	15W/m
Voltage (V)	24V
Led type	SMD2835
Lumens ^(6500°K)	1770 Lm/m
Lumens ^(4000°K)	1875 Lm/m
Lumens ^(3000°K)	1850 Lm/m
Lumens ^(2700°K)	1800 Lm/m
Lumens ^(2400°K)	1725 Lm/m
Lumens ^(2100°K)	1500 Lm/m
Led type	120°
Waterproofing	IP20
N° leds/m	140
Measurements	5000x10x1.2mm
Cutttable	every 50mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

Power (W)	20W/m
Voltage (V)	24V
Led type	SMD2835
Lumens ^(6500°K)	2060 Lm/m
Lumens ^(4000°K)	2050 Lm/m
Lumens ^(3000°K)	2010 Lm/m
Led type	120°
Waterproofing	IP20
N° leds/m	140
Measurements	5000x10x1.2mm
Cutttable	every 50mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

PINK 10



Ref: 30.001

PINK (PINK 10)

Single-coloured flexible led strip with “**PINK EFFECT**”, very useful for combining with neon type silicone profiles.

Requires use with led profile to permit dissipation.

5mm PCB

Daily recommended use: 18h

Maximum connection in open circuit: 3m

Maximum connection in closed circuit: 6m



PINK 20



Ref: 31.020

PINK (PINK 20)

Single-coloured flexible led strip with “**PINK EFFECT**”, very useful for combining with neon type silicone profiles.

Requires use with led profile to permit dissipation.

10mm PCB

Daily recommended use: 18h

Maximum connection in open circuit: 3m

Maximum connection in closed circuit: 6m

Power (W)	10W/m
Voltage (V)	12V
Lumens	200 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	120
Measurements	5000x5x1.2mm
Cutable	every 25mm
Guarantee	3 years

Power (W)	20W/m
Voltage (V)	24V
Lumens	420 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	168
Measurements	5000x10x1.2mm
Cutable	every 42mm
Guarantee	3 years

¿What is the PREMIUM RETAIL series?

This is a led strip series, which is specifically oriented towards retail channels and commerce. Their CRI ratings are high (90-95), they are equipped with voltage stabilizers (which allow us to make longer installations without running the risk of voltage drops), their performance rating is of 100 lumens/W (higher than regular led strips) and they offer a **4 year guarantee**.

¿Why should I choose the PREMIUM RETAIL series?

Most of the led strips currently available on the market have CRI (Colour Rendering Index) ratings ranged between 60 and 80. Our Premium Retail series offers CRI values placed between 90 and 95.

¿What is the purpose of having a high CRI rating?

The light emission of led Strips with high CRI ratings does not distort the colours of images as the human eye sees them. Therefore, by using them, we are able to see the true colours of fabrics, fibres, textile products and other materials.

¿Why don't all led strips have a high CRI?

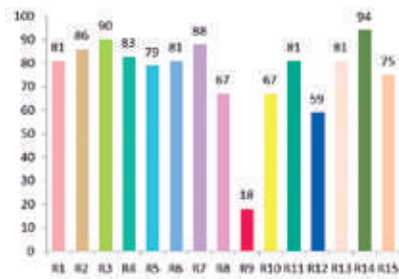
First of all, high rated CRI performances can be useful only when warm or neutral colours are being used. Furthermore, in such cases we use a different and more expensive type of phosphorous, which also affects the led strip by reducing its lighting performance in 20% compared with regular led strips. Therefore, unless the product is oriented towards retail channels or similar targets, the product is not advisable.

PREMIUM RETAIL Led strips

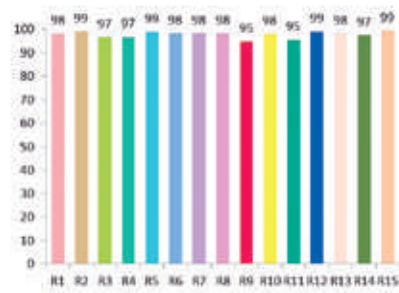


Colour values in high rated CRI led strips are also greater than those offered by regular strips. Amongst these colour values, "R9" significantly affects the overall results and it is considered the most important value. By using our spectroradiometer, which is also equipped with an integrated sphere, we can carry out readings for the different "R" values in order to ensure a high CRI rating.

Led strip with CRI>80



Led strip with CRI>98



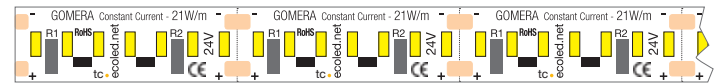
If we compare luminosity with both high and low CRI, those colours with a low CRI rating appear less real and more faded.



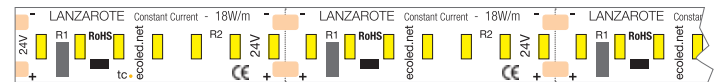
CRI >90



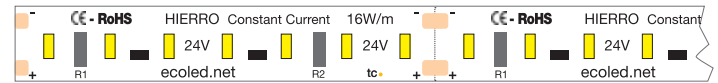
CRI 60



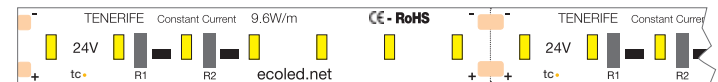
ecoled GOMERA. High luminosity flexible strip, current stabiliser, 24V, IP20, 10mm PCB. Can be cut every 7 leds.



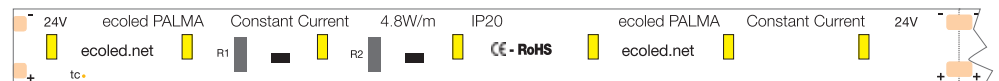
ecoled LANZAROTE. High luminosity flexible strip, current stabiliser, 24V, IP20, 10mm PCB. Can be cut every 7 leds.



ecoled HIERRO. Medium luminosity flexible strip, current stabiliser, 24V, IP20, 10mm PCB. Can be cut every 7 leds.



ecoled TENERIFE. Low luminosity flexible strip, current stabiliser, 24V, IP20, 10mm PCB. Can be cut every 7 leds.



ecoled PALMA. Low luminosity flexible strip, current stabiliser, 24V, IP20, 10mm PCB. Can be cut every 7 leds.

PALMA



Ref: 33.005 4200°K
 Ref: 33.006 3200°K
 Ref: 33.007 2850°K

Single-coloured **PREMIUM RETAIL** flexible strip IP20, with 56 leds/metre 3014SMD.

10mm PCB.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

Current stabiliser.

CRI >90.

Daily recommended use: 18h

Maximum connection in open circuit: 10m

Maximum connection in closed circuit: 20m

Power (W)	4.8W/m
Voltage (V)	24V
Led type	SMD3014
Lumens (4200°K)	480 Lm/m
Lumens (3200°K)	450 Lm/m
Lumens (2850°K)	430 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	56
Measurements	5000x10x1.2mm
Cutttable	every 125mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	4 years

TENERIFE



Ref: 33.008 4200°K
 Ref: 33.009 3200°K
 Ref: 33.010 2850°K

Single-coloured **PREMIUM RETAIL** flexible strip IP20, with 112 leds/metre 3014SMD.

10mm PCB.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

Current stabiliser.

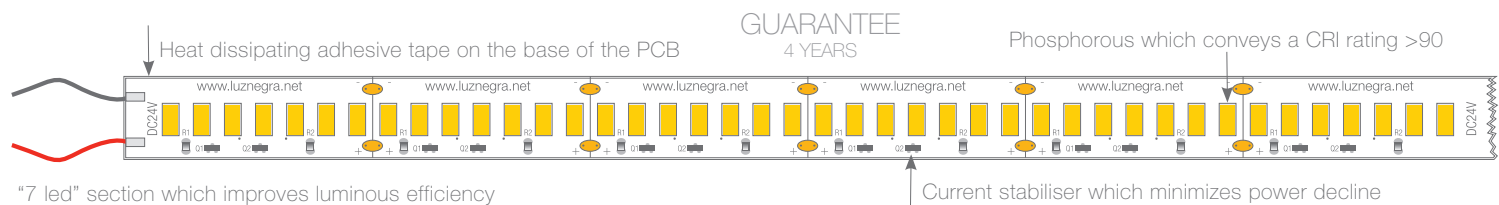
CRI >90.

Daily recommended use: 18h

Maximum connection in open circuit: 10m

Maximum connection in closed circuit: 20m

Power (W)	9.6W/m
Voltage (V)	24V
Led type	SMD3014
Lumens (4200°K)	960 Lm/m
Lumens (3200°K)	900 Lm/m
Lumens (2850°K)	864 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	112
Measurements	5000x10x1.2mm
Cutttable	every 62.5mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	4 years



HIERRO



Ref: 33.011 4200°K
 Ref: 33.012 3200°K
 Ref: 33.013 2850°K

Single-coloured **PREMIUM RETAIL** flexible strip IP20, with 126 leds/metre 3014SMD.

10mm PCB.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

Current stabiliser.

CRI >90.

Daily recommended use: 18h

Maximum connection in open circuit: 7.5m

Maximum connection in closed circuit: 15m

Power (W)	16W/m
Voltage (V)	24V
Led type	SMD3014
Lumens (4200°K)	1850 Lm/m
Lumens (3200°K)	1700 Lm/m
Lumens (2850°K)	1500 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	126
Measurements	5000x10x1.2mm
Cutable	every 55.55mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	4 years

LANZAROTE



Ref: 33.014 4200°K
 Ref: 33.015 3200°K
 Ref: 33.016 2850°K

Single-coloured flexible strip **PREMIUM RETAIL** IP20 with 196 leds/metre 3014SMD.

10mm PCB.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

Current stabiliser.

CRI >90.

Daily recommended use: 18h

Maximum connection in open circuit: 5m

Maximum connection in closed circuit: 10m

Power (W)	18W/m
Voltage (V)	24V
Led type	SMD3014
Lumens (4200°K)	2100 Lm/m
Lumens (3200°K)	2000 Lm/m
Lumens (2850°K)	1850 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	196
Measurements	5000x10x1.2mm
Cutable	every 35.7mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	4 years

GOMERA



Ref: 33.017 4200°K
 Ref: 33.018 3200°K
 Ref: 33.019 2850°K

Single-coloured flexible strip **PREMIUM RETAIL** IP20 with 238 leds/metre 3014SMD.

10mm PCB.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

Current stabiliser.

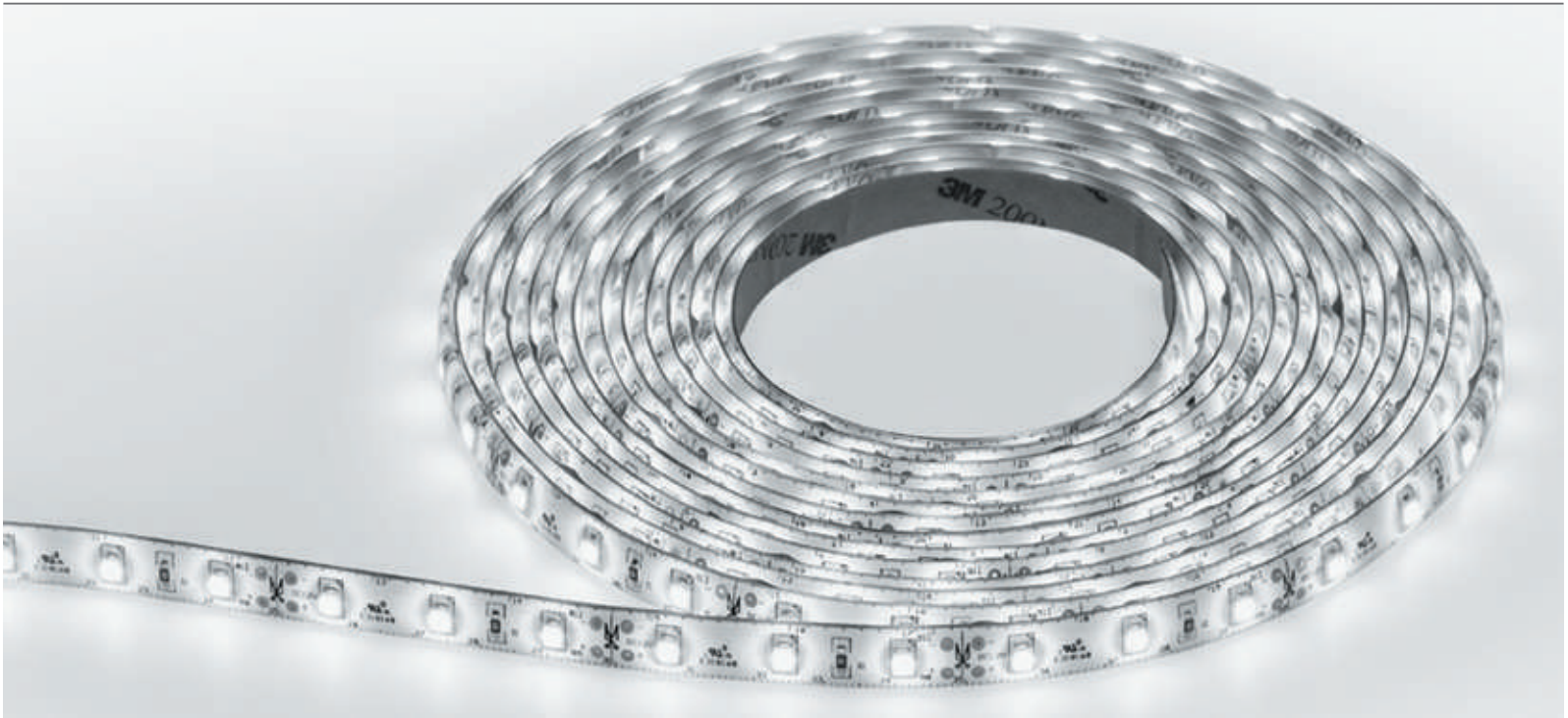
CRI >90.

Daily recommended use: 18h

Maximum connection in open circuit: 5m

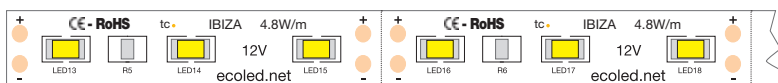
Maximum connection in closed circuit: 10m

Power (W)	21W/m
Voltage (V)	24V
Led type	SMD3014
Lumens (4200°K)	2450 Lm/W
Lumens (3200°K)	2300 Lm/W
Lumens (2850°K)	2100 Lm/W
Light emission	120°
Waterproofing	IP20
N° leds/m	238
Measurements	5000x10x1.2mm
Cutable	every 29.4mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	4 years



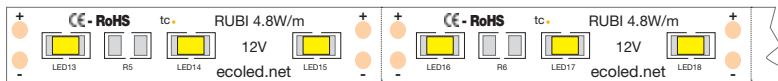
Low luminosity flexible strips which are ideal for ambience lighting or signage.

We would like to highlight the IBIZA PRO led strip which is the star model in this series, offering maximum guarantee and reliability and has been our best seller since 2008. It is also the only strip in this section which offers our exclusive watertight system, waterproof DUO IP67.



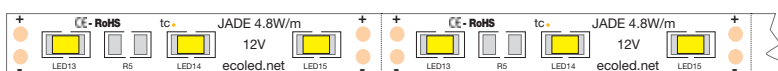
ecoled IBIZA PRO "PRO"

Low luminosity flexible strip, 12V, IP67 waterproof DUO. 10mm PCB. Can be cut every 3 leds.



ecoled RUBÍ PRO "BASIC"

Low luminosity flexible strip, 12V, IP65. 10mm PCB. Can be cut every 3 leds.

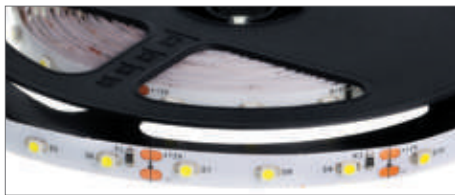


ecoled JADE "BASIC"

Low luminosity flexible strip, 12V, IP20. 8mm PCB. Can be cut every 3 leds.



JADE



Ref: 30.002 6500°K
Ref: 30.003 3500°K

Single-coloured flexible strip **BASIC**
IP20 with 60 leds/metre 3528SMD.
8mm PCB.

Daily recommended use: 12h
Maximum connection in open circuit: 7.5m
Maximum connection in closed circuit: 15m

Power (W)	4.8W/m
Voltage (V)	12V
Led type	SMD3528
Lumens ^(6500°K)	500 Lm/m
Lumens ^(3500°K)	400 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	60
Measurements	5000x8x3mm
Cuttable	every 50mm
PCB	8mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	2 years

RUBÍ PRO



Ref: 30.087 6000°K
Ref: 30.088 2800°K
Ref: 30.089 Blue
Ref: 30.090 Red
Ref: 30.091 Green
Ref: 30.092 Amber

Single-coloured flexible strip **BASIC**
IP65 with 60 leds/metre 3528SMD.

10mm PCB.
Daily recommended use: 12h
Maximum connection in open circuit: 7.5m
Maximum connection in closed circuit: 15m

Power (W)	4.8W/m
Voltage (V)	12V
Led type	SMD3528
Lumens ^(6000°K)	438 Lm/m
Lumens ^(2800°K)	377 Lm/m
Lumens ^(Blue)	61 Lm/m
Lumens ^(Red)	46 Lm/m
Lumens ^(Green)	240 Lm/m
Lumens ^(Amber)	53 Lm/m
Light emission	120°
Waterproofing	IP65
N° leds/m	60
Measurements	5000x10x4mm
Cuttable	every 50mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	1 roll/5m
Guarantee	2 years

IBIZA PRO

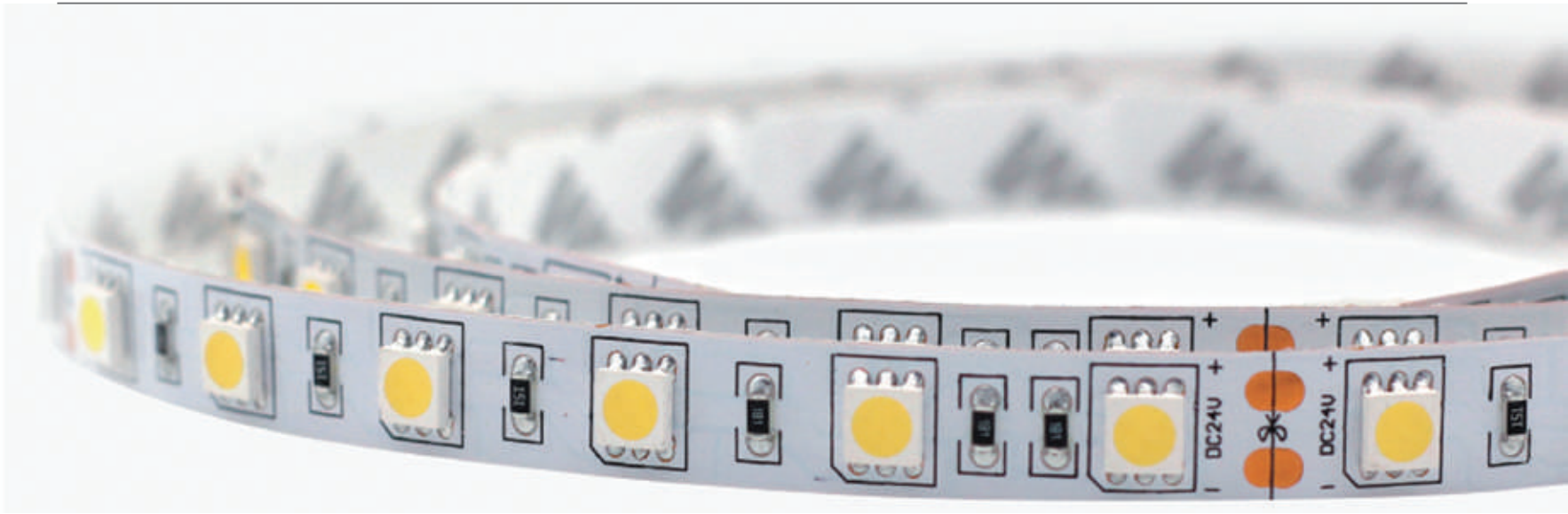


REF: 30.094 6300°K
REF: 30.095 4000°K
REF: 30.096 2800°K

Single-coloured flexible strip **Waterproof DUO**
PRO IP67 with 60 leds/metre 3528SMD.
10mm PCB.

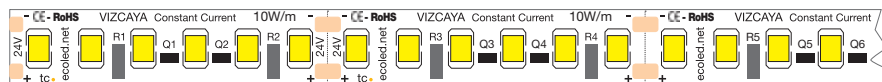
Daily recommended use: 18h
Maximum connection in open circuit: 10m
Maximum connection in closed circuit: 20m

Power (W)	4.8W/m
Voltage (V)	12V
Led type	SMD3528
Lumens ^(6300°K)	441 Lm/m
Lumens ^(4000°K)	424 Lm/m
Lumens ^(2700°K)	417 Lm/m
Light emission	120°
Waterproofing	IP67 "DUO"
N° leds/m	60
Measurements	5000x10x4mm
Cuttable	every 50mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	1 roll/5m
Guarantee	3 years



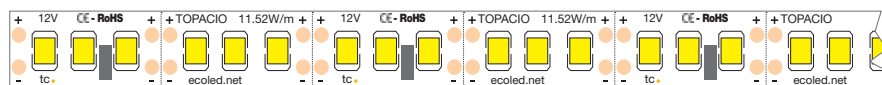
Medium luminosity flexible strips, which are ideal for ambience lighting or for using with furniture, shelving, cornices, etc. We can achieve a good dot free effect with led profiles with medium and large depths, such as our Roma and Berlín models, or similar.

We would like to highlight our VIZCAYA model which offers an excellent relation between Lumens/Watts and with just over 10W gives the same lighting as conventional strips with 14.4W/m. It also incorporates a current stabiliser which allows us to install up to 15m continuously without hardly any tension drop. It is also the only strip in this section which offers our exclusive watertight system, waterproof DUO IP67.



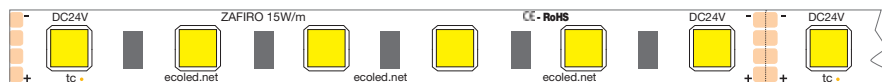
ecoled VIZCAYA "PRO"

Medium luminosity flexible strip, current stabiliser, 24V, IP67 waterproof DUO. 10mm PCB. Can be cut every 6 leds.



ecoled TOPACIO "BASIC"

Medium luminosity flexible strip, 12V, IP20. 10mm PCB. Can be cut every 3 leds.



ecoled ZAFIRO PRO "BASIC"

Medium luminosity flexible strip, 24V, IP65. 10mm PCB. Can be cut every 6 leds.



ZAFIRO PRO



Ref: 31.094 7800°K
 Ref: 31.095 4000°K
 Ref: 31.096 2800°K

Single-coloured flexible strip **BASIC**
 IP65 with 60 leds/metre 5050SMD.
 Requires use with led profile to permit dissipation.
10mm PCB.
 Daily recommended use: 12h
 Maximum connection in open circuit: 5m
 Maximum connection in closed circuit: 10m

Power (W)	15W/m
Voltage (V)	24V
Led type	SMD5050
Lumens ^(7800°K)	1203 Lm/m
Lumens ^(4000°K)	1477 Lm/m
Lumens ^(2800°K)	1103 Lm/m
Light emission	120°
Waterproofing	IP65
N° leds/m	60
Measurements	5000x10x4mm
Cutttable	every 100mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	1 roll/5m
Guarantee	2 years

TOPACIO



Ref: 30.013 6000°K
 Ref: 30.014 2800°K

Single-coloured flexible strip **BASIC**
 IP20 with 144 leds/metre 3528SMD.
 Requires use with led profile to permit dissipation.
10mm PCB.
 Daily recommended use: 12h
 Maximum connection in open circuit: 5m
 Maximum connection in closed circuit: 10m

Power (W)	11.52W/m
Voltage (V)	12V
Led type	SMD3528
Lumens ^(6000°K)	864 Lm/m
Lumens ^(2800°K)	682 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	144
Measurements	5000x10x4mm
Cutttable	every 20mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	2 years

VIZCAYA



Ref: 33.020 6500°K
 Ref: 33.021 4000°K
 Ref: 33.022 3000°K
 Ref: 33.023 2800°K

Single-coloured flexible strip **PRO Waterproof**
DUO IP67 with 144 leds/metre 3528SMD.
 Requires use with led profile to permit dissipation.
10mm PCB.
Current stabiliser.
 Daily recommended use: 18h
 Maximum connection in open circuit: 10m
 Maximum connection in closed circuit: 20m

Power (W)	10W/m
Voltage (V)	24V
Led type	SMD3528
Lumens ^(6500°K)	1100 Lm/m
Lumens ^(4000°K)	980 Lm/m
Lumens ^(3000°K)	960 Lm/m
Lumens ^(2800°K)	910 Lm/m
Light emission	120°
Waterproofing	IP67 "DUO"
N° leds/m	144
Measurements	5000x10x4mm
Cutttable	every 42mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	1 roll/5m
Guarantee	3 years

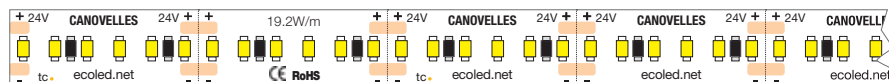


High luminosity flexible strip with a high density of leds which permits a dot free effect in the opal or frosted cover, even when we use the shallower led profiles, Milano, Frankfurt or similar.



ecoled BARCELONA "PRO"

High luminosity flexible led strip, 12V, IP20, 10mm PCB. It can be cut every 3 leds.



ecoled CANOVELLES PRO "PRO"

High luminosity flexible led strip, 24V, IP67 waterproof DUO, 10mm PCB. It can be cut every 6 leds.



