

H2 LINE / Top Light / LL720

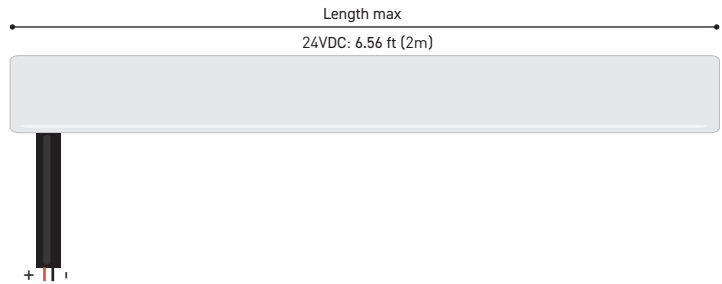
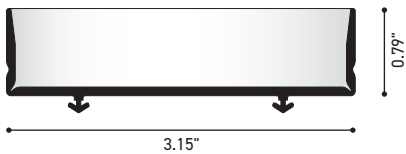
Flex LED Strip | Top Light | 720 LED/3.28' (1 m) | 24VDC | CRI >90

Description Product image

LED strip for outdoor, indoor even underwater applications. The LED light source, with diffused light distribution, is composed of 720 LEDs/3.3 ft and a CRI >90 with a nominal efficiency of 40 