BARCELONA

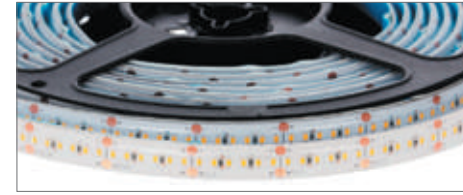


Ref: 32.001 6500°K
 Ref: 32.002 4000°K
 Ref: 32.003 3000°K

Single-coloured flexible strip **PRO**
 IP20 with 240 leds/metre 2216SMD.
 Requires use with led profile to permit dissipation.
Heat dissipation tape included.
10mm PCB.
 Daily recommended use: 18h
 Maximum connection in open circuit: 3m
 Maximum connection in closed circuit: 6m

Power (W)	19.2W/m
Voltage (V)	12V
Led type	SMD2216
Lumens ^(6500°K)	1600 Lm/m
Lumens ^(4000°K)	1400 Lm/m
Lumens ^(3000°K)	1200 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	240
Measurements	5000x10x1.2mm
Cutable	every 12.5mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

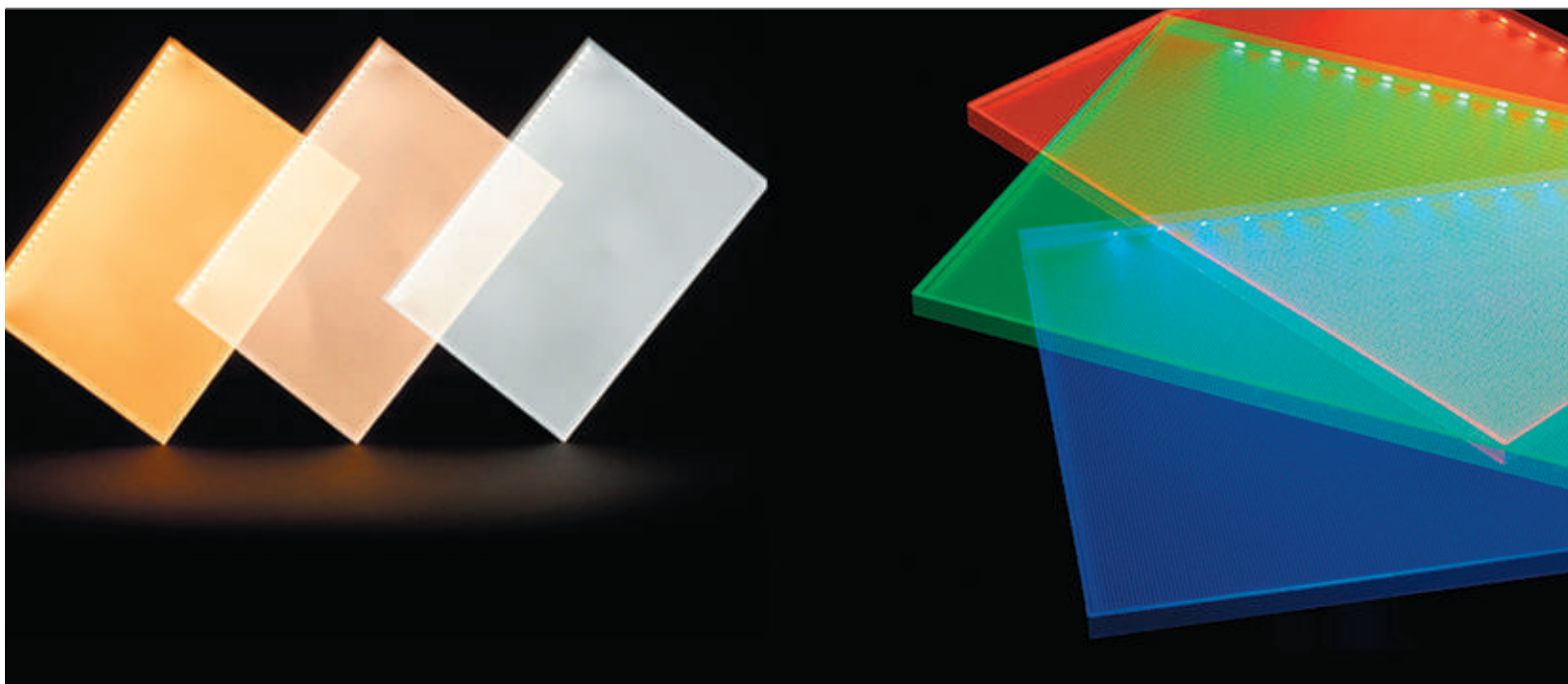
CANOVELLES PRO



Ref: 33.188 6000°K
 Ref: 33.189 4000°K
 Ref: 33.189 2800°K

Single-coloured flexible strip **PRO Waterproof**
DUO IP67 with 240 leds/metre 2216SMD.
Heat dissipation tape included.
10mm PCB.
 Daily recommended use: 18h
 Maximum connection in open circuit: 3m
 Maximum connection in closed circuit: 6m

Power (W)	19.2W/m
Voltage (V)	24V
Led type	SMD2216
Lumens ^(6000°K)	1631 Lm/m
Lumens ^(4000°K)	1747 Lm/m
Lumens ^(2800°K)	1777 Lm/m
Light emission	120°
Waterproofing	IP67 "DUO"
N° leds/m	240
Measurements	5000x10x3mm
Cutable	every 25mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	1 roll/5m
Guarantee	3 years



Flexible strips with widths of only 4-5-6mm. These are specially indicated for illuminating the sides of optic methacrylate Dotting. These are used in the manufacturing of luminous signs, extra thin luminaires, ceiling panels and in general commercial lighting and furniture. They are also highly recommended for using with narrow led profiles, such as our Detroit model (see page 62).

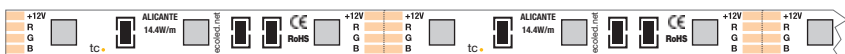
Due to the elevated quantity of dots and high luminosity in the single-coloured led models, they are very useful in conventional profiles as the dots are well diffused in the vast majority of the shallow models.



High luminosity flexible led strip, 24V, IP20, 5mm PCB. It can be cut every 8 leds.

ecoled GRANADA "PRO"

OSRAM
LED



Medium luminosity flexible led strip, RGB, 12V, IP20, 6mm PCB. It can be cut every 3 leds.

ecoled ALICANTE RGB "PRO"



Medium luminosity flexible led strip, 12V, IP20, 5mm PCB. It can be cut every 3 leds.

ecoled CIES PRO

CIES PRO



Ref: 32.086	6000°K
Ref: 32.087	4000°K
Ref: 32.088	3000°K
Ref: 32.089	Red
Ref: 32.090	Green
Ref: 32.085	Blue

Single-coloured flexible strip “PRO”
IP20 with 198 leds/metre 2110SMD.
Requires use with led profile to permit dissipation.
5mm PCB.
Daily recommended use: 18h
Maximum connection in open circuit: 3m
Maximum connection in closed circuit: 6m

Power (W)	10W/m
Voltage (V)	12V
Led type	SMD2110
Lumens (6000°K)	1358 Lm/m
Lumens (4000°K)	1410 Lm/m
Lumens (3000°K)	1315 Lm/m
Lumens (Rojo)	123 Lm/m
Lumens (Verde)	842 Lm/m
Lumens (Azul)	226 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	198
Measurements	5000x5x1.2mm
Cuttable*	every 15mm
PCB	5mm
Working temperature	-40°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

* In red colour every 20mm

ALICANTE RGB



Ref: 32.010 RGB

Flexible led strip **RGB “PRO”**
IP20 with 198 leds/metre 3535SMD.
Requires use with led profile to permit dissipation.
Heat dissipation tape included.
6mm PCB.
Daily recommended use: 18h
Maximum connection in open circuit: 2.5m
Maximum connection in closed circuit: 5m

Power (W)	14.4W/m
Voltage (V)	12V
Led type	SMD3535
Lumens (blanco)	400 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	60
Measurements	5000x6x3mm
Cuttable	every 50mm
PCB	6mm
Working temperature	-20°C / +40°C
Secuencer	not included
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

GRANADA OSRAM LED



Ref: 33.027 6500°K
Ref: 33.028 4000°K
Ref: 33.029 2700°K

Single-coloured flexible led strip “PRO”
IP20 with 128 leds/metre 2835SMD.
Requires use with led profile to permit dissipation.
Heat dissipation tape included.
5mm PCB.
CRI >80.
Daily recommended use: 18h
Maximum connection in open circuit: 5m
Maximum connection in closed circuit: 10m

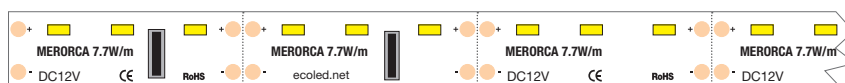
Power (W)	21W/m
Voltage (V)	24V
Led type	SMD2835
Lumens (6500°K)	3150 Lm/m
Lumens (4000°K)	3000 Lm/m
Lumens (2700°K)	2850 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	128
Measurements	5000x5x1.1mm
Cuttable	every 62.5mm (8 leds)
PCB	5mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years



Chicago led profile

Our flexible led strips for SIDE LIGHTING are different from the other ones in this catalogue as they offer side illumination instead of front lighting and can be curved in an “S” shape.

These are specially suitable for very narrow led profiles, such as our Chicago (see page 58) and Dallas (see page 76). They are also ideal for corporate letters and commercial furnishings/displays where we need to bend the led strips.



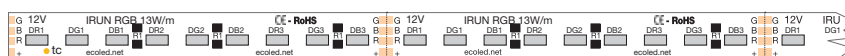
ecoled MENORCA “PRO”

Medium luminosity flexible led strip, 12V, IP67 waterproof DUO, 5mm PCB. It can be cut every 3 leds.



ecoled GETAFE “PRO”

Medium luminosity flexible led strip 12V, IP20, 6mm PCB. It can be cut every 3 leds.
Ideal for use with our Chicago and Dallas led profiles .



ecoled IRÚN RGB “PRO”

Medium luminosity RGB flexible led strip (1 colour per led), 12V, IP20, 6mm PCB. It can be cut every 9 leds.
Ideal for use with our led profiles Chicago and Dallas.



MENORCA



Ref: 32.011 5500°K
 Ref: 32.012 4000°K
 Ref: 32.013 2800°K

Single-coloured flexible strip “PRO”
 IP67 with 96 leds/metre 3014SMD.

Side lighting flexible led strip.
5mm PCB.

Daily recommended use: 18h
 Maximum connection in open circuit: 7.5m
 Maximum connection in closed circuit: 15m

GETAFE



Ref: 32.014 6000°K
 Ref: 32.015 4000°K
 Ref: 32.016 2800°K

Single-coloured flexible strip “PRO”
 IP20 with 120 leds/metre 3014SMD.
 Requires use with led profile to permit dissipation.

Side lighting flexible led strip.
6mm PCB.

Daily recommended use: 18h
 Maximum connection in open circuit: 7.5m
 Maximum connection in closed circuit: 15m

IRÚN^{RGB}



Ref: 32.017 RGB

RGB flexible led strip “PRO”
 IP20 with 180 leds/metre 3014SMD.
 Requires use with led profile to permit dissipation.

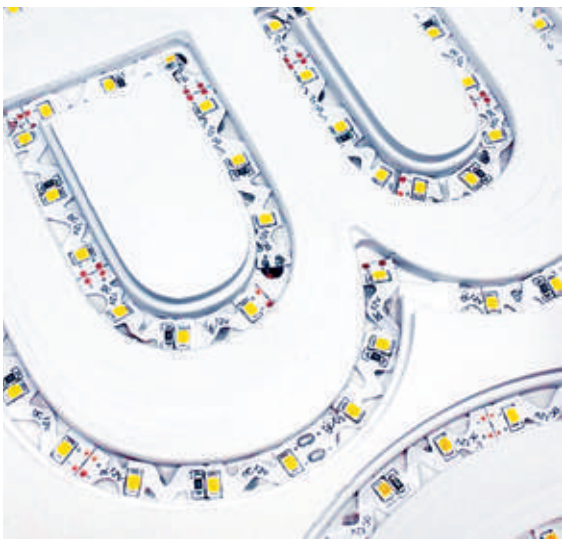
Side lighting flexible led strip.
6mm PCB.

Daily recommended use: 18h
 Maximum connection in open circuit: 4m
 Maximum connection in closed circuit: 8m

Power (W)	7.7W/m
Voltage (V)	12V
Led type	SMD3014
Lumens ^(5500°K)	600 Lm/m
Lumens ^(4000°K)	550 Lm/m
Lumens ^(2800°K)	500 Lm/m
Light emission	120°
Waterproofing	IP67 “DUO”
N° leds/m	96
Measurements	5000x5x10mm
Cutable	every 31mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	1 roll/5m
Guarantee	3 years

Power (W)	10W/m
Voltage (V)	12V
Led type	SMD3014
Lumens ^(6000°K)	953 Lm/m
Lumens ^(4000°K)	946 Lm/m
Lumens ^(2800°K)	940 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	120
Measurements	5000x6x1.8mm
Cutable	every 25mm
PCB	6mm
Working temperature	-25°C / +45°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

Power (W)	13.8W/m
Voltage (V)	12V
Led type	SMD3014
Lumens ^(white)	400 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	180
Measurements	5000x6x1.6mm
Cutable	every 50mm ^(9 leds)
PCB	6mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years



These flexible led strips are die-cut in ZIG-ZAG and this allows us to bend the PCB to achieve right angles, curves and geometrical shapes. They are ideal for corporate letters and for commercial furnishings, where we need to deal with irregular shapes.

Our AVILA model has undergone a waterproofing process called “nanocoating” which offers an IP54 and is covered in a very fine layer of plastic which is practically invisible and protects the flexible strip from humidity.



ecoled AVILA PRO

High luminosity flexible led strip with PCB in ZIG ZAG (maximum light power in this type of led).
12V, IP54, 6mm PCB. It can be cut every 3 leds.



ecoled JEREZ RGB “PRO”

Medium luminosity flexible RGB led strip with PCB in ZIG ZAG, 12V, IP20, 8.5mm PCB. It can be cut every 3 leds.

ÁVILA PRO



Ref: 32.075	6000°K
Ref: 32.076	4400°K
Ref: 32.077	3000°K
Ref: 32.078	Blue
Ref: 32.079	Amber
Ref: 32.080	Red
Ref: 32.081	Green

Single-coloured flexible led strip "**PRO**"
IP20 **nanocoating** with 60 leds/metre 2835SMD.
Requires use with led profile to permit dissipation.
Heat dissipation tape included.
6mm PCB.

Daily recommended use: 18h
Maximum connection in open circuit: 2.5m
Maximum connection in closed circuit: 5m

Power (W)	12W/m
Voltage (V)	12V
Led type	SMD2835
Lumens ^(6000°K)	1071 Lm/m
Lumens ^(4400°K)	1010 Lm/m
Lumens ^(3000°K)	945 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	60
Measurements	5000x6x3mm
Cuttable	every 50mm
PCB	6mm
Working temperature	-20°C / +40°C
Apt for	indoor / outdoor
Packaging	1 roll/5m
Guarantee	3 years

JEREZ RGB



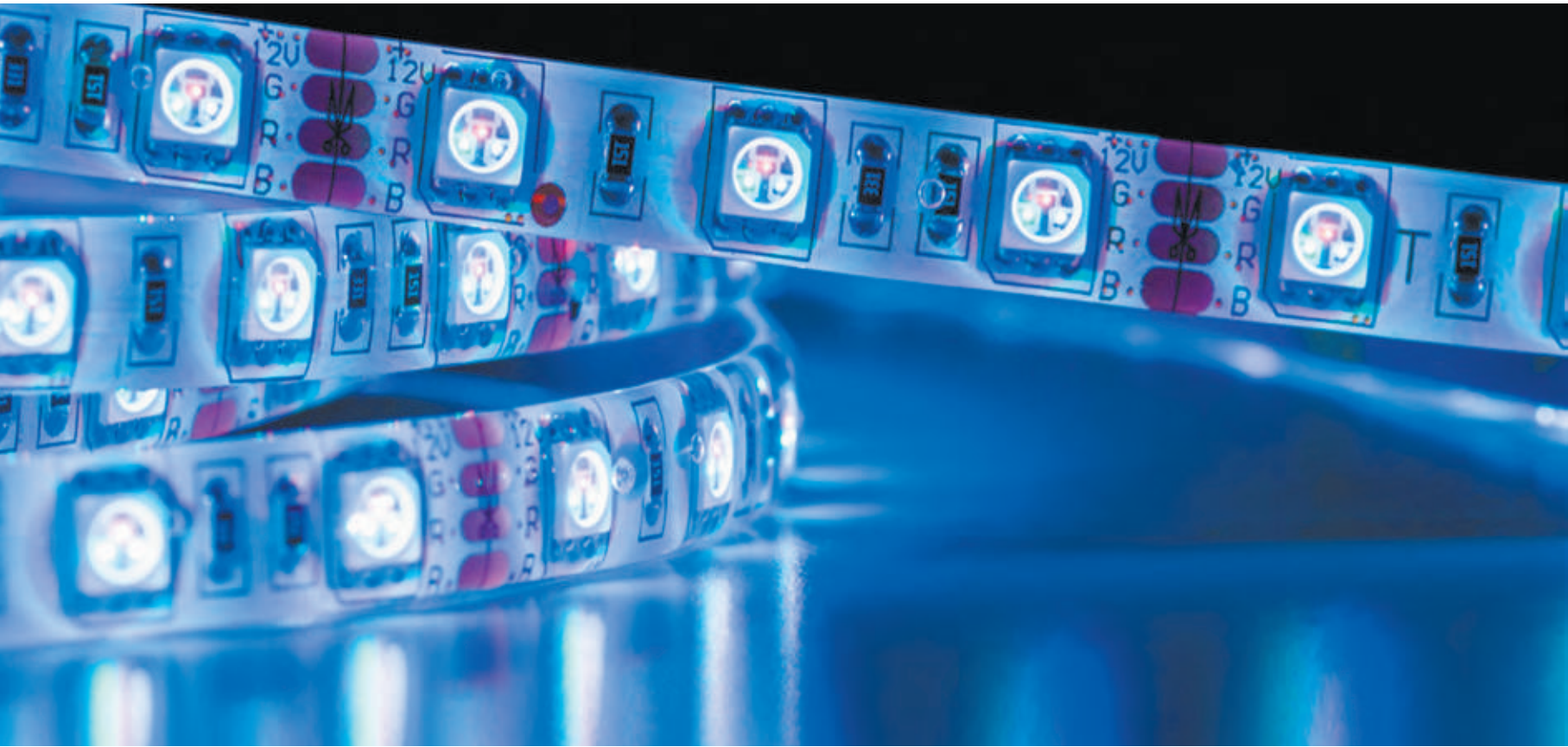
Ref: 32.028 RGB

RGB flexible strip PRO
IP20 with 48 leds/metre 5050SMD.
Requires use with led profile to permit dissipation.
Heat dissipation tape included.

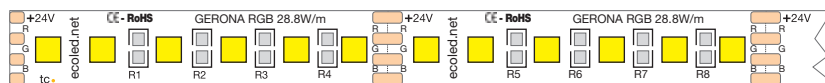
10mm PCB.
Daily recommended use: 18h
Maximum connection in open circuit: 3.5m
Maximum connection in closed circuit: 7m

Power (W)	11.52W/m
Voltage (V)	12V
Led type	SMD5050
Lumens ^(white)	400 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	48
Measurements	5000x8.5x1.8mm
Cuttable	every 60mm
PCB	8.5mm
Working temperature	-20°C / +40°C
Sequencer	not included
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years



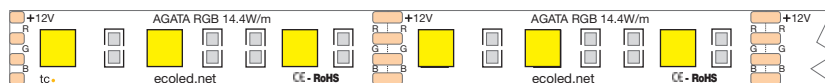


RGB flexible led strips (with 3 chips in the same diode). We can control the colour by means of a controller or sequencer. All the leds in the RGB flexible led strip display the same colour at the same time.



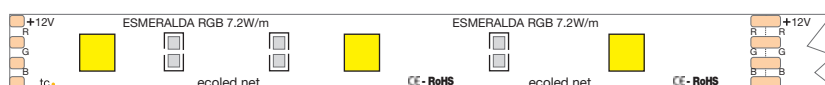
ecoled GERONA RGB PRO

Very high luminosity RGB flexible led strip, 24V, IP20, 12mm PCB. It can be cut every 6 leds.



ecoled ÁGATA RGB "BASIC"

Medium luminosity RGB flexible led strip, 12V, IP65, 10mm PCB. It can be cut every 3 leds.



ecoled ESMERALDA RGB "BASIC"

Low luminosity RGB flexible led strip, 12V, IP65, 10mm PCB. It can be cut every 3 leds.



ESMERALDA RGB



Ref: 30.015

RGB

RGB flexible led strip “BASIC”

IP65 with 30 leds/metre 5050SMD.

10 mm PCB.

Daily recommended use: 18h

Maximum connection in open circuit: 7.5m

Maximum connection in closed circuit: 15m

ÁGATA RGB



Ref: 30.016

RGB

RGB flexible led strip “BASIC”

IP65 with 60 leds/metre 5050SMD.

Requires use with led profile to permit dissipation.

10 mm PCB.

Daily recommended use: 18h

Maximum connection in open circuit: 5m

Maximum connection in closed circuit: 10m

GERONA PRO RGB



Ref: 33.194

RGB

RGB flexible led strip “PRO”

IP20 with 120 leds/metre 3535SMD.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.

10 mm PCB.

High power RGB led strip.

Daily recommended use: 18h

Maximum connection in open circuit: 4m

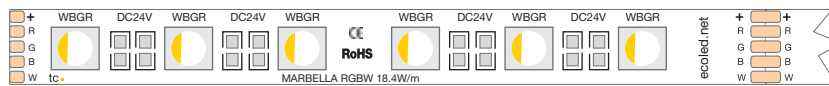
Maximum connection in closed circuit: 8m

Power (W)	7.2W/m
Voltage (V)	12V
Led type	SMD5050
Lumens ^(white)	221 Lm/m
Light emission	120°
Waterproofing	IP65
N° leds/m	30
Measurements	5000x10x4mm
Cutable	every 100mm
PCB	10mm
Working temperature	-20°C / +40°C
Sequencer	not included
Apt for	indoor / outdoor
Packaging	1 roll/5m
Guarantee	2 years

Power (W)	14.4W/m
Voltage (V)	12V
Led type	SMD5050
Lumens ^(white)	350 Lm/m
Light emission	120°
Waterproofing	IP65
N° leds/m	60
Measurements	5000x10x4mm
Cutable	every 50mm
PCB	10mm
Working temperature	-20°C / +45°C
Sequencer	not included
Apt for	indoor / outdoor
Packaging	1 roll/5m
Guarantee	2 years

Power (W)	23W/m
Voltage (V)	24V
Led type	SMD3535
Lumens ^(white)	1150 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	224
Measurements	5000x12x3mm
Cutable	every 31,25mm
PCB	12mm
Working temperature	-20°C / +40°C
Sequencer	not included
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

RGB+W high power flexible led strip which combines in one housing a red-green-blue chip along with warm white. We can achieve a wider range of colours than with a normal RGB led (a more intense white and also coloured degradation to offer pastel tones). It comes with heat dissipation tape. On pages 314 & 315 you can also see controllers and amplifiers for this product.



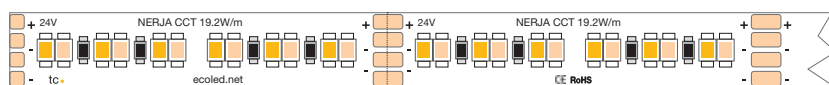
Very high luminosity RGB+W flexible led strip, 24V, IP20, 10mm PCB. It can be cut every 6 leds.

ecoled MARBELLA RGB+3000°K "PRO"



This is a flexible led strip with adjustable white, CCT (correlated colour temperature) with high luminosity which combines a cold white led with a warm white led.

The fact that both leds are together, means that the colour projected is a combination of both and if we use a suitable controller (see pages 314 & 315), it can vary from 3100°K to 6500°K.



Very high CCT flexible led strip, 24V, IP20, 10mm PCB. It can be cut every 6 leds.

ecoled NERJA CCT "PRO"



MARBELLA PRO RGBW



Ref: 33.192

RGB+3000°K

RGB+W flexible led strip “PRO”

IP20 with 60 leds/metre 5050SMD.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.**White colour (included in led chip)****10mm PCB.**

Daily recommended use: 18h

Maximum connection in open circuit: 6m

Maximum connection in closed circuit: 12m

Power (W)	19W/m
Voltage (V)	24V
Led type	SMD5050
Lumens (RGBW)	800 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	60
Measurements	5000x12x1.8mm
Cutttable	every 100mm
PCB	10mm
Working temperature	-20°C / +40°C
Sequencer	not included
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

NERJA Warm white + Cool white



Ref: 33.032

3100°K - 6500°K

Flexible led strip **DUAL WW-CW “PRO”**

IP20 with 120 leds/metre 3528SMD.

Requires use with led profile to permit dissipation.

Heat dissipation tape included.**Allows colour change (cool white, neutral and warm white).****10mm PCB.**

Daily recommended use: 18h

Maximum connection in open circuit: 7.5m

Maximum connection in closed circuit: 15m

Power (W)	19.2W/m
Voltage (V)	24V
Led type	SMD3528
Lumens (3100°K - 6500°K)	1500 Lm/m
Light emission	120°
Waterproofing	IP20
N° leds/m	120
Measurements	5000x10x1.9mm
Cutttable	every 50mm
PCB	10mm
Working temperature	-20°C / +40°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years



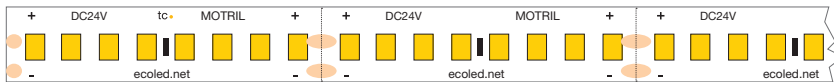
Flexible led strips with a high CRI (Colour Rendering Index), which are specially indicated for the food industry: fruit, vegetables, meat/poultry and bakery products.

Compared with the R9-R14, they offer us greater values, whereby we achieve much more natural and realistic colours and therefore suggesting improved freshness and attractiveness of the exposed product.



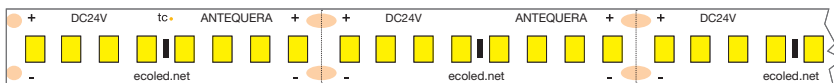
ecoled TREVELEZ "PRO"

High luminosity flexible led strip, 24V, IP54 nanocoating, 10mm PCB. Ideal for the meat and poultry industry. It can be cut every 8 leds.



ecoled MOTRIL "PRO"

High luminosity flexible led strip, 24V, IP54 nanocoating, 10mm PCB. Ideal for the bread and bakery industry. It can be cut every 8 leds.



ecoled ANTEQUERA "PRO"

High luminosity flexible led strip, 24V, IP54 nanocoating, 10mm PCB. Ideal for the fruit and vegetable industry. It can be cut every 8 leds.



TRÉVELEZ



Ref: 33.033

2100°K

Special for MEATS

Single-coloured flexible strip “PRO”
IP54 **nanocoating** with 192 leds/metre 3528SMD.
Requires use with led profile to permit dissipation.

Heat dissipation tape included.

10mm PCB.

Daily recommended use: 18h

Maximum connection in open circuit: 5m

Maximum connection in closed circuit: 7m

Power (W)	20W/m
Voltage (V)	24V
Led type	SMD3528
Lumens ^(2100°K)	1600 Lm/m
Light emission	120°
Waterproofing	IP54
CRI	Ra>85
N° leds/m	192
Measurements	5000x10x2.5mm
Cutable	every 41.6mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor/fridges
Packaging	1 roll/5m
Guarantee	3 years



Highlights the red colours and reduces the browning effect in the sectioned part.

MOTRIL



Ref: 33.034

2500°K

Special for BAKERIES

Single-coloured flexible strip “PRO”
IP65 **nanocoating** with 192 leds/metre 3528SMD.
Requires use with led profile to permit dissipation.

Heat dissipation tape included.

10mm PCB.

Daily recommended use: 18h

Maximum connection in open circuit: 5m

Maximum connection in closed circuit: 7m

Power (W)	20W/m
Voltage (V)	24V
Led type	SMD3528
Lumens ^(2500°K)	1800 Lm/m
Light emission	120°
Waterproofing	IP65
CRI	Ra>90
N° leds/m	192
Measurements	5000x10x2.5mm
Cutable	every 41.6mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor/fridges
Packaging	1 roll/5m
Guarantee	3 years



Highlights the yellow and brown colours, with a golden touch.

ANTEQUERA



Ref: 33.035

6000°K

Special for FRUIT and VEGETABLES

Single-coloured flexible strip “PRO”
IP65 **nanocoating** with 192 leds/metre 3528SMD.
Requires use with led profile to permit dissipation.

Heat dissipation tape included.

10mm PCB.

Daily recommended use: 18h

Maximum connection in open circuit: 5m

Maximum connection in closed circuit: 7m

Power (W)	20W/m
Voltage (V)	24V
Led type	SMD3528
Lumens ^(6000°K)	2200 Lm/m
Light emission	120°
Waterproofing	IP65
CRI	Ra>90
N° leds/m	192
Measurements	5000x10x2.5mm
Cutable	every 41.6mm
PCB	10mm
Working temperature	-40°C / +60°C
Apt for	indoor/fridges
Packaging	1 roll/5m
Guarantee	3 years




Highlights the cooler colours, giving a fresher appearance to the product.



www.digitalled.net

by Luz Negra

Digital lighting is an intelligent way to personalise light in fine details and to be able to communicate by means of emotions and sensations. In order to go further afield with the digital lighting experience, Luz Negra has established a partnership with,  ProtoPixel who are specialised in software and hardware design for digital lighting control.

Here at Luz Negra we are able to offer full support and assistance for any type of project related to digital lighting. We can work together, starting off with the initial concept and design and taking it through to the manufacturing of the luminaires or supports and also the calculations for the electrical connections and hardware. We can even offer custom programming solutions which are completely personalised and which can be updated via internet no matter where the installation is located.



OVNEW Restaurant (Barcelona).
Illuminated with more than 100 Oslo luminaires with digital led . Design, control and installation made by Protopixel.

FIJI RGB
"cuttable every 1 led"



Ref: 35.001

RGB

Flexible led strip with digital led in RGB "PRO" series, IP20 with 60 leds/metre and cuttable every led.

Requires use with led profile to permit dissipation.
5mm PCB.

Maximum connection in open circuit: 2m.

Power (W)	11.5W/m
Voltage (V)	5V
IC type	SK6812
Lumens	308 Lm/m
Led Control	led to led
Light emission	120°
Waterproofing	IP20
N° leds/m	60
Measurements	5000x5x2.5mm
Cuttable	every 16.54mm
PCB	5mm
Working temperature	-20°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

HAWAI RGB
"cuttable every 1 led"



Ref: 35.002

RGB

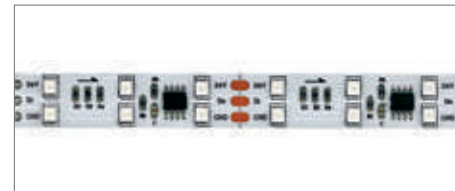
Flexible led strip with digital led in RGB "PRO" series, IP20 with 60 leds/metre and cuttable every led.

Requires use with led profile to permit dissipation.
10mm PCB.

Maximum connection in open circuit: 5m.

Power (W)	9W/m
Voltage (V)	12V
IC type	2815
Lumens	260 Lm/m
Led Control	led to led
Light emission	120°
Waterproofing	IP20
N° leds/m	60
Measurements	5000x10x2.5mm
Cuttable	every 16.8mm
PCB	10mm
Working temperature	-20°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

SEYCHELLES RGB
"cuttable every 6 led"



Ref: 35.003

RGB

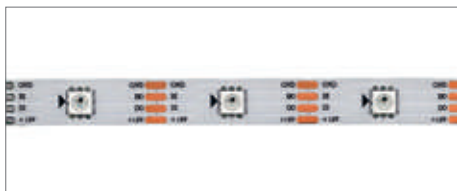
Flexible led strip with digital led in RGB, "PRO" series IP20 with 120 leds/metre and cuttable every 6 leds.

Requires use with led profile to permit dissipation.
12mm PCB.

Maximum connection in open circuit: 5m.

Power (W)	28.8W/m
Voltage (V)	24V
IC type	16703
Lumens	592 Lm/m
Led Control	every 6 leds
Light emission	120°
Waterproofing	IP20
N° leds/m	120
Measurements	5000x12x2.5mm
Cuttable	every 50mm ^(6 leds)
PCB	12mm
Working temperature	-20°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

COZUMEL RGB
"cuttable every 1 led"



Ref: 35.004

RGB

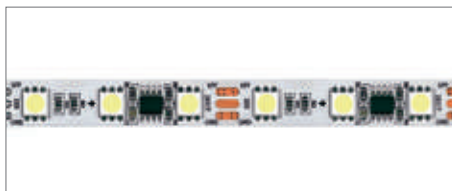
Flexible led strip with digital led in RGB, "PRO" series IP20 with 30 leds/metre and cuttable every led.

Requires use with led profile to permit dissipation.
10mm PCB.

Maximum connection in open circuit: 5m.

Power (W)	5W/m
Voltage (V)	12V
IC type	2815
Lumens	112 Lm/m
Led Control	led to led
Light emission	120°
Waterproofing	IP20
N° leds/m	30
Measurements	5000x10x2.5mm
Cuttable	every 33.2mm
PCB	10mm
Working temperature	-20°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

BALI warm white
"cuttable every 3 leds" - control led to led



Ref: 35.006

6.500°K

Ref: 35.007

3.000°K

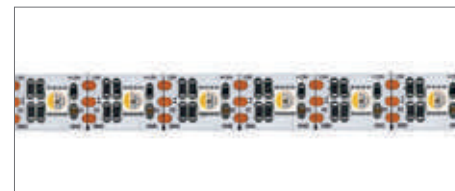
Flexible led strip with warm white monochromatic digital led, "PRO" series, IP20 with 60 leds/metre and cuttable every 3 leds + led to led control.

Requires use with led profile to permit dissipation.
10mm PCB.

Maximum connection in open circuit: 5m.

Power (W)	14.4W/m
Voltage (V)	12V
IC type	2811
Lumens ^(7000°K)	1000 Lm/m
Lumens ^(3000°K)	994 Lm/m
Led Control	led to led
Light emission	120°
Waterproofing	IP20
N° leds/m	60
Measurements	5000x10x2.5mm
Cuttable	every 50mm ^(3 leds)
PCB	10mm
Working temperature	-20°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years

MALDIVAS RGB+W
"cuttable every 1 led"



Ref: 35.008

RGB+W

Flexible led strip with digital led in RGBW, "PRO" series IP20 with 60 leds/metre and cuttable every led.

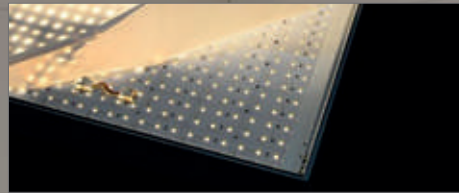
Requires use with led profile to permit dissipation.
10mm PCB.

Maximum connection in open circuit: 5m.

Power (W)	20W/m
Voltage (V)	12V
IC type	6812
Lumens	500 Lm/m
Led Control	led to led
Light emission	120°
Waterproofing	IP20
N° leds/m	60
Measurements	5000x10x2.5mm
Cuttable	every 16.8mm
PCB	10mm
Working temperature	-20°C / +60°C
Apt for	indoor
Packaging	1 roll/5m
Guarantee	3 years



OVNEW restaurant.
Luminaires with Oslo led profile.
Cortesy of Protopixel.



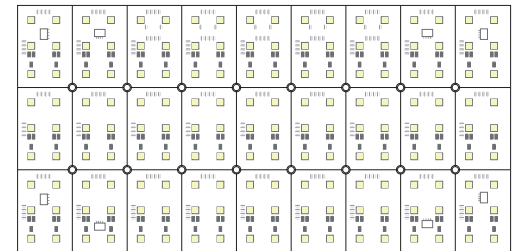
Power (W)	18W
Voltage (V)	24V
Led type	5050
Lumens	665 Lm
Light emission	120°
Waterproofing	IP20
N° leds/m	162 Leds/m
Measurements	480x240x5mm
Cuttable	it is cuttable basing on the cutting line
PCB	480x240
Working temperature	-25°C / +60°C
Apt for	indoor
Packaging	1 unit
Guarantee	2 years

Ref: 46.001

RGB

Flexible RGB panel for indoor use (480x240mm) which can be cut in to 27 modules of 80x53mm (6 leds/ module). It is specially recommended for backlighting (luminaires and lightboxes). It has fast connectors to put various panels together without welding. We can connect up to 10 panels in series

RGB FLEXIBLE PANEL



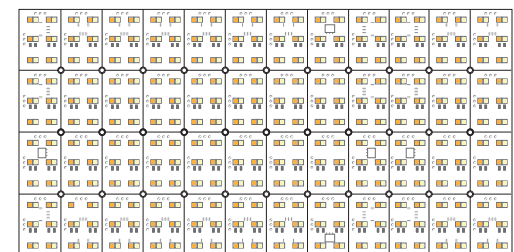
Power (W)	16W
Voltage (V)	24V
Led type	2835
Lumens (3000°K)	978 Lm
Light emission	120°
Waterproofing	IP20
N° leds/m	288 Leds/m
Measurements	480x240x5mm
Cuttable	it is cuttable basing on the cutting line
PCB	480x240mm
Working temperature	-25°C / +60°C
Apt for	indoor
Packaging	1 unit
Guarantee	2 years

Ref: 46.002

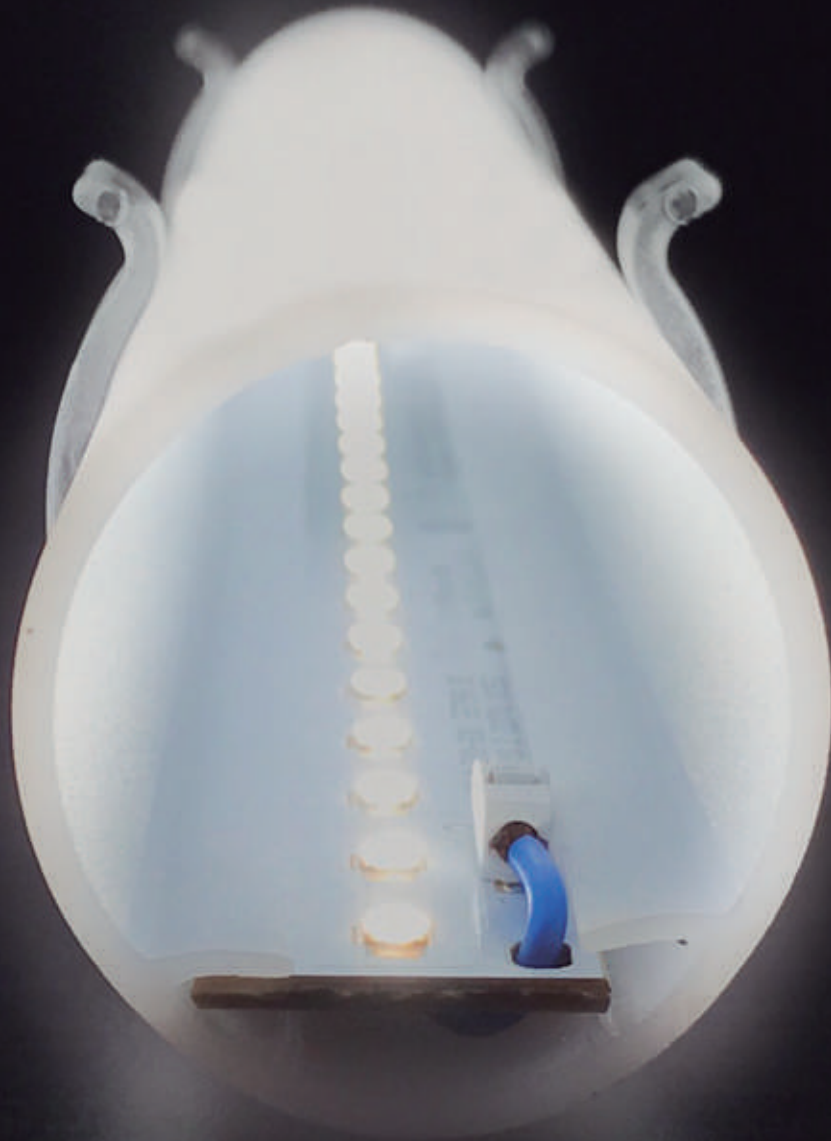
3000°K-6000°K

Flexible TUNABLE WHITE panel for indoor use (480x240mm) which can be cut in to 48 modules of 60x40mm, with 6 cold leds and 6 warm leds. It is specially recommended for backlighting (luminaires and lightboxes). It has fast connectors to put various panels together without welding. We can connect up to 10 panels in series.

TUNABLE WHITE FLEXIBLE PANEL



rigid led strips



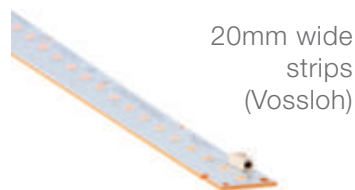


Compared to flexible led strips which normally work at 12V or 24V (constant current) rigid led strips work in continuous intensity. The majority of the rigid strips in this catalogue can work at 350-500 or 700 mA (milliamps).

One single strip can light up at any of the three intensities and depending on the milliamps applied, we can achieve more or less luminosity (an increase in milliamps means more light but also higher consumption).

Our rigid led strips are made by the German company Vossloh and offer a colour tolerance of 3 step MacAdams (minimum) and a 5 year guarantee. Lengths are in accordance to ZHAGA standards.

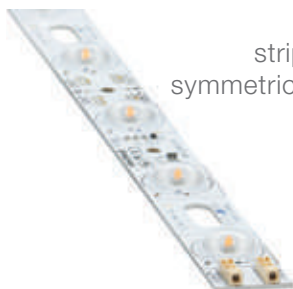
We have optics available with different effects for the 40mm width strips.



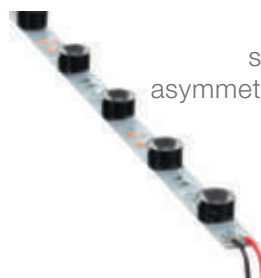
20mm wide strips
(Vossloh)



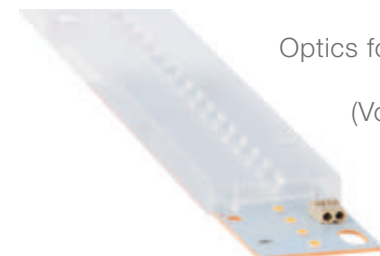
40mm wide strips
(Vossloh)



strips with symmetric optics



strips with asymmetric optics



Optics for rigid strips
(Vossloh)

Rigid led strip with standard brightness "20mm wide"



"280x20mm" rigid led strip

Ref: 36.001 3000°K
Ref: 36.002 4000°K
Ref: 36.003 5000°K

Single coloured rigid strip IP20 with 24 leds 3030SMD.

NICHIA led.

For a correct dissipation of this model, a led profile and heat dissipation tape will be required.

Power (W)	6.1W / 8.9W / 12.8W
Intensity (I)	350mA / 500mA / 700mA
Lumens ^(5000°K)	970 Lm / 1330 Lm / 1765 Lm
Lumens ^(4000°K)	950 Lm / 1305 Lm / 1730 Lm
Lumens ^(3000°K)	900 Lm / 1240 Lm / 1640 Lm
Colour temp.	5000°K/ 4000°K / 3000°K
Light emission	120°
Waterproofing	IP20
CRI	>80
Measurements	280x20x1.6mm
Cuttable	no
Working temp.	-20°C / +75°C
1-10V	yes
DALI/PUSH	yes
Power supply	not included
Connecting cable	needed (but not included)
Packaging	1 unit
Guarantee	5 years

"560x20mm" rigid led strip

Ref: 36.004 3000°K
Ref: 36.005 4000°K
Ref: 36.006 5000°K

Single coloured rigid strip IP20 with 48 leds 3030SMD.

NICHIA led.

For a correct dissipation of this model, a led profile and heat dissipation tape will be required.

Power (W)	12.1W / 17.8W / 25.6W
Intensity (I)	350mA / 500mA / 700mA
Lumens ^(5000°K)	1940 Lm / 2660 Lm / 3530 Lm
Lumens ^(4000°K)	1905 Lm / 2615 Lm / 3465 Lm
Lumens ^(3000°K)	1805 Lm / 2480 Lm / 3285 Lm
Colour temp.	5000°K/ 4000°K / 3000°K
Light emission	120°
Waterproofing	IP20
CRI	>80
Measurements	560x20x1.6mm
Cuttable	no
Working temp.	-20°C / +75°C
1-10V	yes
DALI/PUSH	yes
Power supply	not included
Connecting cable	needed (but not included)
Packaging	1 unit
Guarantee	5 years

High brightness rigid led strip "20mm wide"



"140x20mm" rigid led strip

Ref: 36.007 3000°K
Ref: 36.008 4000°K
Ref: 36.009 5000°K

Single coloured rigid strip IP20 with 12 leds 3030SMD.

NICHIA led.

For a correct dissipation of this model, a led profile and heat dissipation tape will be required.

Power (W)	4W / 5.9W / 8.5W
Intensity (l)	350mA / 500mA / 700mA
Lumens ^(5000°K)	730 Lm / 1025 Lm / 1395 Lm
Lumens ^(4000°K)	730 Lm / 1025 Lm / 1395 Lm
Lumens ^(3000°K)	680 Lm / 950 Lm / 1295 Lm
Colour temp.	5000°K/ 4000°K / 3000°K
Light emission	120°
Waterproofing	IP20
CRI	>85
Measurements	140x20x1.6mm
Cutable	no
Working temp.	-20°C / +75°C
1-10V	yes
DALI/PUSH	yes
Power supply	not included
Connecting cable	needed (but not included)
Packaging	1 unit
Guarantee	5 years

"280x20mm" rigid led strip

Ref: 36.010 3000°K
Ref: 36.011 4000°K
Ref: 36.012 5000°K

Single coloured rigid strip IP20 with 24 leds 3030SMD.

NICHIA led.

For a correct dissipation of this model, a led profile and heat dissipation tape will be required.

Power (W)	7.9W / 11.7W / 16.9W
Intensity (l)	350mA / 500mA / 700mA
Lumens ^(5000°K)	1460 Lm / 2050 Lm / 2790 Lm
Lumens ^(4000°K)	1460 Lm / 2050 Lm / 2790 Lm
Lumens ^(3000°K)	1360 Lm / 1900 Lm / 2590 Lm
Colour temp.	5000°K/ 4000°K / 3000°K
Light emission	120°
Waterproofing	IP20
CRI	>85
Measurements	280x20x1.6mm
Cutable	no
Working temp.	-20°C / +75°C
1-10V	yes
DALI/PUSH	yes
Power supply	not included
Connecting cable	needed (but not included)
Packaging	1 unit
Guarantee	5 years

"560x20mm" rigid led strip

Ref: 36.013 3000°K
Ref: 36.014 4000°K
Ref: 36.015 5000°K

Single coloured rigid strip IP20 with 48 leds 3030SMD.

NICHIA led.

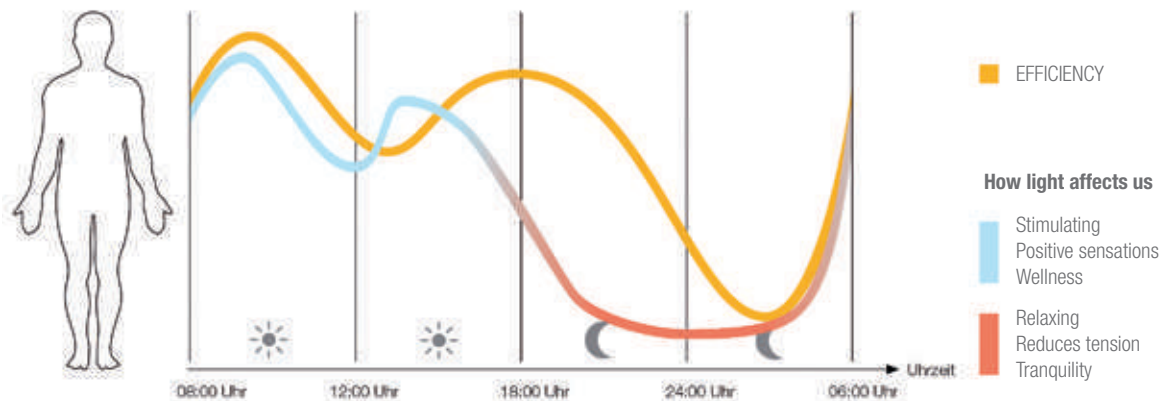
For a correct dissipation of this model, a led profile and heat dissipation tape will be required.

Power (W)	15.8W / 23.4W / 33.9W
Intensity (l)	350mA / 500mA / 700mA
Lumens ^(5000°K)	2920 Lm / 4100 Lm / 5580 Lm
Lumens ^(4000°K)	2920 Lm / 4100 Lm / 5580 Lm
Lumens ^(3000°K)	2720 Lm / 3800 Lm / 5180 Lm
Colour temp.	5000°K/ 4000°K / 3000°K
Light emission	120°
Waterproofing	IP20
CRI	>85
Measurements	560x20x1.6mm
Cutable	no
Working temp.	-20°C / +75°C
1-10V	yes
DALI/PUSH	yes
Power supply	not included
Connecting cable	needed (but not included)
Packaging	1 unit
Guarantee	5 years



Human Central Lighting; The right light at the right time

Physical wellness effects generated by illumination



Light is not only used for visual orientation, but due to the wave lengths, it can also have an influence on physiological processes such as concentration capacity, efficiency, sleep-wake cycle or wellness.

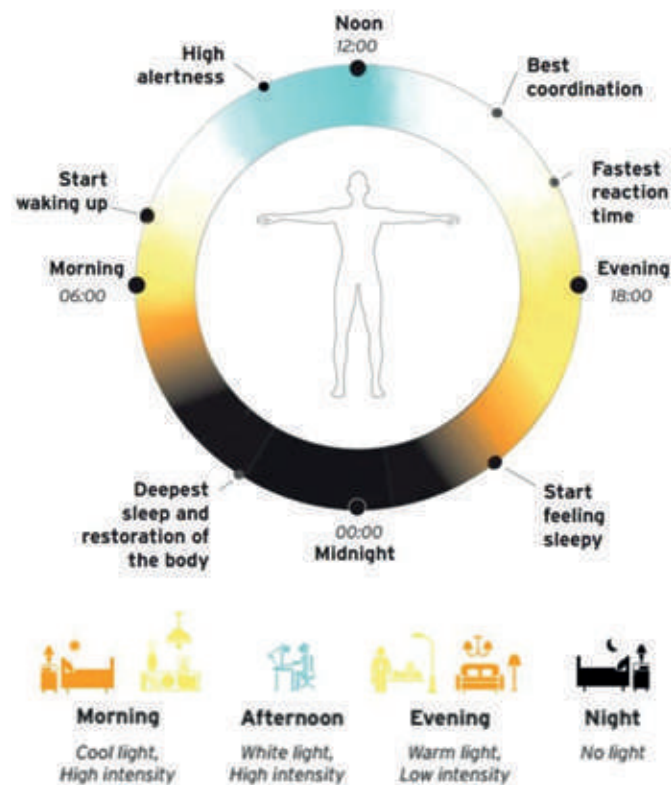
HCL (Human Centric Lighting) is the type of lighting focused on individuals and designed to make us feel better at all times.

Light in general has a very high emotional effect in many ways. It can be useful to boost sales, for communication and personal relationships, etc. It can create a sumptuous light effect in luxury shops and also a more simple light concept in low cost shops. In both cases, light creates a space full of emotions, but with different results: positive emotions are generated, like the sensation of something being exclusive and original and at the same time creating an attractive light ambience in order to obtain the best product at the best price.

Human Centric Lighting has 3 aspects which are closely related: the emotional, the visual and non visual. Although we cannot consider them separately, we can give priority to one of them.

Using it correctly, HCL is adapted to all user's needs and there are many ways of going about it. Light which, for example, has a visual effect, attracts attention and can also be very emotional, meaning that when we plan a project it is extremely necessary to have full knowledge of HCL.

We offer more than 100 profiles to choose from, and you only have to indicate the required length for the luminaire and we will take care of the programming needed, according to the desired effect.



Human Central Lighting

Control system (via wireless Bluetooth) for luminaires.

The combination of rigid led strips with tunable white (from 2700°K to 6000°K) using Blu2Light control system, allows us to manufacture luminaires which can be controlled from a smartphone. This way, we can modify and/or program the luminaires, changing colour and intensity, using a DALI protocol.

Not only do we need a power supply, but also a sensor (41.003), which will be inserted inside the luminaire; and also a driver which will control the DALI power supplies (41.001 - 41.002).



TUNABLE WHITE Rigid led strip
"280x20mm"

Ref: 36.016

2700°K-6000°K

Single coloured rigid led strips IP20 with 30 leds.
Dynamic colour control from 2700°K to 6000°K.

NICHIA led.

For a correct dissipation of this model, a led profile will be required.

Power (W)	2.9W / 4.3W / 6.2W
Voltage (V)	8.3V / 8.5V / 8.8V
Intensity (l)	350mA / 500mA / 700mA
Lumens (6000°K)	425 Lm / 598 Lm / 812 Lm
Lumens (2700°K)	371 Lm / 522 Lm / 716 Lm
Colour temp.	2700°K - 6000°K
Light emission	120°
Waterproofing	IP20
CRI	>85
Measurements	280x20x1.6mm
Working temp.	-20°C / +60°C
DALI/PUSH	yes
Packaging	1 unit
Guarantee	5 years

TUNABLE WHITE Rigid led strip
"560x20mm"

Ref: 36.017

2700°K-6000°K

Single coloured rigid led strips IP20 with 60 leds.
Dynamic colour control from 2700°K to 6000°K.

NICHIA led.

For a correct dissipation of this model, a led profile will be required.

Power (W)	5.8W / 8.6W / 12.3W
Voltage (V)	16.6V / 17.1V / 17.6V
Intensity (l)	350mA / 500mA / 700mA
Lumens (6000°K)	844 Lm / 1188 Lm / 1628 Lm
Lumens (2700°K)	745 Lm / 1048 Lm / 1436 Lm
Colour temp.	2700°K - 6000°K
Light emission	120°
Waterproofing	IP20
CRI	>85
Measurements	560x20x1.6mm
Working temp.	-20°C / +60°C
DALI/PUSH	yes
Packaging	1 unit
Guarantee	5 years



"Connect me" Internal sensor

Ref: 41.003

Bluetooth Sensor

DALI system sensor via Bluetooth radiofrequency.
IP20.

It allows us to control professional lighting.

Body / Colour	Polycarbonate / White
Communication	Blu2Light
Control	DALI
Power (W)	max. 0.24W
Frequency	2402 - 2480 MHz
Ambient temp.	0°C - 50°C
Light emission	120°
Waterproofing	IP20
Protection	class II
Measurements	Ø40xH40mm
Cable connection terminal	minimum 0.5mm Ø maximum 1.5mm Ø
Packaging	1 unit
Guarantee	3 years

Drivers for DALI applications

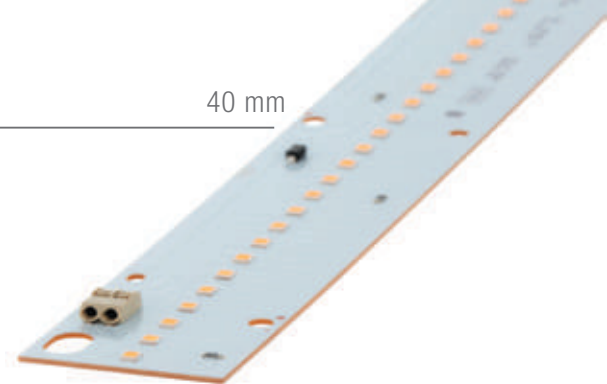
VOSSLOH (German origin) drivers for DALI applications. **5 year guarantee.**

In accordance with lighting standards: **EN-61347-2-11.**



Reference	Voltage	Feeding DALI	Connection	Waterproofing	Weight	Protection	Measurements (mm)
41.001	220V-240V	45mA	We can connect up to 10 power supplies with only one DALI direction.	IP20	38g	class I y II	147x21x18
41.002	220V-240V	45mA	We can connect up to 64 power supplies with only one DALI direction.	IP20	150g	class II	175x42x31.5

Rigid led strip “40 mm wide”



“280x40mm” rigid led strip

Ref: 36.018

3000°K

Single coloured rigid strip IP20 with 30 leds 3030SMD.

NICHIA led.

For a correct dissipation of this model, a led profile and heat dissipation tape will be required.

This allows us to use different types of optics with various light emitting angles (see page 307).

“280x40mm” rigid led strip

Ref: 36.019

4000°K

Single coloured rigid strip IP20 with 30 leds 3030SMD.

NICHIA led.

For a correct dissipation of this model, a led profile and heat dissipation tape will be required.

This allows us to use different types of optics with various light emitting angles (see page 307).

“280x40mm” rigid led strip

Ref: 36.020

5000°K

Single coloured rigid strip IP20 with 30 leds 3030SMD.

NICHIA led.

For a correct dissipation of this model, a led profile and heat dissipation tape will be required.

This allows us to use different types of optics with various light emitting angles (see page 307).

Power (W)	4.79W / 6.97W / 9.97W
Intensity (l)	350mA / 500mA / 700mA
Lumens ^(3000°K)	780 Lm / 1100 Lm / 1500 Lm
Colour temp.	3000°K
Light emission	120°
Waterproofing	IP20
CRI	>85
Measurements	280x40x1.6mm
Cutttable	no
Working temp.	-20°C / +75°C
1-10V	yes
DALI/PUSH	yes
Power supply	not included
Connecting cable	needed (but not included)
Fixing clip	needed (but not included)
Packaging	1 unit
Guarantee	5 years

Power (W)	4.79W / 6.97W / 9.97W
Intensity (l)	350mA / 500mA / 700mA
Lumens ^(4000°K)	820 Lm / 1150 Lm / 1570 Lm
Colour temp.	4000°K
Light emission	120°
Waterproofing	IP20
CRI	>85
Measurements	280x40x1.6mm
Cutttable	no
Working temp.	-20°C / +75°C
1-10V	yes
DALI/PUSH	yes
Power supply	not included
Connecting cable	needed (but not included)
Fixing clip	needed (but not included)
Packaging	1 unit
Guarantee	5 years

Power (W)	4.79W / 6.97W / 9.97W
Intensity (l)	350mA / 500mA / 700mA
Lumens ^(5000°K)	890 Lm / 1255 Lm / 1715 Lm
Colour temp.	5000°K
Light emission	120°
Waterproofing	IP20
CRI	>85
Measurements	280x40x1.6mm
Cutttable	no
Working temp.	-20°C / +75°C
1-10V	yes
DALI/PUSH	yes
Power supply	not included
Connecting cable	needed (but not included)
Fixing clip	needed (but not included)
Packaging	1 unit
Guarantee	5 years



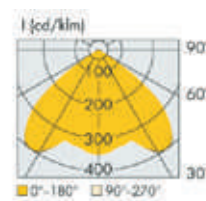
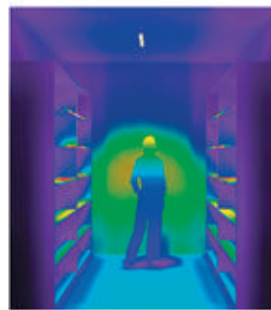
led profile with optic lens



80.00	cd/m²
70.00	cd/m²
60.00	cd/m²
50.00	cd/m²
40.00	cd/m²
30.00	cd/m²
20.00	cd/m²
10.00	cd/m²
0.00	cd/m²

Although conventional covers are much better in terms of appearance when compared to the optic ones (a more industrial finish) we sometimes end up using the latter, to be able to project the light in the desired direction.

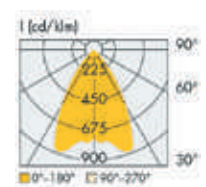
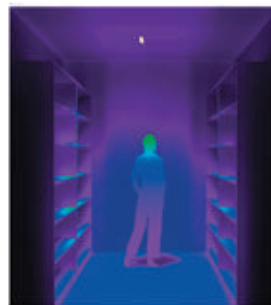
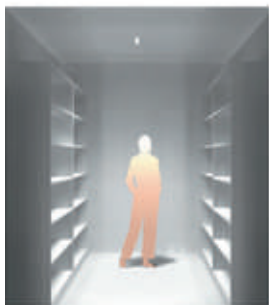
Please find below a detailed list of the most important optical emissions currently available.



Extra Wide 110°
Ref: 46.003

EXTRA WIDE OPTIC

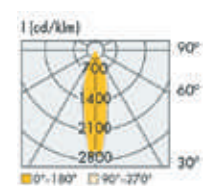
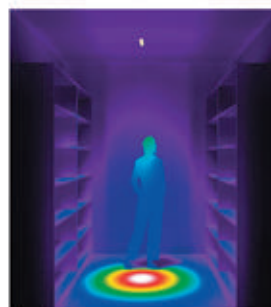
These optics provide the widest angle and are suitable for homogeneous lighting, therefore preventing the formation of grey areas.



Wide 60°
Ref: 46.004

60° OPTIC

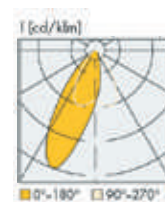
This is one of our most popular optics due to its versatility (it can be used in corridors and even in side shelving).



Narrow 30°
Ref: 46.005

30° OPTIC

High concentration optics which permit the lighting of transit areas and corridors with high ceilings or similar.



Retail ASYM
Ref: 46.006

ASYMMETRIC OPTIC

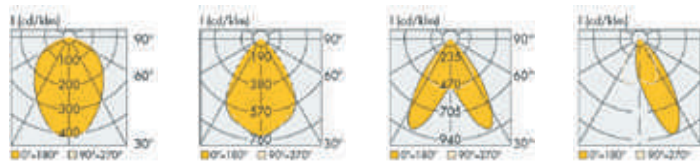
This optic accentuates the light intensity obtained from one of the sides of the device, making the products stand out and offering high visibility.

Optics for rigid strips

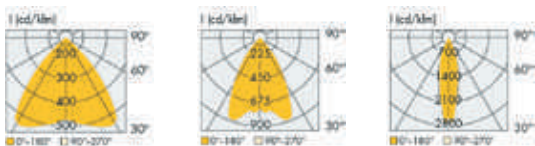
“Simple” optics
(for rigid strips of 40mm wide) See page 300

Reference	Model	Efficiency	Weight
46.007	Cover	88%	50g
46.008	Standard	95%	50g
46.009	SYM	95%	50g
46.006	ASYM	95%	50g
46.010	Extra Wide 90°	95%	50g
46.004	Wide 60°	95%	50g
46.005	Narrow 30°	95%	50g

These optics are for rigid strips of 40mm and ideal for lighting up offices, factories and shops. Measurements: 280x43x9.5mm



Cover Ref: 46.007 Standard Ref: 46.008 Retail SYM Ref: 46.009 Retail ASYM Ref: 46.006



Extra Wide 90° Ref: 46.010 Wide 60° Ref: 46.004 Narrow 30° Ref: 46.005

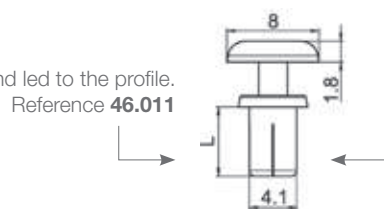
Terms of use

We recommend the use this product for indoor indoors. The optic is to be screwed to the rigid led strip with a cylindrical head or flat head (M4) or with a fixing bracket.

Endcap for strip reference **46.012**.

Endcap, reference **46.013**.

Please consult all 44mm rigid strips available and which can be used with the different types of optics (see page 304).



Compatibility with:

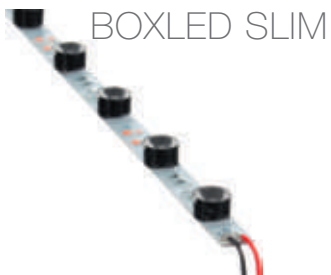


GALES
See page 203



KRAKOVIA
See page 222



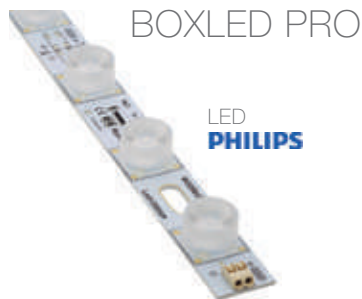


BOXLED SLIM

Ref: 37.001 7300°K

Single coloured rigid led strip (cuttable) **“PRO”** series, IP33 with 6 leds 3535SMD.
13°/50° asymmetrical optics.
 For a correct dissipation of this model, a led profile and heat dissipation tape will be required.
 Daily recommended use: 18h.

Voltage	24V
Power (W)	13.54W
Lumens (7300°K)	895 Lm
Efficiency	66.06 Lm/W
Colour temp.	7300°K
Light emission	13° / 50° asymmetric
Waterproofing	IP33
CRI	>71
Measurements	333x14x11mm
Cutttable	every 110mm (2 leds)
Working temp.	-25°C / +60°C
Power supply	not included
Connecting cable	you need, not included
Fixing	adhesive tape, included
Packaging	1 unit
Guarantee	2 years

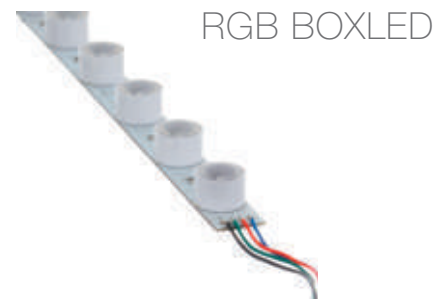


BOXLED PRO

Ref: 37.002 5700°K
 Ref: 37.003 4000°K

Single coloured rigid led strip (cuttable) **“PRO”** series, IP20 with 9 SMD leds.
15°/50° asymmetrical optics for wallwashing.
 For a correct dissipation of this model, a led profile will be required.
 We need to apply thermal dissipation tape.
 Daily recommended use: 18h.

Voltage	24V
Power (W)	14.4W
Lumens (5700°K)	1926 Lm
Lumens (4000°K)	1685 Lm
Efficiency	134 Lm/W
Colour temp.	5700°K
Colour temp.	4000°K
Light emission	15° / 50° asymmetric
Waterproofing	IP20
CRI	>90
Measurements	500x24x15mm
Cutttable	every 166mm (3 leds)
Working temp.	-25°C / +65°C
Converter	not included
Fixing	screw
Packaging	1 unit
Guarantee	3 years



RGB BOXLED

Ref: 37.004 RGB

RGB rigid led strip **“PRO”** series, IP43 with 9 leds.
45° symmetrical optics.
 For a correct dissipation of this model, a led profile and heat dissipation tape will be required.
 It can be combined with Paris XL led profile for the manufacturing of luminaires and wallwashers.
 Daily recommended use: 18h.

Voltage	12V
Power (W)	12.6W
Lumens	698 Lm (white color)
Colour temp.	RGB
Light emission	45°
Waterproofing	IP43
CRI	>80
Measurements	450x22x16mm
Cutttable	no
Working temp.	-20°C / +40°C
Sequencer	you need, not included
Power supply	not included
Connecting cable	on the ends
Fixing	double sided adhesive tape (not included)
Packaging	1 unit
Guarantee	2 years



Ref: 37.005 6000°K

Cuttable rigid led strip, IP20 with 6 leds 2835SMD.
500mm rigid led strip cuttable every 1 led.
It can light up light boxes with a depth of 5cm.
165° optics for wallwashing.
Daily recommended use: 18h.

Voltage	12V
Power (W)	5.4W
Lumens ^(6000°K)	677 Lm
Efficiency	109 Lm/W
Colour temp.	6000°K
Light emission	165°
Waterproofing	IP20
CRI	>67
Measurements	500x20x6.5mm
Cuttable	every led ^(1 led)
Working temp.	-20°C / +60°C
Power supply	not included
Regulation	via dimmer
Fixing	screw
Packaging	1 unit
Guarantee	4 years



Ref: 37.006 6000°K
Ref: 37.007 4000°K
Ref: 37.009 2700°K

Cuttable monocoloured rigid led strip "PRO" series IP20 with 9 SMD leds.
165° optics for wallwashing.
For a correct dissipation of this model, a led profile will be required.
We need to apply thermal tape.
Daily recommended use: 18h.

Voltage	24V
Power (W)	15W
Lumens ^(6000°K)	1530 Lm
Lumens ^(4000°K)	1430 Lm
Lumens ^(2700°K)	1330 Lm
Efficiency	102 Lm/W
Colour temp.	6000°K
Colour temp.	4000°K
Colour temp.	2700°K
Light emission	165°
Waterproofing	IP20
CRI	>90
Measurements	500x24x15mm
Cuttable	every 166.6mm ^(3 leds)
Working temp.	-20°C / +60°C
Power supply	not included
Fixing	screw
Packaging	1 unit
Guarantee	3 years



Ref: 37.008 7500°K
Ref: 37.020 4500°K
Ref: 37.021 3000°K
Ref: 37.010 strip connector

Cuttable rigid led strip series, IP20 and 7 leds SMD.
500mm rigid led strip cuttable every 1 led.
It can light up light boxes up to depths of 4cm with a cross connection comb (in a closed circuit).
We can connect up to 20 units.
In light boxes with increased depths, the connections are alternate.
Daily recommended use: 18h.

Voltage	12V
Power (W)	7W
Lumens ^(7500°K)	560 Lm
Efficiency	92.8 Lm
Colour temp.	11500°K
Light emission	170°
Waterproofing	IP20
CRI	>67
Measurements	497x18x1.5mm
Cuttable	every led ^(1 led)
Working temp.	-25°C / +60°C
Power supply	not included
Fixing	screw
Packaging	1 unit
Guarantee	2 years





Meanwell non-waterproof power supplies

Constant voltage 12V - 24V - 48V

Power supplies with a constant voltage Meanwell (not waterproof). **We offer a 2 year guarantee.**

Reference	Tension	Power	Amps	Power factor	Waterproofing	Weight	Measurements (mm)
39.010	12V	150W	12.5A	>0.5	IP20	500g	160x98x30
39.011	12V	320W	25A	>0.5	IP20	900g	215x115x30
39.017	24V	150W	6.5A	>0.5	IP20	500g	160x98x30
39.018	24V	320W	13,3A	>0.5	IP20	900g	215x115x30
39.002	48V	500W	10,5A	>0.9	IP20	900g	230x127x40.5



Meanwell waterproof power supplies

Constant voltage 5V - 12 V - 24V

Power supplies with a constant voltage Meanwell (waterproof). **We offer a 2 year guarantee.**

Reference	Tension	Power	Amps	Power factor	Waterproofing	Weight	Measurements (mm)
39.003	5V	25W	5A	>0.5	IP67	340g	148x40x30
39.004	5V	40W	8A	>0.5	IP67	400g	160x40x30
39.005	12V	18W	1.5A	>0.5	IP67	220g	140x30x24
39.006	12V	36W	3A	>0.5	IP67	340g	148x40x30
39.007	12V	60W	5A	>0.5	IP67	400g	163x43x32
39.008	12V	100W	8.5A	>0.5	IP67	630g	190x52x37
39.009	12V	120W	10A	>0.5	IP67	500g	191x63x37.5
39.019	12V	480W	40A	>0.9	IP67	900g	280x144x48.5
39.012	24V	18W	0.75A	>0.5	IP67	220g	118x35x26
39.013	24V	36W	1.5A	>0.5	IP67	340g	140x30x24
39.014	24V	60W	2.5A	>0.5	IP67	400g	163x43x32
39.015	24V	100W	4.2A	>0.5	IP67	630g	190x52x39
39.016	24V	150W	6.3A	>0.5	IP67	700g	180x63x35,5

ecoled non-waterproof power supplies

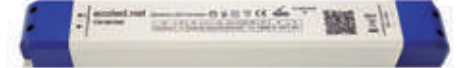
Constant voltage 12V - 24V



Ultra-thin



Compact



We offer our own brand name “ecoled” power supplies which are compact and ultra-thin with a constant output voltage. **We offer a 5 year guarantee.**
In compliance with lighting apparatus standards: EN-61347-1-2-13. EN-61547. EN-61000-3-2. EN-62384. EN-55015.

Reference	Tension	Power	Amps	Power factor	Waterproofing	Weight	Measurements (mm)
40.006	12V	20W	1.66A	>0.9	IP20	62g	123x42x20
40.001	Ultra-thin 12V	30W	2.5A	>0.95	IP20	105g	245x30x14
40.004	Compact 12V	36W	3A	>0.5	IP20	180g	84x28x42
40.007	12V	60W	5A	>0.9	IP20	310g	180x50x32
40.008	12V	100W	8.33A	>0.9	IP20	350g	300x38x30
40.009	24V	30W	1.25A	>0.9	IP20	62g	153x42x32
40.002	Ultra-thin 24V	30W	1.25A	>0.95	IP20	146g	245x30x14
40.005	Compact 24V	36W	1.5A	>0.5	IP20	180g	84x28x42
40.003	Ultra-thin 24V	60W	2.5A	>0.98	IP20	170g	290x45x18
40.010	24V	75W	3.12A	>0.9	IP20	310g	180x50x32
40.011	24V	120W	5A	>0.9	IP20	350g	300x38x30
40.012	24V	180W	7.5A	>0.9	IP20	450g	350x50x30

ecoled waterproof power supplies

Constant voltage 24V



IP67 waterproof power supplies with a constant current output ecoled. **We offer a 5 year guarantee.**

In compliance with lighting apparatus standards: EN-61347-1-2-13. EN-61547. EN-61000-3-2. EN-62384. EN-55015.

Reference	Tension	Power	Amps	Power factor	Waterproofing	Weight	Measurements (mm)
40.015	24V	200W	8.33A	>0.8	IP67	920g	230x90x43
40.016	24V	320W	13.33A	>0.9	IP67	1300g	236x97x40

Vossloh non-waterproof power supplies

Constant voltage 12V - 24V - 48V

Power supplies with a constant voltage, Vossloh (German brand) specially indicated for lighting.

We offer a 5 year guarantee. In compliance with lighting apparatus standards: EN-61347-2-13.



Reference	Tension	Power	Amps	Power factor	Waterproofing	Weight	Measurements (mm)
38.002	12V	20W	1.68A	>0.5	IP20	100g	123x45x19
38.003	12V	60W	5A	>0.9	IP20	310g	180x52x30
38.004	12V	75W	6.25A	>0.9	IP20	380g	180x52x30
38.005	12V	100W	8.40A	>0.9	IP20	440g	300x40x30
38.006	24V	30W	1.25A	>0.9	IP20	140g	153x41x32
38.021 (DALI2/1-10V)	24V	30W	1.25A	>0.95	IP20	550g	359x30x21
38.007	24V	60W	2.5A	>0.9	IP20	310g	180x52x30
38.008	24V	75W	3.12A	>0.9	IP20	380g	180x52x30
38.022 (DALI2/1-10V)	24V	70W	2.91A	>0.95	IP20	550g	359x30x21
38.009	24V	120W	5A	>0.9	IP20	440g	300x40x30
38.023 (DALI2/1-10V)	24V	120W	5A	>0.95	IP20	550g	359x30x21
38.010	24V	180W	7.5A	>0.9	IP20	665g	345x50x35
38.001	48V	120W	2.5A	>0.95	IP20	410g	300x30x40

Vossloh non-waterproof power supplies

Constant current 350mA - 500mA - 700mA

Power supplies with a constant current, Vossloh (German brand) specially indicated for lighting.

We offer a 5 year guarantee. In compliance with lighting apparatus standards: EN-61347-2-13.

Reference	Control	Power	350mA	500mA	700mA	Size
38.013	No	6-14W	✓	✗	✗	230x30x21
38.014	No	12-21W	✗	✓	✓	230x30x21
38.017	1-10V	12-80W	✗	✓	✓	425x30x21
* Power supplies with 2 channels each of 40W						
38.012	No	20-40W	✓	✓	✓	360x30x21
38.015	DALI/PUSH	21-42W	✓	✓	✓	358x30x21
38.011	No	42-80W	✓	✓	✓	360x30x21
38.016	DALI/PUSH	42-84W	✓	✓	✓	358x30x21
38.019	No	70-120W	✗	✓	✓	280x30x21
38.020	No	95-165W	✗	✓	✓	359x30x21





Factory Berlin
Led digital in led profile Oslo and Oslo Black&White
Cortesy of Protopixel

REFERENCES	41.004	41.005	41.006	41.007	41.008	41.009	41.010	41.011	41.012	41.013	41.014	41.015	41.016	41.017	41.018	41.019	41.046
Page number	316	316	316	316	317	317	317	318	318	318	319	319	319	320	320	320	320

Functions carried out by the products

Sequencer	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	✓	-	✓
Amplifier	-	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-
Dimmer	✓	✓	-	-	✓	-	✓	✓	✓	-	-	-	-	✓	✓	-	✓
Sensor	-	-	✓	✓	-	-	-	-	-	✓	✓	✓	-	-	-	-	-
Switch	✓	✓	-	-	-	-	-	✓	✓	-	-	-	✓	-	-	-	-

Main characteristics

One colour	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
RGB	-	-	-	-	✓	✓	-	-	-	-	-	-	-	-	-	-	✓
RGBW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
CCT. WW - CW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	-
Power 12V	36W	36W	24W	120W	144W	144W	144W	24W	24W	-	32W	24W	-	96W	60W	60W	192W
Power 24V	72W	72W	48W	240W	288W	-	288W	48W	48W	-	72W	48W	-	192W	120W	120W	384W
Power 220V	-	-	-	-	-	-	-	-	-	250W	-	-	200W	-	-	-	-
Waterproofing	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Channels	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1	2	4
Zones	1	1	1	1	1	1	1	1	1	1	1	1	-	1	6	1	dmx
WIFI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bluetooth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Radio frequency	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	-
Memory saver	-	-	-	-	✓	-	✓	-	-	-	-	-	-	✓	✓	✓	-
Receiver apart	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	-	-

REFERENCE	41.020	41.021	41.022	41.049	41.023	41.024	41.025	41.026	41.027	41.028	41.029	41.030	41.031	41.033	41.034	41.035	41.045
Page number	321	321	321	321	322	322	322	322 / 324	323	323	323	324	324	325	325	325	325

Functions carried out by the products

Sequencer	-	-	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	-	-	-	-
Amplifier	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimmer	-	-	-	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sensor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Switch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Main characteristics

One colour	✓	✓	-	-	-	-	✓	✓	-	-	-	✓	✓	✓	✓	✓	✓
RGB	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
RGBW	✓	✓	-	✓	-	-	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
CCT. WW - CW	-	-	✓	-	-	-	✓	✓	-	-	-	✓	✓	-	-	-	-
Power 12V	144W	144W	180W	120W	108W	144W	180W	180W	192W	192W	192W	144W	144W	96W	96W	96W	-
Power 24V	288W	288W	360W	240W	216W	288W	360W	360W	384W	384W	384W	288W	288W	190W	190W	190W	-
Power 220V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
Waterproofing	IP20	IP66	IP20	IP20	IP20	IP20	IP20	IP20	IP68	IP25	IP25	IP20	IP20	IP20	IP20	IP20	IP20
Channels	3	4	4	4	3	3	5	5	4	4	4	3	3	1	1	1	1
Zones	1	1	1	1	1	1	8	1	1	1	1	4	4	1	1	1	1
WIFI	-	-	-	-	-	-	-	-	-	-	✓	-	-	-	-	-	-
Bluetooth	-	-	-	-	-	-	-	-	✓	✓	-	-	-	-	-	-	✓
Radio frequency	-	-	-	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-
Memory saver	-	-	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
Receiver apart	-	-	-	-	-	-	✓	-	-	-	-	✓	✓	-	-	-	-

Bluetouch sensor



Ref: 41.004 (without pilot light) 12V-24V
 Ref: 41.005 (with pilot light) 12V-24V

A small switch with a touch dimmer function for inserting inside our led profiles. The cover is placed on top of the switch (this does not require any type of manipulation of the profile). It can be switched on and off and the led intensity can be regulated from 0% to 100%.

We recommend a layer of insulating tape on the lower part of the sensor when mounting in the profile to avoid malfunctioning.

This product is only recommended for indoor use and only 1 sensor can be used in the same luminaire.

Power (W)	48W (12V)
Power (W)	96W (24V)
Channels (output)	1
Amps	4A
Measurements	60x11x5mm
Regulation	0% - 100%
Led indicator light	Ref: 41.004 - no Ref: 41.005 - blue
On-Off	tactile
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Movement sensor

(installation in rooms)



Ref: 41.006 12V-24V

A small movement sensor for inserting inside our led profiles which is activated on detecting movement from a distance of approximately 2.5 metre and at a 90° angle. As long as there is movement the sensor will stay activated, but once it fails to detect any presence, it will remain "ON" for 45" and will then switch off.

We recommend a layer of insulating tape on the lower part of the sensor when mounting in the profile to avoid malfunctioning.

The cover has to be perforated so that the sensor's head remains visible.

Power (W)	48W (12V)
Power (W)	96W (24V)
Channels (output)	1
Amps	4A
Measurements	48x10x12mm
Detection angle	90°
Movement detection	2.5 metre
Weight	4.8g
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Movement sensor



Ref: 41.007 12V-24V

A small movement sensor for inserting inside our led profiles which is activated thanks to an infrared sensor and can detect movement from a distance of approximately 2m, lighting up the led strip. The 12V and 24V strips inside the aluminium profile can be switched ON / OFF.

Once this sensor stops detecting movement, the led strip will turn off after 40 seconds. It is necessary to make a hole in opaque cover in the profile for the sensor to fit in.

Power (W)	120W (12V)
Power (W)	240W (24V)
Amps	10A
Measurements	43x16x10mm
Off	40 seconds
Apt for	interior
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

MINI sequencer



Ref: 41.008 5V-12V-24V

MINI sequencer for RGB leds which offers ON-OFF and also flashing and progressive colour change functions, yet at the same time permits a fixed colour. As it is very small, it can be fitted in places where visual impact is minimal.

This sequencer only offers a manual option and does not come with a remote control . It can be fitted into our Versailles profile (see page 54).

Power (W)	60W (5V)
Power (W)	144W (12V)
Power (W)	288W (24V)
Channels (output)	3
Amps	4A x channel
Measurements	42x12x13mm
Regulation	0% - 100%
Remote control	no
Memory	yes
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

MINI amplifier



Ref: 41.009 5V-12V

MINI amplifier for RGB leds, which due to its reduced size can be fitted in places where visual impact is minimal.

We always recommend the use of an amplifier when the led installation is more than 5 linear metre or more than the admitted power in the sequencer. It can be fitted into our Versailles profile (see page 54).

Power (W)	60W (5V)
Power (W)	144W (12V)
Channels (output)	3
Amps	4A x channel
Measurements	42x12x3mm
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

MINI dimmer



Ref: 41.010 5V-12V-24V

MINI dimmer for single coloured leds, which due to its reduced size can be fitted in places where visual impact is minimal.

This dimmer only offers a manual option and does not come with a remote control . It can be fitted into our Versailles profile (see page 54).

Power (W)	30W (5V)
Power (W)	72W (12V)
Power (W)	144W (24V)
Channels (output)	1
Amps	6A
Measurements	40x12x5mm
Regulation	0% - 100%
Remote control	no
Memory	yes
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Touch sensor for recessing



Ref: 41.011 12V-24V

A touch sensor for recessing with ON-OFF function, yet at the same time regulating the light's intensity with the dimmer. It works at 12V - 24V.

This product is only recommended for indoor use and only 1 sensor can be used in the same installation. The "cell" detecting cable must not be cut as this could cause failure.

WARNING: the installation of the sensor with the led strip must be carried out without connecting to the power supply (the line must be disconnected from 230V) as this could shut off and cause malfunctioning.

Power (W)	36W (12V)
Power (W)	72W (24V)
Channels (output)	1
Amps	3A
Sensor size	Ø 22mm
Regulation	yes
Working temperature	-20°C / +45°C
Weight	65g
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years



Touch sensor for surfaces



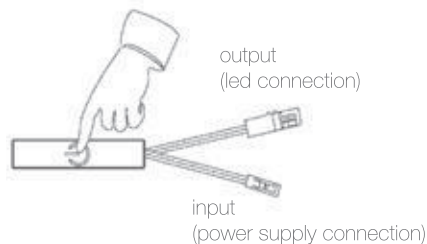
Ref: 41.012 12V-24V

A touch sensor for surfaces recommended with ON-OFF function yet at the same time regulating the light's intensity with the dimmer. It works at 12V - 24V.

This product is only recommended for indoor use and only 1 sensor can be used in the same installation. The "cell" detecting cable must not be cut as this could cause failure.

WARNING: the installation of the sensor with the led strip must be carried out without connecting to the power supply (the line must be disconnected from 230V) as this could shut off and cause malfunctioning.

Power (W)	36W (12V)
Power (W)	72W (24V)
Channels (output)	1
Amps	2A
Waterproofing	60x11x6mm
Regulation	yes
Working temperature	-20°C / +45°C
Weight	38g
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years



Motion sensor



Ref: 41.013 100V-240V

A motion sensor for angles of 120° and ideal for placing in commuted areas such as stairways, corridors, etc. It works at 220V and includes driver.

This product is only recommended for indoor use and only 1 sensor can be used in the same installation. The "cell" detecting cable must not be cut as this could cause failure.

WARNING: the installation of the sensor with the led strip must be carried out without connecting to the power supply (the line must be disconnected from 240V) as this could shut off and cause malfunctioning.

Power (W)	250W
Input	100V - 240V
Output	100V - 240V
Detection angle	120°
Size of receiver	76x35x19.5mm
Size of receiver	Ø 18mm
Working temperature	-20°C / +45°C
Hole size	15mm
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years



Sensor

(for drawers and wardrobes with 1 door)



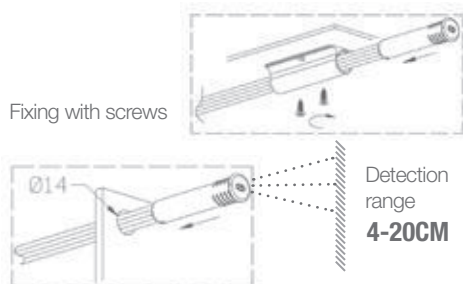
Ref: 41.014 12V-24V

Pseudo sensor which is recommended for use in wardrobes and drawers and works at 12V-24V. Working range (ON-OFF) 4-20 cms.

This product is only recommended for indoor use and only 1 sensor can be used in the same installation. It is suitable for recessing and surfaces. The "cell" detecting cable must not be cut as this could cause failure.

WARNING: the installation of the sensor with the led strip must be carried out without connecting to the power supply (the line must be disconnected from 230V) as this could shut off and cause malfunctioning.

Power (W)	36W (12V)
Power (W)	72W (24V)
Channels (output)	1
Amps	2A
Measurements	63x28x17mm
On-Off	4-20cm
Working temperature	-20°C / +45°C
Weight	12g
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years



Double sensor

(for wardrobes with 2 doors)



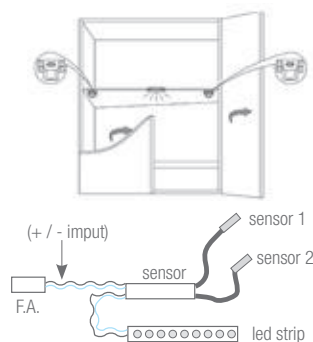
Ref: 41.015 12V-24V

Pseudo double sensor which is recommended for use in wardrobes with 2 doors and drawers and works at 12V-24V. Working range (ON-OFF) 4-20 cms.

This product is only recommended for indoor use and only 1 sensor can be used in the same installation. The "cell" detecting cable must not be cut as this could cause failure.

WARNING: the installation of the sensor with the led strip must be carried out without connecting to the power supply (the line must be disconnected from 230V) as this could shut off and cause malfunctioning.

Power (W)	36W (12V)
Power (W)	72W (24V)
Channels (output)	1
Amps	2A
Measurements	65x12x11mm
On-Off	4-20cm
Working temperature	-20°C / +45°C
Weight	30g
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years



On-Off switch

(doors and drawers)



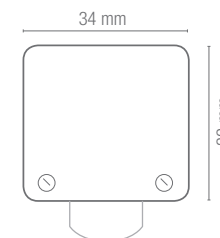
Ref: 41.016

A mechanical switch designed to control lighting on opening and closing doors and drawers.

This product can be connected directly to the main power supply (maximum 250VAC/1A) with a service frequency of 50/60Hz. It can also permit the led to be connected at 12V-24V.

It has a rectangular shape, measuring 34x32mm and a thickness of 15mm and can be fixed with 2 screws (not included). It is manufactured in plastic with a white finish.

Power (W)	200W
Channels (output)	1
Amps	1A maximum load
Measurements	34x32x15mm
On-Off	by contact
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years



Dimmer for surfaces



Ref: 41.017 12V-24V

Non-waterproof, single coloured dimmer for surfaces.
Regulation from 0% to 100%.
This product is not recommended for installations in areas with high levels of humidity (IP20).

Power (W)	96W (12V)
Power (W)	192W (24V)
Channels (output)	1
Amps	8A
Weight	83g
Measurements	89x60x24mm
Regulation intensity	0% - 100%
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Dimmer + temperature control for 6 zones



Ref: 41.018 controller

Temperature control (°Kelvin) for the led strip DUAL CCT. It can work 6 different zones (installations) with the same remote control.
Signal is via radio frequency. Battery not included.
Receiver not included (Ref: 41.019).

Measurements (remote control)	136.3x38.9x10.7mm
Memory	yes
Regulation intensity	yes
Working temperature	0°C / +40°C
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Slave DMX

(Control slave for 4 channels)



Ref: 41.046 192W (12V) - 384W (24V)

A controller for digital installations using DMX512 with 4 output channels (4A x channel).
The slave DMX protocol changes the analogical signal into a digital one and therefore enables us to freely establish a DMX address.

We recommend the use of RJ45 cables with a DMX signal to enhance signal transmission and also the placing of a RJ45 terminator at the exit of the 41.046 to avoid losses (not included).
It can be connected to a computer or to a DMX mixing panel with a maximum of 512 channels.

Receiver size	177x42x33mm
Power (W)	192W (12V)
Power (W)	384W (24V)
Channels	4
Amps	4A x channel
Working temperature	-20°C / +60°C
Weight	201g
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Signal receiver

(for remote control 41.018)

Ref: 41.019 60W (12V) - 120W (24V)

A signal receiver for the remote control 41.018. Each receiver can be assigned 1 different channel of the remote control. Can permit installations in PUSH.



Receiver size	178x46x22mm
Power (W)	60W (12V)
Power (W)	120W (24V)
CC 350mA (PUSH)	4x350mA (12.6W)
CC 700mA (PUSH)	4x700mA (25.2W)
Amps	5A x channel
Working temperature	0°C / +40°C
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Amplifier (non-waterproof)

(3 channels "RGB")



Ref.: 41.020

12V-24V

Non-waterproof RGB amplifier (4A x channel). It must feed from the power supply (entrance channel: +/-).

We can install as many amplifiers as we need, connecting them to each other and to their corresponding power supplies. This product is for indoor use.

Power (W)	144W (12V)
Power (W)	288W (24V)
Channels (output)	3
Amps	4A x channel
Measurements	65x105x23mm
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Amplifier (waterproof)

(3 channels "RGB")



Ref: 41.021

12V-24V

Waterproof RGB amplifier (4A x channel). It must feed from the power supply (entrance channel: +/-).

We can install as many amplifiers as we need, connecting them to each other and to their corresponding power supplies. This product is for indoor and outdoor use.

Power (W)	144W (12V)
Power (W)	288W (24V)
Channels (output)	3
Amps	4A x channel
Measurements	53x79x29mm
Waterproofing	IP66
Packaging	1 unit
Guarantee	2 years

Amplifier (non-waterproof)

(4 channels "RGBW")



Ref: 41.022

12V-24V

Non-waterproof RGB + W amplifier (6A x channel) with a maximum output of 15A. It must feed from the power supply (entrance channel: +/-).

We can install as many amplifiers as we need, connecting them to each other and to their corresponding power supplies. This product is for indoor use.

Power (W)	180W (12V)
Power (W)	360W (24V)
Channels (output)	4
Amps	3.75A x channel
Measurements	119x47x23mm
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

RGB+W Sequencer



Ref: 41.049

5V-12V-24V

RGB+W sequencer (6A x channel) with a maximum output of 10A. No memory. Includes remote with signal receiver. Battery not included.

The maximum load which we can use is 2.5A if we use the 4 channels (RGBW) and 3.33A if we use the 3 channels (RGB), as the maximum output is 10A. If the installation's consumption is superior then we must use amplifiers.

Power (W)	50W (5V)
Power (W)	120W (12V)
Power (W)	240W (24V)
Channels (output)	4
Amperes	2.5A x 4 channels
Movement detection	max. 30 metres
Programs	9
Save memory	no
Regulation intensity	yes
Receptor included	No, (ref: 41.026)
Working temperature	-20°C / +60°C
Waterproof	IP20
Packaging	1 unit
Guarantee	2 years

RGB dimmer with 3 fixed channels



Ref: 41.023 5V-12V-24V

RGB dimmer (3A x channel).
The 3 independent channels allow us to control, channel by channel, R, G & B and the intensity can be graduated for each colour. This colour will remain fixed until changed again. Colour degree controlled from 0% to 100%.

RGB dimmer for surfaces.
This product is not recommended for installations in areas with high levels of humidity (IP20).

Power (W)	45W (5V)
Power (W)	108W (12V)
Power (W)	216W (24V)
Channels (output)	3
Amps	3A x channel
Control	by buttons
Measurements	130x40x52mm
Regulation colours	0% - 100%
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

RGB sequencer



Ref: 41.024 12V-24V

RGB sequencer (4A x channel).
No memory.
Includes remote with signal receiver.
Battery not included.

This product allows us to fix 7 colours (white, blue, turquoise, red, green, yellow and lilac) with progressive changes, with flashing, on and off sequences for the 7 colours and also for the 3 channels (RGB). We can also control the speed of the colour changes (4 steps). Once we switch off, the last colour changing sequence is not recorded when we switch on again.

Power (W)	144W (12V)
Power (W)	288W (24V)
Channels (output)	3
Amps	4A x channel
Signal detection distance	15m
Programs	10
Measurements (remote control)	130x64x24mm
Channels	1
Save memory	no
Regulation intensity	yes
Receiver included	yes
Working temperature	-20°C / +45°C
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Controller and receiver, single-coloured + RGB + RGBW



Ref: 41.025 controller
Ref: 41.026 receiver 12V-24V

CONTROLLER FOR 8 ZONES, SINGLE-COLOURED + CCT DUAL + RGB + RGBW - 12V/24V - 216W (WITHOUT BATTERIES)

RECEIVER RGB + DUO + SINGLE-COLOURED (FOR 41.025, 41.030 & 41.031) - 12-24V, 216W

Power (W)	180W (12V)
Power (W)	360W (24V)
Channels (output)	5
Amps	6A x channel
Signal detection distance	15m
Control	2,4 GHz
Measurements	124x38x23mm
Regulation colours	yes
Working temperature	-20°C / +65°C
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Bluetooth sequencer RGB+W



Ref: 41.027

6V-12V-24V

A very small waterproof sequencer offering IP68. It permits 43 colour changes and 16 pre-programmed static colours.

It is controlled by means of a smartphone or a tablet with IOS (Apple) or Android operative systems.

As the connection is via bluetooth V2.1 and does not occupy the wifi channel, this can be used for internet connection or other uses. It is suitable both for indoors and outdoors.



Power (W)	96W (6V)
Power (W)	192W (12V)
Power (W)	384W (24V)
Channels (output)	1 (RGBW)
Signal detection distance	15m
Weight	38g
Measurements	87x212x8.5mm
Programs	16
Memory	yes
Waterproofing	IP68
Packaging	1 unit
Guarantee	2 years

Bluetooth RGB+W sequencer



Ref: 41.028

12V-24V

A very small non-waterproof sequencer offering IP25, which permits multiple modes and effects.

It is controlled by means of a smartphone or a tablet with operative systems IOS (Apple), version 6.0 or Android, version 4.3 upwards.

As the connection is via bluetooth V2.1 and does not occupy the wifi channel, this can be used for internet connection or other uses. It is only suitable for indoors.



Power (W)	192W (12V)
Power (W)	384W (24V)
Channels (output)	4
Amps	4A x channel
Signal detection distance	20m
Weight	46g
Measurements	86x45x23mm
Memory	yes
Waterproofing	IP25
Packaging	1 unit
Guarantee	2 years

Sequencer via wifi RGB+W



Ref: 41.029

12V-24V

A very small non-waterproof sequencer offering IP25, which permits multiple modes and effects.

It is controlled by means of a smartphone or a tablet with operative systems IOS (Apple), version 6.0 or Android, version 2.2 upwards. The application "Dream Color" (or similar) can be downloaded free.

It is supplied with an installation manual and a static IP in order to be able to connect via wifi.



Power (W)	192W (12V)
Power (W)	384W (24V)
Channels (output)	4
Amps	4A x channels
Signal detection distance	20 m
Weight	52g
Measurements	86x45x23mm
Memory	yes
Waterproofing	IP25
Packaging	1 unit
Guarantee	2 years

Control panel for surfaces



Rear view

Ref: 41.030 controller
3V (3 x AAA batteries)

A small yet elegant control panel for wall surfaces with a tempered glass front. It is capable of controlling 4 different zones. It has a touch screen with a capacity of 2.4GHz and is used to control RGBW led installations, dimmers and DUAL CCT.

It is wall mounted by using double sided adhesive tape or can be screwed on.
2 batteries are required (AAA).
It gives out instructions to the receiver (41.026) via radiofrequency.
Receiver not included.

Tactile screen	yes
Electrical feed	2 batteries 3v (AAA)
RGBW regulation	yes
White regulation	yes (DUAL CCT)
Speed mode +/-	yes
“On”	yes, hold botton 5 sec
“Off”	yes, hold botton 5 sec
Signal detection distance	30 metre with obstacles
Zones	4
Measurements	86x86x20mm
Front panel	tempered glass
Memory	yes
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Control panel for recessing



Rear view

Ref: 41.031 controller 220V

A small yet elegant control panel for recessing in walls with a tempered glass front. It is capable of controlling 4 different zones. It has a touch screen with a capacity of 2.4GHz and is used to control RGBW led installations, dimmers and DUAL CCT.

It is wall mounted with screws and sufficient space must be contemplated in the surface area for embedding.
The panel has to be connected to 220V. The panel gives out instructions to the receiver (41.026) via radiofrequency.
Receiver not included.

Tactile screen	yes
Electrical feed	2 batteries 3v (AAA)
RGBW regulation	yes
White regulation	yes (DUAL CCT)
Speed mode +/-	yes
“On”	yes, hold botton 5 sec
“Off”	yes, hold botton 5 sec
Signal detection distance	30 metre with obstacles
Zones	4
Measurements	86x86x33mm
Front panel	tempered glass
Memory	yes
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

30 metres



2,4GH



Front view
Ref: 41.030 / Ref: 41.031 models controller

Receiver “RN8”

(for control panels)



Ref: 41.026 12V - 24V

RECEIVER RGB + DUO + SINGLE-COLOURED (FOR 41.025, 41.030 & 41.031) - 12-24V, 216W

Power (W)	180W (12V)
Power (W)	360W (24V)
Channels (output)	5
Amps	6A x channel
Control	2,4 GHz
Measurements	124x38x23mm
Regulation colours	yes
Working temperature	-20°C /+65°C
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Led Dimmer

(constant voltage 0-10V / 1-10V)



Ref: 41.033

120W (12V)
240W (24V)

This is a device with just 1 channel for regulating the light intensity, using an analogue signal which can work at 0-10V or at 1-10V (dimmer). It can be installed in big profiles (check models) and also in standard wall boxes.

Attention: we advise you to leave a safety margin of 20% for a correct working of the product.

Power (W)	120W (12V)
Power (W)	240W (24V)
Channels (output)	1
Amps	10A
Control	1-10V
Measurements	56x68x35mm
Weight	38g
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Led Dimmer DALI

(constant voltage 12V-24V)



Ref: 41.034

78W (12V)
156W (24V)
312W (48)

This is a device with just 1 channel for regulating the light intensity, using a digital signal which can DALI protocols. It incorporates a pushbutton if we want to operate the device without the "bus" controller. It can be installed in big profiles (check models) and also in standard wall boxes.

Attention: we advise you to leave a safety margin of 20% for a correct working of the product.

Power (W)	78W (12V)
Power (W)	156W (24V)
Power (W)	312W (48V)
Channels (output)	1
Amps	6.5A
Control	DALI
Measurements	56x68x35mm
Weight	43g
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Led Dimmer DMX

(constant voltage 12V-24V)



Ref: 41.035

78W (12V)
156W (24V)
312W (48)

This is a device with just 1 channel for regulating the light intensity, using a digital signal which can DMX512 protocols.

It incorporates a pushbutton if we want to operate the device without the "bus" controller. It can be installed in big profiles (check models) and also in standard wall boxes.

Attention: we advise you to leave a safety margin of 20% for a correct working of the product.

Power (W)	78W (12V)
Power (W)	156W (24V)
Power (W)	312W (48V)
Channels (output)	1
Amps	6.5A
Control	DMX
Measurements	56x68x35mm
Weight	43g
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

Casambi dimmer controller (Bluetooth)



Ref: 41.045

Triac dimmer (via Bluetooth) for led strips at 230V (Infinity & Ghost profile). Program can be downloaded for free with operative systems IOS (Apple) or Android.

Casambi uses a mesh network technology, meaning that each 41.045 also acts as a repeater.

Power (W)	150W (230V)
Voltage (V)	85V-240V
Control	bluetooth
Amps	0.65A
Measurements	40.4x36.3x14mm
Apt for	indoor
Waterproofing	IP20
Packaging	1 unit
Guarantee	2 years

DIGITAL CONTROLLER



Ref: 41.036

5V-24V

RGB IP20 digital wifi controller that allows multiple modes and effects.
Free download program via IOS (Apple) or Android operating systems.

MINI DIGITAL CONTROLLER



Ref: 41.037

5V-24V

RGB digital controller plus remote.
300 pre-recorded functions.
Brightness adjustment, flash, flickering and grading function.

DIGITAL CONTROLLER WITH IP20 SENSOR



Ref: 41.038

Digital controller with 133 effects.

It is controlled by means of the buttons on the controller or with a small remote control.

Working tension 12V, maximum pixel load of 1024 points (in low mode) or 2048 points (in high mode).

Working voltage	5V - 12V - 24V
Working current	20mA to 130mA
Control method	Wifi
Application	Led Shop, can be downloaded from applications or via QR codes which contain the same product.
Compatible with operative systems	IOS version 10.0 or superior. Android OS 4.4 or superior.
Signal detection distance	30 metre with obstacles
Maximum pixel load	2048px
Product dimensions	45x22x85mm
Product weight	40g
PCB	10mm
Working temperature	-20°C / +60°C
Cable holding system	By means of pressure connectors with screws for cables of maximum 1.5mm ² (in Output and Input) or with a Jack connector.
Memory	yes

Working voltage	5V - 12V - 24V
Working temperature	-20°C / +60°C
Maximum pixel load	2048px
Control mode	via remote control RF
Control battery	CR2025
RF signal distance	30 clear metre
Working modes	yes, 300 different types
Dimensions	85x40x5mm ^{remote control} 75x35x5mm ^{controller}
Product dimensions	L137xW70xH25mm
Memory	yes

Product	Led digital controller
Working voltage	12V
Working current	< 60mA
Electric feed	By means of Jack connector or terminal with screws for cables
Maximum pixel load	1024 points (in low mode) or 2048 points (in high mode).
IC compatible models	WS2811, WS2812B, TM1809, UCS1903 y TM1812
Working temperature	-20°C / +60°C
Effect modes	133
Product dimensions	L137xW70xH25mm
Control types	by means of the buttons on the controller or with a small remote control.
Synchronous controller	yes, they can be synchronised by means of a mains cable connection and a RJ45 connector

CONTROLLER



Ref: 41.047

Controller for digital led strips which supports the majority of Ic on the market.

Suitable for controlling up to 2048 pixels.

The programming is saved in a SD card which is inserted into the controller.

Product	Led digital controller
Working voltage	5V-24V
Working current	< 60mA
Electric feed	By means of Jack connector or terminal with screws for cables
Maximum pixel load	2048 points (in high mode).
IC compatible models	WS2811, WS2812B, TM1809, UCS1903 y TM1812
Working temperature	-20°C / +60°C
Product dimensions	L160xW90xH30mm
Control types	by means of the buttons on the controller
Synchronous controller	yes, they can be synchronised by means of a mains cable connection and a RJ45 connector

CONTROLLER



Ref: 41.048

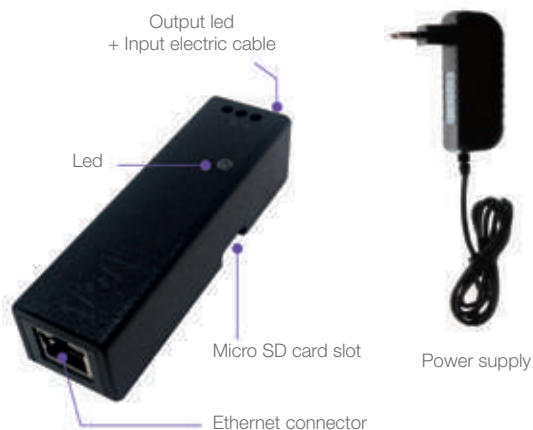
Controller for digital led strips which supports the majority of Ic on the market.

Suitable for controlling up to 8192 pixels.

The programming is saved in a SD card which is inserted into the controller.

Product	Led digital controller
Working voltage	5V-24V
Working current	< 60mA
Electric feed	By means of Jack connector or terminal with screws for cables
Maximum pixel load	8192 points (in high mode).
IC compatible models	WS2811, WS2812B, TM1809, UCS1903 y TM1812
Working temperature	-20°C / +60°C
Product dimensions	L180xW120xH30mm
Control types	by means of the buttons on the controller
Synchronous controller	yes, they can be synchronised by means of a mains cable connection and a RJ45 connector

“Basic” starter kit



Flexible led strip (5m roll)

Ref: 41.039

Digital Led “basic” starter kit
Includes: 1 controller, 1 flexible led strip (5m roll), 1 power supply, a 3 month subscription to Protopixel Create (design software).

ProtoPixel Create “control software”



Ref: 46.014

1 month

“ProtoPixel software is used to create visual content and scenes for Digital Led installation. The first time you download the software in your computer, it will be executed in “demo” mode during 30 days. After this, you will have to take out a monthly subscription.”

Subscriptions. ProtoPixel Create can be used for free in order to generate lighting projects (create content, lighting zones and for developing interactive experiences, etc). This “demo” mode only shows a water mark on the final content, but it allows you to design at your leisure. However, if you want to design without water marks and/or export the content to the final installation, you would need to take out a monthly subscription which you can activate at any time. All subscriptions can be renovated monthly if needed.

Protopixel Remote Management Silver
Ref: 41.050

Protopixel Remote Management Gold
Ref: 41.051

Protopixel Remote Management Platinum
Ref: 41.052

ProtoPixel Player “sequence player”



Measurements:
65x91x26mm

Ref: 41.040

What is 41.040?

Player is a device used to reproduce the lighting sequences created and recorded with the control software (ProtoPixel Create).

This is also an interesting alternative and much more simple than the Protopixel control software Node, when we are using a non interactive

Technical characteristics:

- Capacity for managing up to 6 controllers.
- Reproduction of unlimited lighting sequences.
- Does not require subscription.
- Requires ProtoPixel Create software to design and record lighting sequences.
- No subscription required to ProtoPixel Create in order to execute sequences.
- Network connection: Ethernet and WiFi access point.
- Electric feeding via micro-USB or external power supply (5V 2A).
- Includes cable and power supply.

ProtoPixel Node "mini computer"



Measurements:
115x112x32mm

Ref: 41.041

What is 41.041?

Node is a mini computer which reproduces lighting content and scenes generated by ProtoPixel Create. This node operates independently without having to use a computer and the final user can control the lighting scenes with an App.



How does it work?

All lighting scenes designed by ProtoPixel Create Software can be saved in this Node locally or remotely (in a cloud). The content can also be monitored and updated remotely.

CONTROLLER + 2 SATELLITES "high quality 8 channel controller"



Measurements:
65x89x26mm



SATELLITES

Ref: 41.042

What is 41.042?

8 channel controller used to manage up to 4800 RGS Leds at 50fps. The controller comes with 2 satellites to simplify the connection.

It can reproduce lighting scenes sent from ProtoPixel Create or stored in ProtoPixel Player or Node.

It can be fed by USB or with an external power supply (5V). USB interface not only permits power supply but also the updating of the firmware.

Technical characteristics:

- Standard Ethernet interface 10/100mbps.
- 2 satellites included with every controller
- Maximum capacity: 4800 RGB leds at 50fps.
- Easy network configuration by means of DHCP.
- It is fed directly at 5V or via USB.
- It is compatible with different types of Led strips, individually controlled.
- WS2811
- WS2812
- WS2812B
- NEOPIXEL
- SK6812
- WS2813
- CS8812
- WS2815

1 channel CONTROLLER "1 channel controller in small scale"



Measurements:
28x120x25mm

Ref: 41.043

Ref: 41.044

without wifi

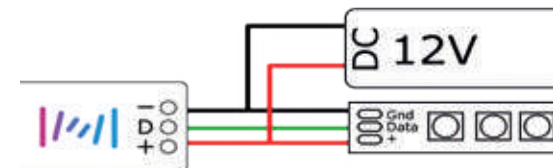
with wifi

What is 41.043?

1 channel controller (satellites are not required). It can reproduce lighting scenes from ProtoPixel Player or Node which are stored in the microSD card of the controller. It can control up to 600 RGB leds. It offers easy and basic installation. We can add as many controllers as necessary. All data cables are replaced by standard Ethernet cables which cover very long distances. It also has a microSD card slot that can be used to add recorded content which the controller will play independently.

Technical characteristics:

- Standard Ethernet interface 10/100mbps.
- Slot for microSD card.
- Maximum capacity: 600 RGB leds at 50fps.
- Easy network configuration with DHCP.
- Directly fed at 5V or 12V.
- It is compatible with different types of Led strips, individually controlled:
- WS2811
- WS2812
- WS2812B
- NEOPIXEL
- SK6812
- WS2813
- CS8812
- WS2815





Ref: 42.008
Terminal sealed with silicone (2 poles) for cables of up to Ø0.9mm
Measurements: 8x15mm



Ref: 42.009
Terminal sealed with silicone (3 poles) for cables of up to Ø0.9mm
Measurements: 10x15mm



Ref: 42.010
Terminal sealed with silicone (3 poles) for cables of up to Ø1.5mm
Measurements: 15x20mm



Ref: 42.011
Terminal sealed with silicone (2 poles) for cables of up to Ø1.5mm
Measurements: 13x50mm



Ref: 42.012
Terminal (not sealed) with 1 pole in "T"
Measurements: 25.3x12.8mm



Ref: 42.013
Terminal (not sealed) with 2 poles in "T"
Measurements 28.8x16.8mm



For cables of up to 2mm

Ref: 42.014
Terminal (not sealed) with 3 ways
Measurements: 20x14x17mm



Ref: 42.015
Terminal (not sealed) with 1 pole
Measurements: 8x3mm



Ref: 42.016
Terminal (not sealed) with 2 poles
Measurements: 8x6mm



For cables of up to 2mm

Ref: 42.017
Terminal (not sealed) with 5 ways
Measurements: 25x14x20mm



Ref: 42.072
Terminal (not sealed) with 5 ways
Measurements: 41.5x15x40.6mm



Ref: 42.073
Terminal (not sealed) with 3 ways
Measurements: 39.2x14.8x18.8mm



Ref: 42.075
Connector for IP20 strip with PCB of 8mm
Ref: 42.076
Connector for IP20 strip with PCB of 10mm

See page 335



Ref: 42.068
Connector for IP20 strip with
PCB of 10mm

Ref: 42.069
Connector for IP20 strip with
PCB of 5-8mm



See page 263



Ref: 42.007
Connector for IP65 strip with PCB of 10mm



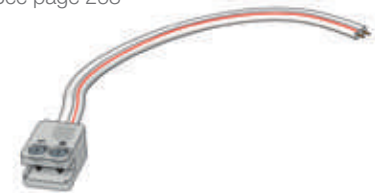
Ref: 42.026
Waterproof connector IP67 "male-female" with a
10cm cable. Measurements: 25x10mm

See page 263



Ref: 42.004
Kit (connector with cable of 10cm, closure
endcap, cap with connector neck, screws and
silicone)

See page 263



Ref: 42.005
Connector with cable of 100cm



Ref: 42.077
3 pin Cannon connector for embedding (female)



Ref: 42.078
3 pin Cannon connector for embedding (male)



Ref: 42.079
3 pin Cannon connectors (pair)



Ref: 42.044
"Female" jack connector



Ref: 42.071
"Male" jack connector



Ref: 42.036
Non waterproof jack power strip
Measurements: 13x6mm



Ref: 42.037
Waterproofing spray
for leds and connections: 400ml

In order to be able to waterproof approx 12 metre of DUBLIN led profile we would need these quantities of both resin and catalyst.



Ref: 22.018
Epoxy resin for water proofing
led profiles. 1 tin (1kg) + 1 catalyst (400g)



Ref: 42.045
Alkaline batteries (AAA)

Silicone encaps



Ref: 19.181 without hole
Ref: 19.182 with 2 holes
Ref: 19.183 with 4 holes

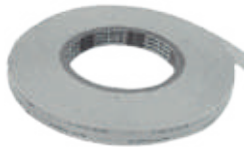


Ref: 20.041 silicone clip

Ref: 19.251
Cap with connector neck
transparent silicone



Ref: 42.046
Button cell batteries (3V)



Ref: 42.002
Double side adhesive tape (160 microns)
Measurements: 50m x12mm



Ref: 42.003
Double sided adhesive foam tape
Measurements: 50m x12mm

Thermal adhesive tape

Ref: 42.038 25m x5mm
Ref: 42.039 25m x10mm
Ref: 42.040 25m x20mm



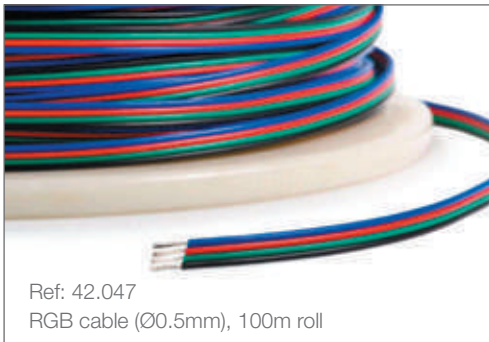
Ref: 42.041
Welding paste for leds 1 tin



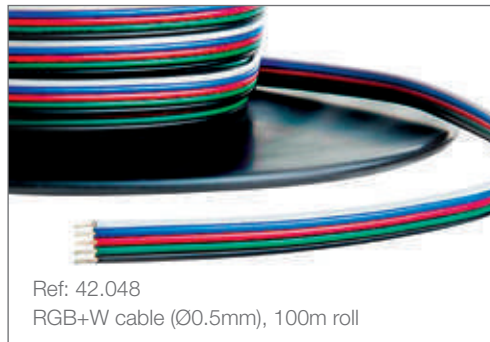
Ref: 42.042
Cutters for led profiles and covers



Ref: 42.001
Adhesive magnetic strips (12mm width)
for fixing led profiles



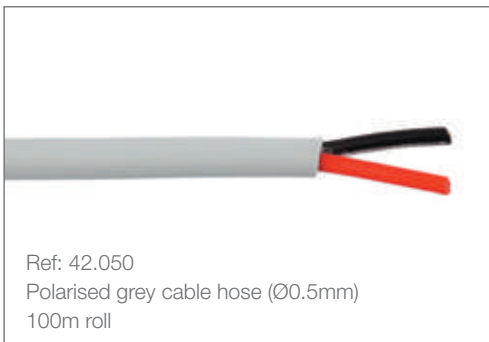
Ref: 42.047
RGB cable (Ø0.5mm), 100m roll



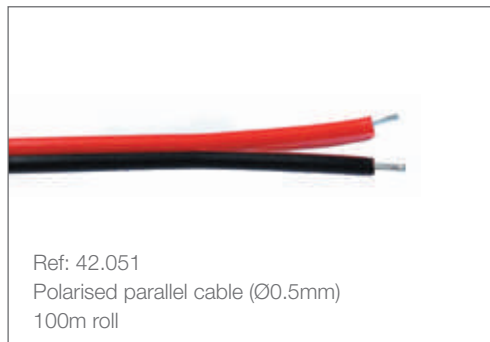
Ref: 42.048
RGB+W cable (Ø0.5mm), 100m roll



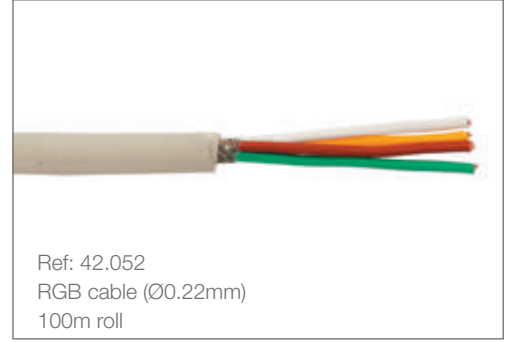
Ref: 42.049
5 wire cable hose (Ø1.5mm)
100m roll



Ref: 42.050
Polarised grey cable hose (Ø0.5mm)
100m roll



Ref: 42.051
Polarised parallel cable (Ø0.5mm)
100m roll

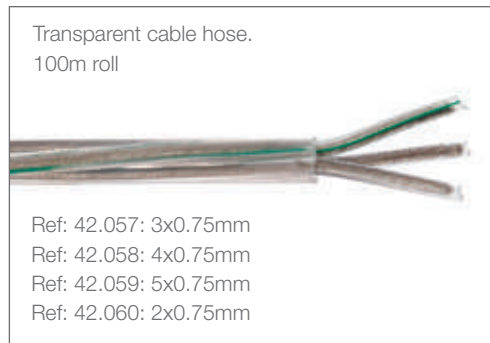


Ref: 42.052
RGB cable (Ø0.22mm)
100m roll



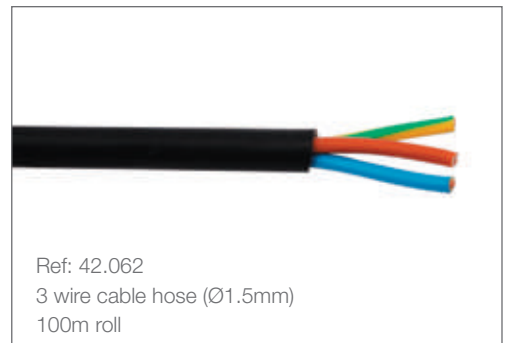
Thermoretractable for covering
cables and welding
in led strips

Thermoretractable strip
Ref: 42.053 black/1.5x2.4mm
Ref: 42.054 white/1.5x4.8mm
Ref: 42.055 white/16mm
Ref: 42.056 transparent/15.48mm



Transparent cable hose.
100m roll

Ref: 42.057: 3x0.75mm
Ref: 42.058: 4x0.75mm
Ref: 42.059: 5x0.75mm
Ref: 42.060: 2x0.75mm



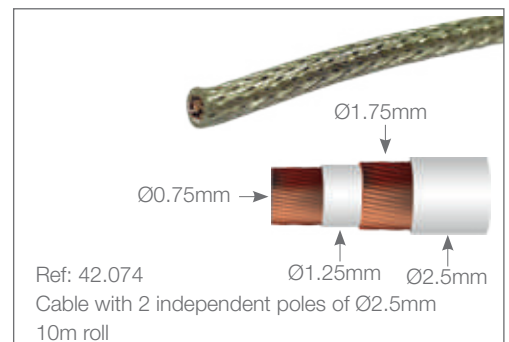
Ref: 42.062
3 wire cable hose (Ø1.5mm)
100m roll



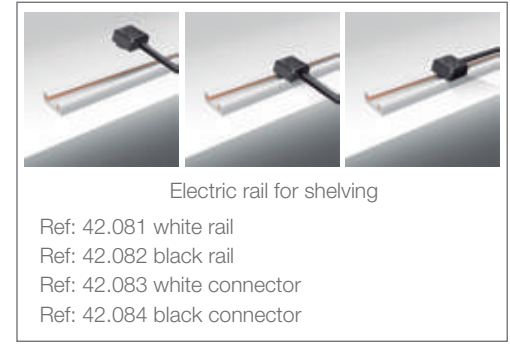
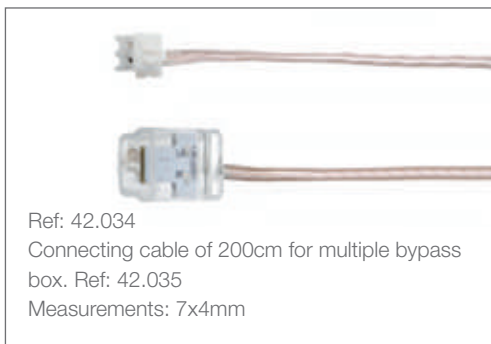
Ref: 42.061
Cable hose with socket and earthing



Ref: 42.070
Steel braided cable of Ø1.5mm
100m roll

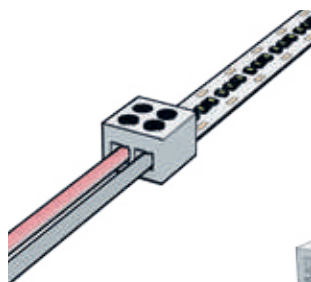


Ref: 42.074
Cable with 2 independent poles of Ø2.5mm
10m roll



Connectors for non-waterproof strips. (with screw system, no need for welding)

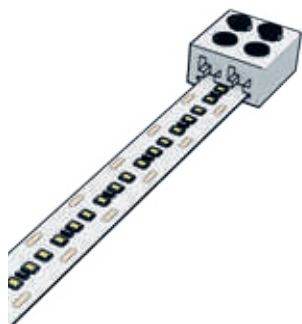
Our new IP20 connectors make led strip connections easier, as there is no soldering involved. Only 2 screws are required like in conventional terminal blocks.



42.068 10mm PCB connectors



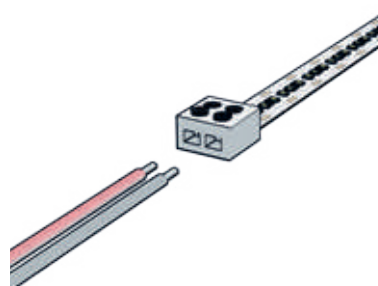
42.069 5-8mm PCB connectors



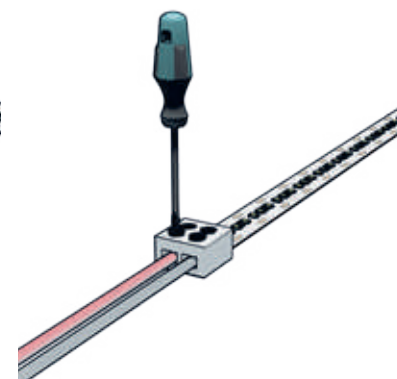
1. We place the strip inside the connector.



2. We tighten the screws on the connector to fix the led strip.



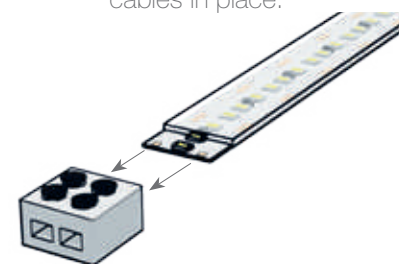
3. We connect the electric cable.



4. We tighten the screws on the connector to hold the cables in place.

We can also use these connectors for waterproof led strips, but we have to remove the silicone layer.

IMPORTANT: the connection will only be IP20.



Connectors compatible with our led strips:

42.068:

- ALCORCON
- BARCELONA
- CANOVELLES
- VIZCAYA
- ELITE
- IBIZA PRO
- PINK 20
- RUBI
- HIERRO
- LANZAROTE

42.068:

- GOMERA
- TENERIFE
- PALMA
- ANTEQUERA
- PINTO
- MOSTOLES

42.069:

- GETAFE
- GRANOLLERS
- GRANADA
- JADE
- AVILA
- CIES
- PINK 10

Connectors compatible with Led Profile:

42.068:

- TORINO
- DUBLIN XL
- PARIS XL
- ROMA XL
- BERLIN XL
- SOPHIA XL
- INFERNO
- VERSALLES
- TEXAS
- NUEVA YORK
- PHILADELPHIA

42.069:

- All those permitted for the ref: 42.068
- SOPHIA
- ROMA
- BERLIN
- MIAMI

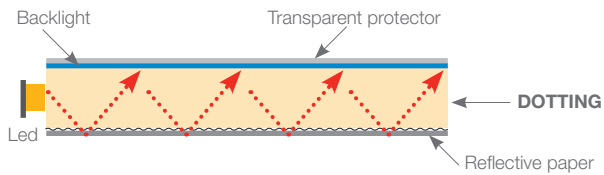
Dotting Matrix

The methacrylate optic is an exceptionally good quality cast acrylic sheet which has been laser engraved "Dotting" and when we apply the flexible led strip on the edge of the sheet, the light is projected frontwards.

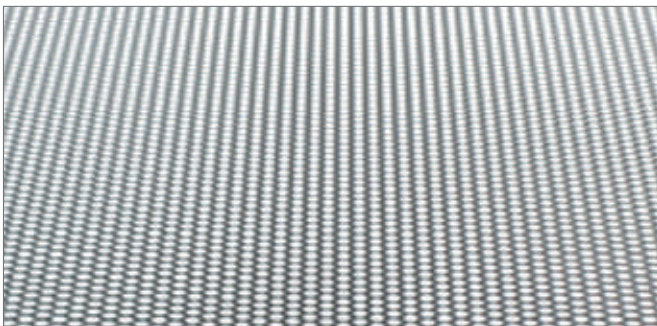
This allows us to manufacture luminous publicity displays or decorative panels with different shapes and with only a width of 3mm.

If requested, along with the methacrylate sheets we can supply (free of charge) special reflective paper which is applied to the rear of the panel where we find the milled pattern (squares or dots). The light is therefore reflected towards the front and we can achieve a softer effect.

DOTTING MATRIX Methacrylate with side lighting



DOTTING MATRIX



Ref: 71.001	Measurements: 3000x2000x3mm
Ref: 71.002	Measurements: 1500x2000x3mm
Ref: 71.003	Measurements: 3000x2000x5mm
Ref: 71.004	Measurements: 1500x2000x5mm
Ref: 71.005	Measurements: 3000x2000x8mm
Ref: 71.006	Measurements: 1500x2000x8mm





Luminaires designed and manufactured with Dotting and "Cíes" ecoled, all by Luz Negra.

Luminous "Plexiled" panels

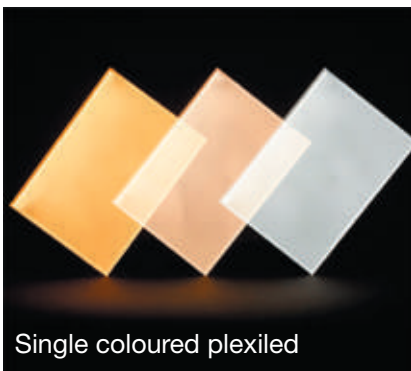
Plexiled is a totally custom made panel where we apply led strips to one side or to all sides of the methacrylate (DOTTING MATRIX) and hence transforming it into a luminous panel.

The client can choose the thickness of the methacrylate optic, the power, the colour of the led strip and the number of sides to be illuminated (the more sides illuminated, the brighter the panel).

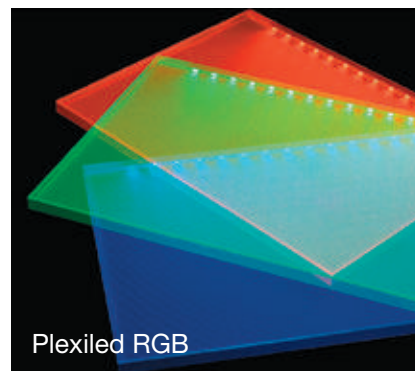
The Plexiled can be manufactured with led strips on the edge (Slim model) or by inserting the led strip into the milling of the methacrylate (Maxi model).

We can study all your needs to cover different models, eg, curved, round, etc.

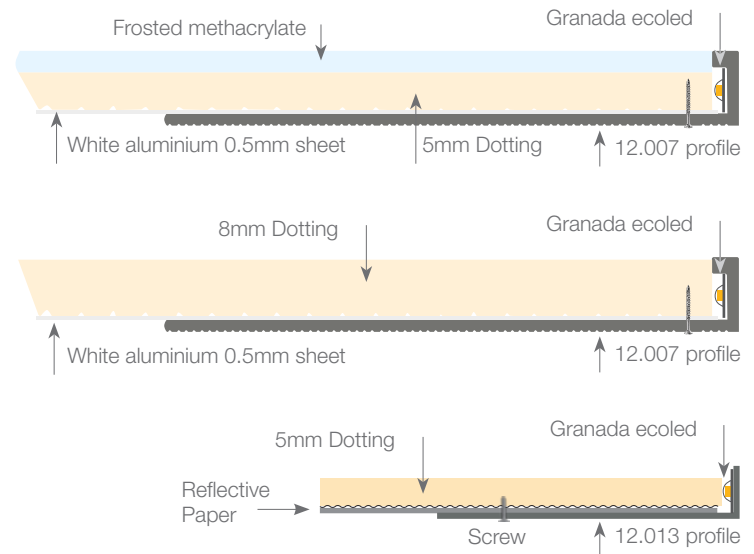
* Compatible profiles found on pages 152, 154, 158, 160 and 161



Light tone in 2800°K - 5000°K with "ecoled Granollers"
3000°K - 4400°K with "ecoled Cíes"



Available in RGB with "Alicante" ecoled



Technical characteristics:

Sides to be illuminated:
L1 - L2

Power supply (Vossloh brand) included in the price.

Guarantee: 2 years.

		Plexiled SLIM with 5mm thickness					
		30cm	60cm	90cm	120cm	150cm	200cm
30cm	L1	71.007	71.008	71.009	71.010	71.011	71.012
30cm	L2	71.013	71.014	71.015	71.016	71.017	71.018
60cm	L2	-	71.019	71.020	71.021	71.022	71.023
90cm	L2	-	-	71.024	71.025	71.026	71.027
120cm	L2	-	-	-	71.028	71.029	71.030

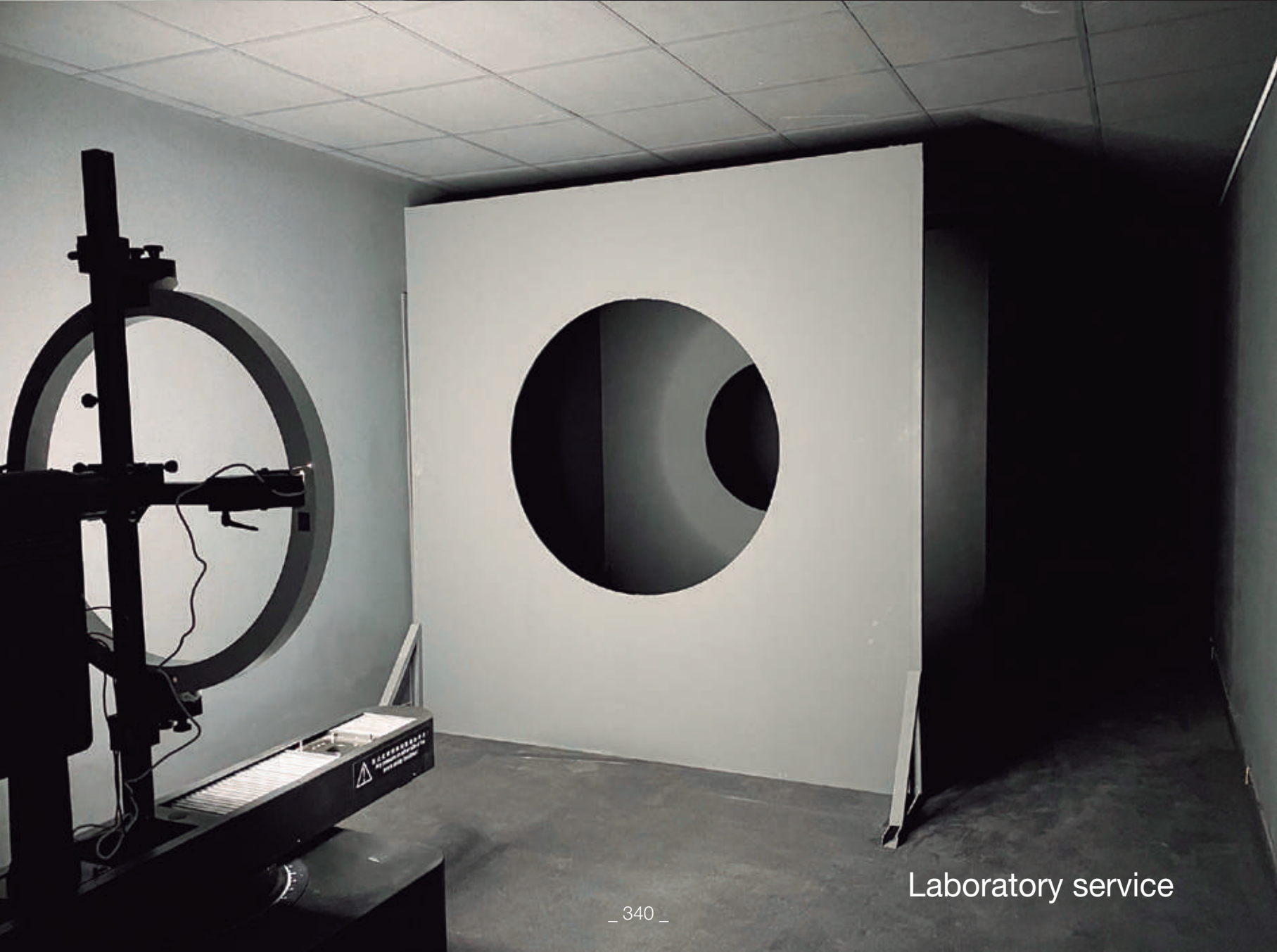
		Plexiled maxi with 8mm thickness					
		30cm	60cm	90cm	120cm	150cm	200cm
30cm	L1	71.031	71.032	71.033	71.034	71.035	71.036
30cm	L2	71.037	71.038	71.039	71.040	71.041	71.042
60cm	L2	-	71.043	71.044	71.045	71.046	71.047
90cm	L2	-	-	71.048	71.049	71.050	71.051
120cm	L2	-	-	-	71.052	71.053	71.054



Luminaires designed and manufactured with Dotting and ecoleds (see page 336), all by Luz Negra.

Project carried out by MASQUESPACIO (Restaurante Hikari).

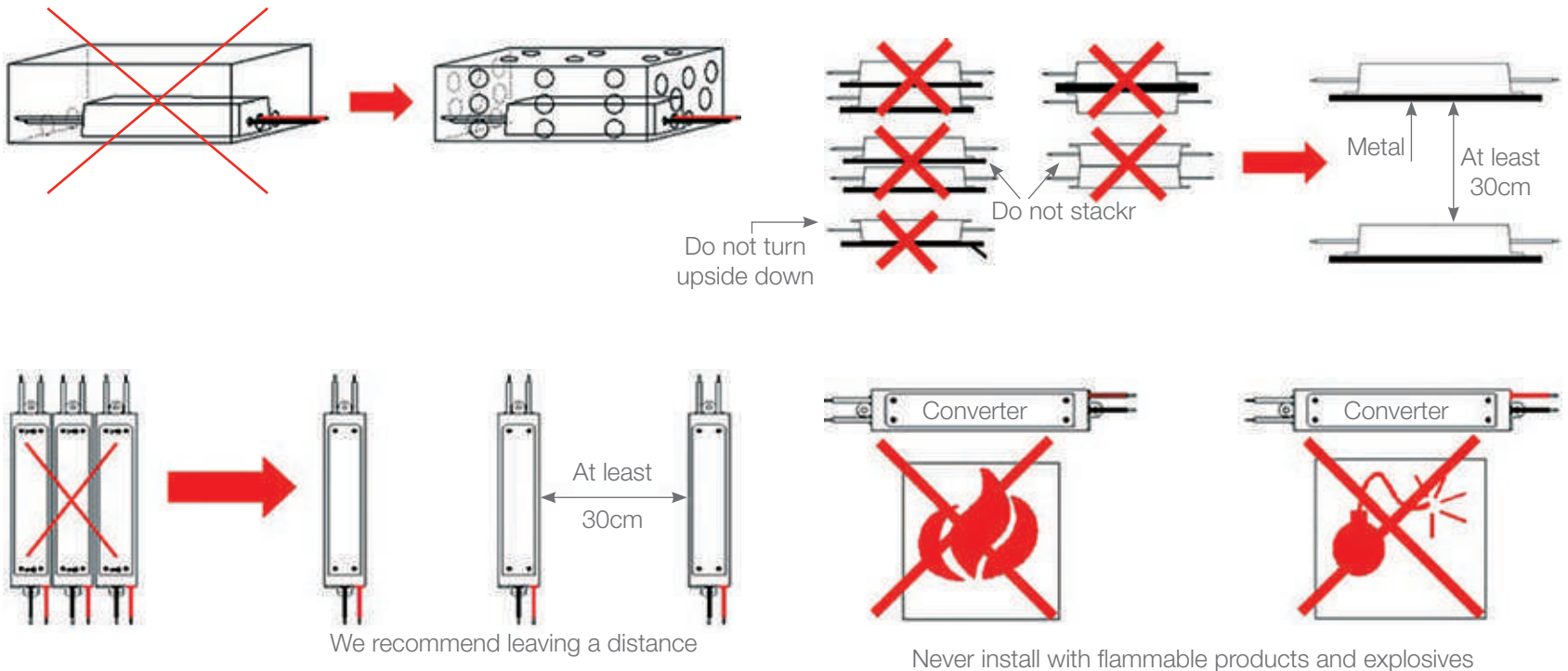




Laboratory service

BASIC RULES FOR THE INSTALLATION OF POWER SUPPLIES

1. Study the voltage (V) and the wattage consumption (W) of the installation to be carried out, in order to be able to correctly choose the appropriate power supply.
2. Never place the power supply in closed boxes (allow to ventilate).
3. Depending on the type of installation we must install the power supply in the right place (to avoid sudden voltage drops). It is not advisable to place the source at a distance greater than 3 metre (maximum recommended) and if so, we must use thicker wiring.
4. If the installation is exterior, or in any place where there is moisture or condensation, it is essential to use waterproof power supplies (as well as other components such as leds, connections, etc.)
5. To prevent overheating we recommend not overloading the power supplies in more than 85% of their theoretical maximum load (for example with a 100W source don't connect more than 85W). The same should apply to amplifiers, sequencers, dimmers and other accessories.
6. We recommend placing the power supplies on materials which favour dissipation, such as aluminum and other metals.
7. Do not stack power supplies as this can lead to malfunctions (caloric condensation and radiofrequency switching).
8. We must take special care when installing the power supplies, especially where there are risks of corrosion from external liquids, as well as places where there are high risks of fire and /or explosions.





Basic rules for installing ecoleds

- 1.- Any waterproof ecoled stops being waterproof as soon as we cut it. If we want to maintain the water-tightness we must apply a "silicone plug" on the cut area (silicone, insulating resin, etc).
- 2.- If the installation is carried out in the exterior then all the connections must be done using waterproof components. This way we avoid any type of short circuit (water-tight power strips, power supplies, cable coverings, etc).
- 3.- For the sequencers, converters, amplifiers and programmers we have to contemplate a safety margin of 15% and therefore we must never apply more than 85% of the theoretical load (if a converter/sequencer is 100wt power, we don't recommend applying more than 85wt).
- 4.- We recommend use for between 18-20 hours daily (max. recommended for "PRO" and "PREMIUM" series) and between 8 & 12 hours (max. recommended for "BASIC" series), taking into consideration that the led strip is on a dissipating surface and that the surrounding conditions are the appropriate. Use is not recommended below -20°C and above 45°C otherwise its lifespan will be affected considerably.
- 5.- This product is sensitive to static electricity. Avoid touching after having manipulated plastic. Keep the product in its original packaging until used.
- 6.- In order to avoid decreases in tension do not connect leads superior to those indicated on the technical data sheet for each product.
- 7.- We always recommend closing the circuit in the installation so as to achieve colour uniformity in the flexible led and a lower drop in tension. This favours an even distribution of the heat from the led in up to 30% more.
- 8.- For strips with power greater than 14W; always use: heat dissipation tape aluminium dissipating plate (Ref 12.017) or a led profile to enhance heat dissipation.
- 9.- For strips with power greater than 14W; do not use for recessing in wood otherwise its lifespan will be affected considerably and the guarantee will be void. (Please check with our technical department for this type of installation).
- 10.- If we continuously bend the flexible modules we can break its circuit (PCB). The product must be manipulated with extreme care. Do not bend the flexible ecoled led strip in a radius less than 3cm or the guarantee will be void.
- 11.- Do not place the power supply more than 300cm from the installation to avoid decreases in tension.
- 12.- Power supplies, sequencers, amplifiers and other accessories must always be supplied by LUZ NEGRA otherwise the guarantee will become void and we will not accept any type of claim.
- 13.- These products are not recommended for saline areas (please check with our technical department).



Cable section for installations

How to choose the correct cable for an installation

Choosing the correct electrical cable is a basic requirement for the equipment which we are connecting to function and above all to ensure the safety of the installation. The section, or the gauge is the diameter of the cable, which is normally made of copper, without counting the insulating layer. The section determines the electrical charge – in Amps – which the cable can hold.

Which is better? Rigid or flexible cable?

The rigidity or flexibility of the cable depends on the number of copper wires which it has (one single wire is more rigid than a cable with various wires). The flexible cable is more manageable and makes work easier in recessing walls and if there are any elbows or bends involved in the installation.

Outside installations and areas with high levels of humidity (SPA)

For outside installations or places which have high condensation levels (eg. saunas and baths), we must ensure that the cable has the correct covering to protect from humidity. However, we always recommend that the cable goes inside a protection tube.

Maximum cable length (metres) to be applied with leds at 12V/temperature 20°C

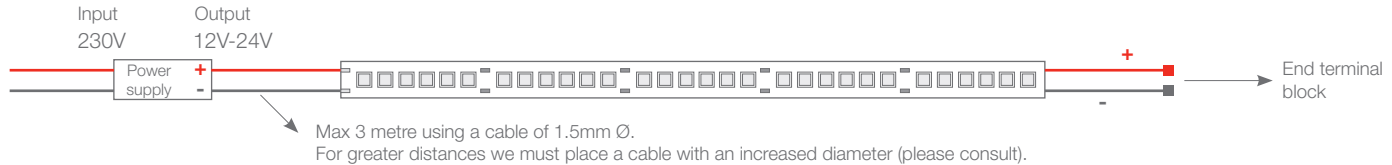
Cable section (diameter Ø)	10W	20W	30W	40W	50W	75W	100W	150W	200W	250W
0.5mm ²	8.1	4.0	2.7	2.0	1.6	1.1	0.8	0.5	0.4	0.3
0.75mm ²	12.1	6.0	4.0	3.0	2.4	1.6	1.2	0.8	0.6	0.5
1mm ²	16.1	8.1	5.4	4.0	3.2	2.2	1.6	1.1	0.8	0.6
1.5mm ²	24.2	12.1	8.1	6.0	4.8	3.2	2.4	1.6	1.2	1.0
2.5mm ²	40.3	20.2	13.4	10.1	8.1	5.4	4.0	2.7	2.0	1.6
4mm ²	64.5	32.3	21.5	16.1	12.9	8.6	6.5	4.3	3.2	2.6
6mm ²	96.8	48.5	32.3	24.2	19.4	12.9	9.7	6.5	4.8	3.9
10mm ²	161.3	80.6	53.8	40.3	32.3	21.5	16.1	10.8	8.1	6.5

Maximum cable length (metres) to be applied with leds at 24V/temperature 20°C

10W	20W	30W	40W	50W	75W	100W	150W	200W	250W
32.3	16.1	10.8	8.1	6.5	4.3	3.2	2.2	1.6	1.3
48.4	24.2	16.1	12.1	9.7	6.5	4.8	3.2	2.4	1.9
64.5	32.3	21.5	16.1	12.9	8.6	6.5	4.3	3.2	2.6
96.8	48.4	32.3	24.2	19.4	12.9	9.7	6.5	4.8	3.9
161.3	80.6	53.8	40.3	32.3	21.5	16.1	10.8	8.1	6.5
258.0	129.0	86.0	64.5	51.6	34.4	25.8	17.2	12.9	10.3
387.1	193.5	129.0	96.8	77.4	51.6	38.7	25.8	19.4	18.5
645.1	322.6	215.0	161.3	129.0	86.0	64.5	43.0	32.3	25.8

Installation diagram for a single coloured open series circuit

When using this type of circuit, it's important not to exceed the maximum recommended power levels (defined in the data sheet provided for each product). By doing so, we will avoid overheating at the beginning of the led strip and potential malfunctioning. The power levels supplied by the transformer must be more than the consumption ratings with a security margin of between 15% and 20%. The use of thermal tape ref: 42.039 or an aluminium surface is highly recommended for improving heat dissipation with the flexible led strip. Waterproof terminal blocks must be placed on the cable ends to avoid humidity and therefore possible malfunctions in the installation.



Installation diagram for a single coloured closed circuit

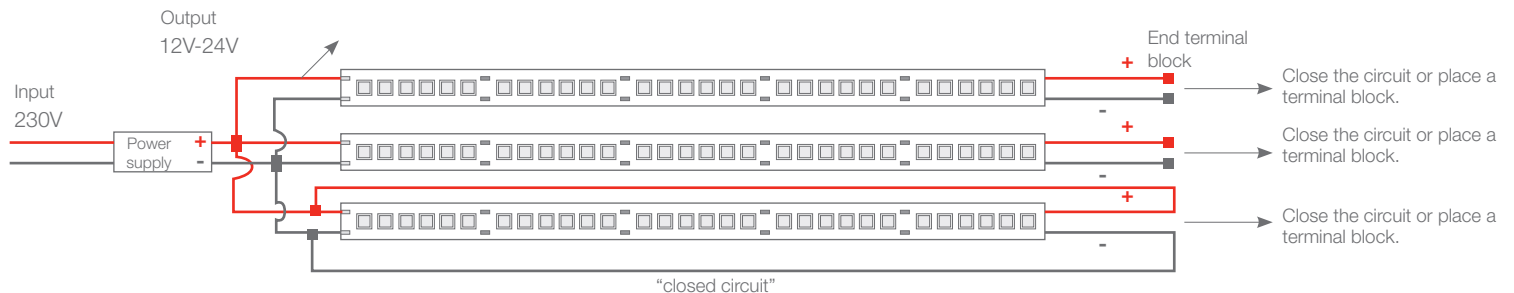
When using this type of circuit, it's important not to exceed the maximum recommended power levels (defined in the data sheet provided for each product). By doing so, we will avoid overheating at the beginning of the led strip and potential malfunctioning. The use of thermal tape ref: 42.039 or an aluminium surface is highly recommended for improving heat dissipation with the flexible led strip. Waterproof terminal blocks must be placed to avoid humidity and therefore possible malfunctions in the installation.



Installation diagram for a single coloured parallel circuit.

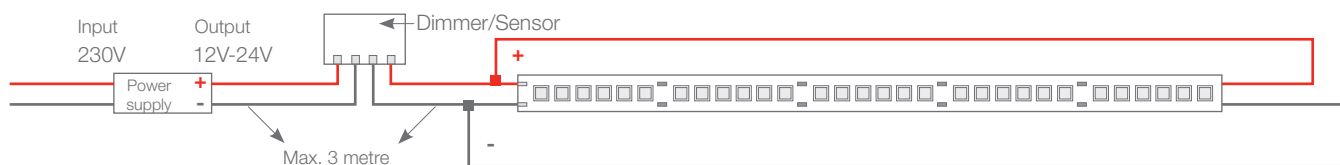
Installation diagram for a single coloured parallel circuit

On a series circuit, do not exceed the maximum recommended power levels for each line circuit (recommended power levels are defined in the data sheet provided for each product). The power levels supplied by the transformer must be more than the consumption ratings with a security margin of between 15% and 20%. The use of thermal tape ref: 42.039 or an aluminium surface is highly recommended for improving heat dissipation with the flexible led strip. Waterproof terminal blocks must be placed to avoid humidity and therefore possible malfunctions in the installation.



Installation diagram for single coloured circuit with "dimmer" or "sensor"

We will always install the controller (dimmer or sensor) after the power supply. For large installations we will need to use amplifiers to avoid losing signals. The use of thermal tape ref: 42.039 or an aluminium surface is highly recommended for improving heat dissipation with the flexible led strip. Waterproof terminal blocks must be placed to avoid humidity and therefore possible malfunctions in the installation.



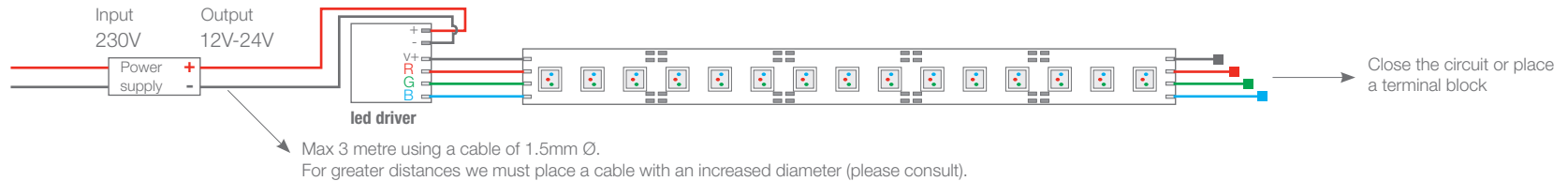
Installation diagram for RGB “3 channels”

We do not recommend applying more than 5 metre of led strip without an amplifier.

The power supply must always be greater than our electrical consumption and we recommend a safety margin of between 15% and 20%.

We recommend the use of thermal tape, ref: 42.039 or an aluminium base in order to improve heat dissipation of the led strip.

Waterproof terminal blocks must be placed on the cable ends to avoid humidity and therefore possible malfunctions in the installation.



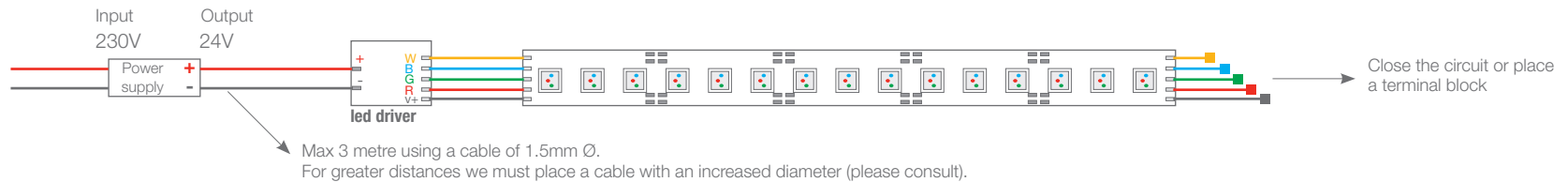
Installation diagram for RGBW “4 channels”

We do not recommend applying more than 5 metre of led strip without an amplifier.

The power supply must always be greater than our electrical consumption and we recommend a safety margin of between 15% and 20%.

We recommend the use of thermal tape, ref: 42.039 or an aluminium base in order to improve heat dissipation of the led strip.

Waterproof terminal blocks must be placed on the cable ends to avoid humidity and therefore possible malfunctions in the installation.



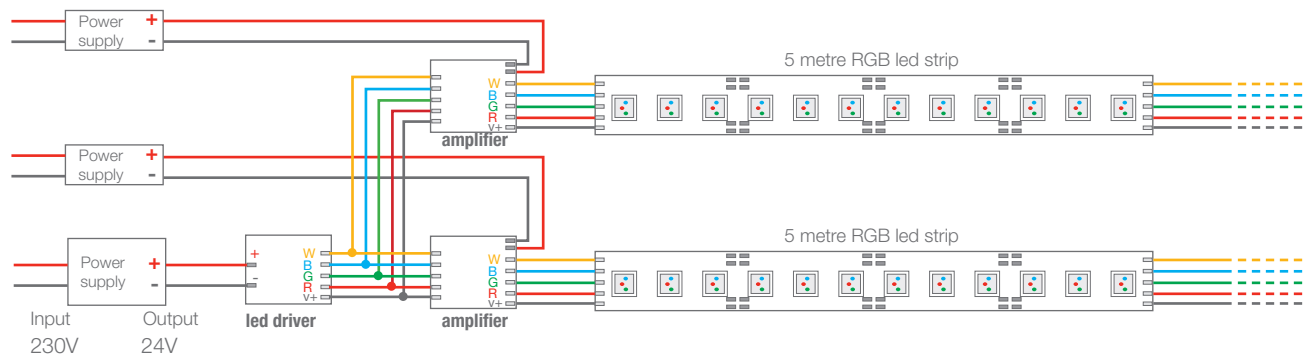
Installation diagram for RGBW “4 channels” with amplifiers

For large installations we must use amplifiers ref: 41.020, and therefore we do not lose luminosity.

The power supply must always be greater than our electrical consumption and we recommend a safety margin of between 15% and 20%.

We recommend the use of thermal tape, ref: 42.039 or an aluminium base in order to increase heat dissipation of the led strip.

Waterproof terminal blocks must be placed on the cable ends to avoid humidity and therefore possible malfunctions in the installation.



Interior lighting basic guide

When it comes to studying a project, the lighting is of utmost importance and, as there are many different options and points of light in interior projects, we must have a CRI (colour rendering index) in order to guarantee a favourable visual environment.

There are 3 fundamental aspects which we must take into consideration before choosing a product:

Visual comfort: We must always consider the well-being of the people in the area and if related to a work space, this indirectly leads to higher levels of productivity. The luminance relation between task and environment or glare control provoked by the lighting, are important aspects to take into account.



Visual benefits: This is where we are capable of carrying out visual tasks even under difficult circumstances and during long periods of time.

Safety: Depending on the surrounding environment and the professional activity which we are carrying out, we must follow the parameter established in the tables below (according to UNE 12464.1 by the European Committee for Standardisation and under Directive 2002/91/CE) relating to the energy efficiency of the buildings. This is obligatory in countries which form the European Union.

We require a CRI >80 in the scale of 0 to 100 in order to illuminate spaces where we are to remain a long period of time or permanently, and not just “passing through” areas like corridors, aisles, etc.

The required values are reflected on the basic tables and specific guidelines which determine the statistical values and this is fundamental when it comes to choosing the most adequate products for the execution of the final project.

Lighting in different areas according to UNE – EN 12464.1

OFFICES	LUX	UGRL	Ra (CRI)
Archives, photocopying rooms	300	19	80
Meeting rooms	500	19	80
Work stations “computers”	500	19	80
Draftsmen	750	19	80
Receptions	300	22	80
Reading rooms	500	19	80

Reading room	LUX	UGRL	Ra (CRI)
Hotels - restaurants	-	-	80
Dining rooms	500	19	80
Corridors	100	25	80
Kitchens	500	25	80
Reception areas	300	22	80
Self-service restaurants	200	22	80

LIBRARIES	LUX	UGRL	Ra (CRI)
Shelves	200	19	80
Reading areas	500	19	80
Customer services posts	500	19	80

PUBLIC PARKING	LUX	UGRL	Ra (CRI)
Parking areas (interior)	75	-	80
Access ramps or exits (night)	75	25	80
Access ramps or exits (day)	75	25	80
Internal parking lines	75	25	80
Cashier booths	300	19	80

CONCERT HALLS, THEATRES	LUX	UGRL	Ra (CRI)
Rehearsal rooms	300	22	80
Dressing rooms	300	22	80
Cinemas	300	22	80

Illumination areas. UNE - EN 12464.1

RETAILER	LUX	UGRL	Ra (CRI)
Sales areas	300	19	80
Cash management areas	500	19	80
Packing table spaces	500	19	80

TRANSIENT AREAS	LUX	UGRL	Ra (CRI)
Halls	100	22	80
Wardrobes	200	25	80
Living rooms	200	22	80
Ticket offices	300	22	80

FAIRS, EXHIBITIONS	LUX	UGRL	Ra (CRI)
Global lighting	300	22	80

ELECTRIC POWER INDUSTRY	LUX	UGRL	Ra (CRI)
Cable production, large coils	300	25	80
Small cable coils	750	19	80
Electronic workshop	1500	16	80
High precision assemblies	1000	16	80
Thin-sized assemblies (phone devices)	750	19	80
Thick-sized assemblies (power supplies)	300	25	80
Medium-sized (counting devices)	500	22	80

FOOD INDUSTRY	LUX	UGRL	Ra (CRI)
Fruit cutting and sorting procedures	300	25	80
Vegetable cutting and sorting procedures	300	25	80
Breweries	300	25	80
Beer factories	200	25	80
Cooking and baking areas	200	25	80
Facilities for the washing of food	300	25	80
Abattoirs	500	25	80

MUSEUMS	Observations
Exhibition halls for the display of art in general	The kind of illumination will always be defined by the display requirements of the art works

AIRPORTS	LUX	UGRL	Ra (CRI)
Luggage lockers service area for passengers	200	25	80
Access control and security inspection areas	300	19	80
Air traffic control towers	500	16	80
Escalators	150	22	80
Information desks	500	19	80
Check-in areas	500	19	80
Band conveyors	150	22	80
Holding areas	200	22	80

STATIONS	LUX	UGRL	Ra (CRI)
Passenger waiting areas	200	22	40
Access control and security areas	300	19	80
Hall and luggage lockers service areas	200	28	40
Ticket sale offices	300	19	80
Luggage	300	19	40

INDUSTRIAL BAKERY	LUX	UGRL	Ra (CRI)
Bread-making ovens	300	22	80
Baking finishing process	500	22	80

HAIRDRESSERS	LUX	UGRL	Ra (CRI)
Beauty salons	500	19	90

JEWELLERY	LUX	UGRL	Ra (CRI)
Jewellery activities	1000	16	90
Watchmaking (manual set up)	1500	16	90
Watchmaking (automatic set up)	500	19	80
Gemstones workmanship	1500	16	90

Ingress Protection (IP)

Level of protection

The Ingress Protection is an international classifying system which indicates the sealing effectiveness against humidity, dust, etc. of the electric equipment, in accordance with the Regulation IEC60529 from the International Electrotechnical Commission.

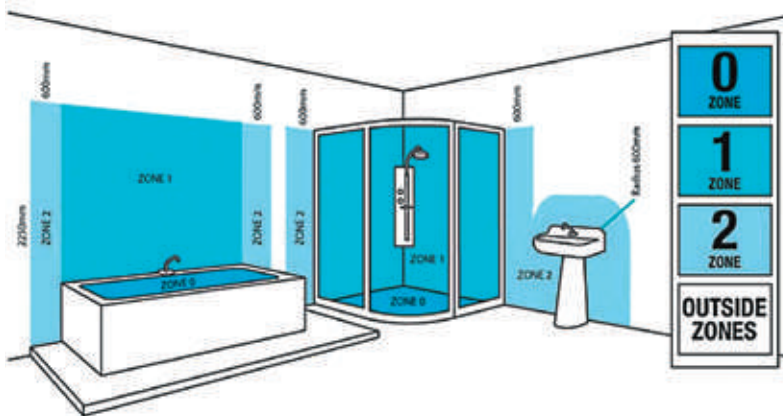
This classifying system combines the letters IP followed by two or three numbers. The letter "X" is used only when there is a type of protection against humidity. The first number defines the protection against solid materials. The second number defines the protection against liquid materials.

First digit - protection against solid objects

0. No protection.
1. Ingress of solid object diameter 50mm is protected.
2. Ingress of solid object diameter 12.5mm is protected.
3. Ingress of solid object diameter 2.5mm is totally protected.
4. Ingress of solid object diameter 1.0mm is totally protected.
5. Protected against harmful dust.
6. Totally protected against dust.

Second digit - protection against liquid objects

0. No protection.
1. Protection against water drips.
2. Protection against water drips. (vertically inclined 15°).
3. Protection against water spray (vertically inclined up to 60°).
4. Protection from water splashes.
5. Protection from water jets.
6. Protection from strong water jets.
7. Protection from temporary immersion (at 1m depth and maximum of 60min).
8. Protection from constant immersion (at more than 1m depth and can normally remain under water).



Impact Protection (IK)

Level of protection against IMPACTS

It is a European regulation, equivalent to the international regulation IEC 62262 and which concerns the different levels of protection against potential impacts inflicted on the electrical devices by a foreign body.

Prior to officially using the IK, a third number was added occasionally to the IP code in order to define the level of protection against impacts -for example, IP66 (9). The non official use of this system motivated the development of its standard rating code. The code appears separately from the other two numbers (already official), therefore making it appear different from them. The unit of measurement is "Joules".

Definition of "Joules": it is a unit of measurement included in the International System and applied when measuring energy, work and heat. As a work unit of measurement, "Joule" is equal to the quantity of work carried out by a continuous force of one "Newton" throughout a distance of 1metre, while also having the same direction of the force.

Protection degree against impacts "IK"

- IK00: No protection
IK01: Protection against impact of 0.14 Joules (0.25Kg and distance of 56mm)
IK02: Protection against impact of 0.2 Joules (0.25Kg and distance of 80mm)
IK03: Protection against impact of 0.35 Joules (0.25Kg and distance of 140mm)
IK04: Protection against impact of 0.5 Joules (0.25Kg and distance of 200mm)
IK05: Protection against impact of 0.7 Joules (0.25Kg and distance of 280mm)
IK06: Protection against impact of 1 Joules (0.25Kg and distance of 400mm)
IK07: Protection against impact of 2 Joules (0.5Kg and distance of 400mm)
IK08: Protection against impact of 5 Joules (1.7Kg and distance of 300mm)
IK09: Protection against impact of 10 Joules (5Kg and distance of 200mm)
IK10: Protection against impact of 20 Joules (5Kg and distance of 40mm)

Which things must be taken into account when illuminating bathrooms and other areas with high ratings of humidity?

When choosing a bathroom illumination, it is not only a question of style, but also how the lighting will fit in with the original design. Two very important issues are to be considered: the safety during the installation and choosing the correct product for the specific application.

ZONE 0.- Inside baths or showers. All kinds of illumination within these areas must be of low power and have an IP68 protection rating.

ZONE 1.- Above baths or showers, but not higher than 2.25m, all kinds of illumination installed within these areas must have an IP44 protection rating. This IP is appropriate on baths where there is no shower head above the bath. If there is no shower head or movable shower system, then we require an IP65 protection.

ZONE 2.- This refers to areas outside ZONE 1 and at 60cm distance/radius from the sink. All illumination within this zone must be within IP44. If there is a risk of splashing water, then an IP65 protection rating is required.

Outside the above mentioned areas, any IP rating can be used for lighting purposes. All electric products to be placed in a bathroom, must be installed by a professional.

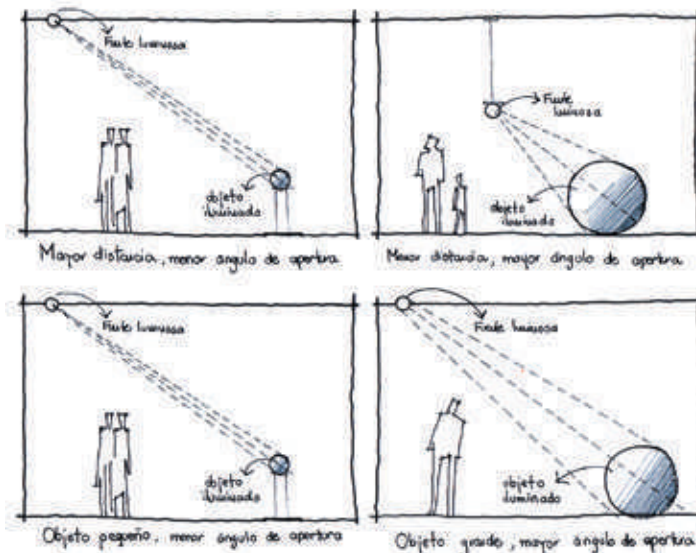
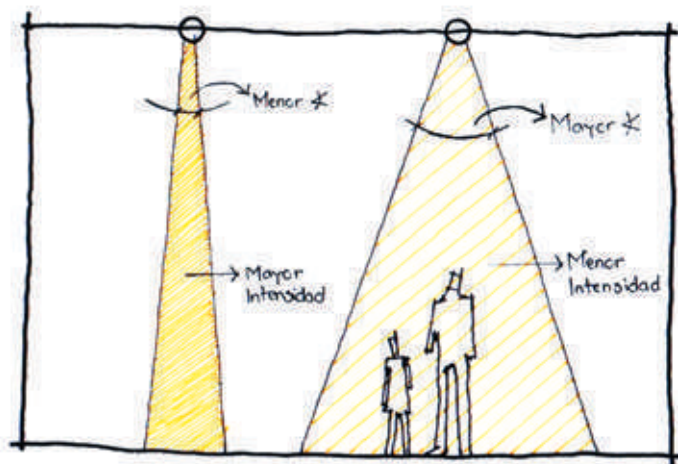
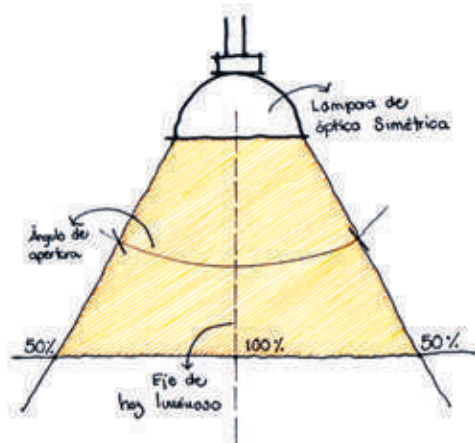
Basic lighting concepts

The angle of light emission of a luminaire: how does it affect us?

The amount of light reaching an object by means of a lamp reflector depends on the opening angle. Also, the object stands out against its surroundings when it receives greater quantities of light.

There are two attributes which help us choose an opening angle: the size of the object which we intend to illuminate and its distance from the light source.

The bigger the size of the object to be illuminated, the wider the opening angle required. On the other hand, the greater the object's distance from the light source, the narrower the opening angle needed for illuminating it.



The opening angles are always defined by whole numbers. When a value of an opening angle is ranged between 13° and 50° , we round the number up to express it as multiples of 5, for example:

22° must be rounded down to 20° . For angle values greater than 50° , the rounding is carried out to express the numbers as multiples of 10.

It is also important to consider the possibility of two lamps of the same type, with both having the same power but different opening angles. The lamp with a wider opening angle will illuminate an object with less light intensity when compared to the lamp with a narrower opening angle.

We must take into consideration the global energy savings stemming from using light efficiently; when we optimise the use of light we avoid light saturation (flat images) and therefore we gain a more realistic perception of the true volume of objects.



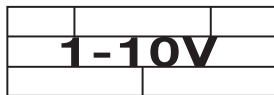
DALI / Digital Addressable Lighting Interface

Is a two-way standard interface where the information is transmitted from the controller to the lighting equipment which carry out all commands and information requests received.

This system allows us to accomplish an appropriate management of the architectural illumination. It can be incorporated as a subsystem into current protocols regarding building control systems.

It enables the creation of up to 16 different settings for the total control of the building. It also emits alerts regarding malfunctions of the luminaires, giving us total control of the installation. This means we are aware at all times of any potential problems.

The transmission of digital signals is made by means of a two-wired control line (bus), where there is a data transmission rate of 1.2 Kb/s. The DALI system has a logarithmic curve which is adjustable to the sensitivity of the human eye, defined by the international regulation IEC 62386. Additionally, the compatibility with different brand models of ballasts is also covered by this international regulation.



Intensity adjustments 1-10V

This adjusting system is based on the variation of the continuous current of electricity which, allows us to modify the levels of light emission from 1 to 100 % via an analogical signal.

Therefore, light emissions which are being controlled have scaled output ratings, with 10V being the value corresponding to a 100% light intensity and 0V the lowest level of light intensity.

This system permits us to dim the levels of light emission. An ON/OFF switch is found in the power supply line. As this is an analogic product, it cannot be consequently modified via software, meaning that the group setting must be carried out through cables instead.

DMX DIGITAL MULTIPLEX

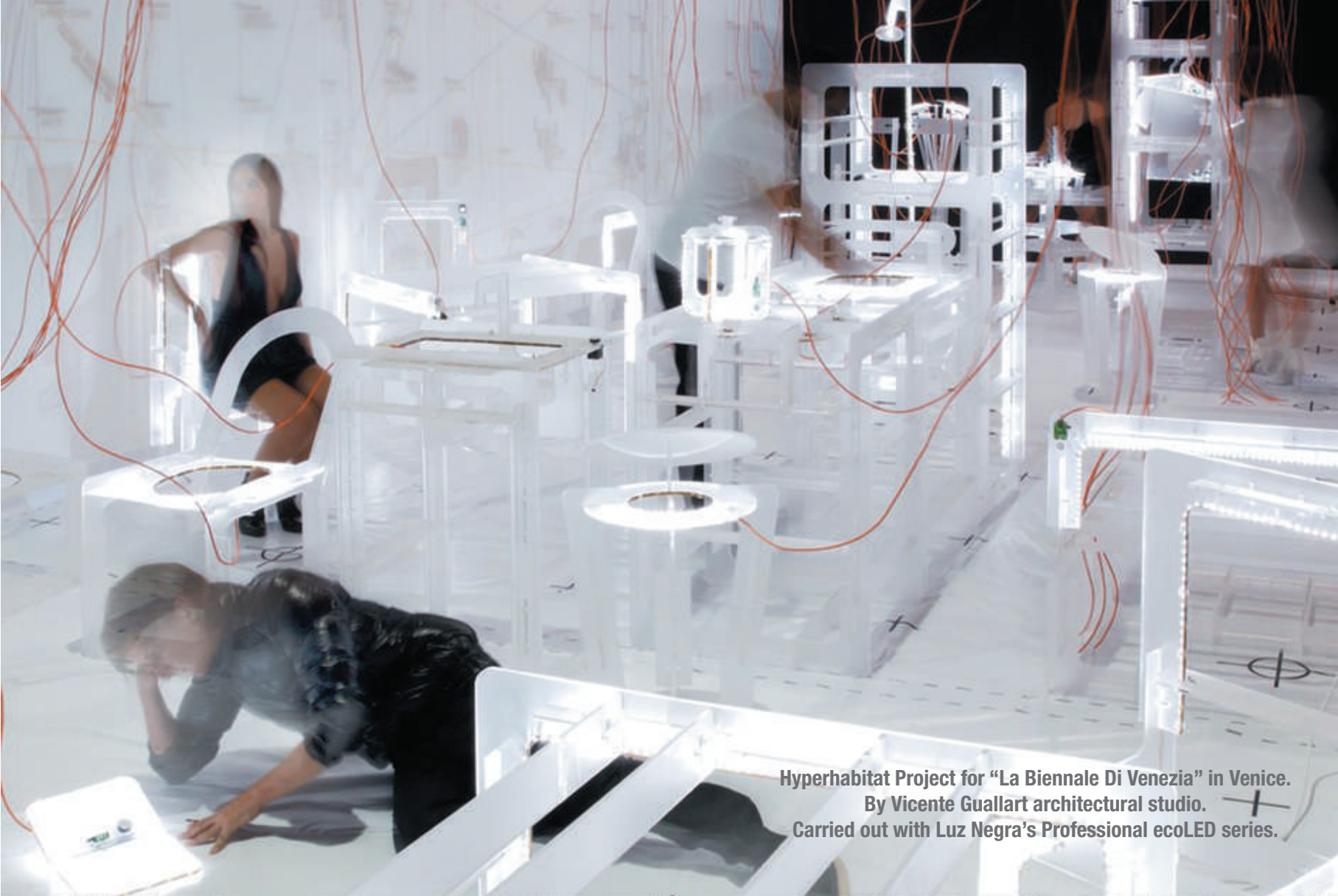
DMX512 Program Code

DMX (digital Multiplex) is an electronic protocol used in lighting engineering for monitoring and controlling the illumination of closed or limited spaces. It also used in architectural lighting applications, where we require multimedia on building facades.

The DMX512 uses channels for the command transmissions to the different equipment installed. The transfer of information is carried out via 3 or 5 pin wires, with a data transmission rate greater than 250 Kb/s. Since signals are not bidirectional (like DALI system) we cannot verify any of the commands as they are not sent back to any screen.

In order to prevent any potential interference during transmission, all DMX512 wires must be kept apart from the rest of electric cables and signal repeaters.

The DMX holds a limited quantity of 512 channels. Each channel controls a specific parametre or special effect, which can be controlled with software (PC) or with a mixing console. What's more, this can be linked up between devices by means of a splitter or a cascade formation.



Hyperhabitat Project for "La Biennale Di Venezia" in Venice.
By Vicente Gullart architectural studio.
Carried out with Luz Negra's Professional ecoLED series.



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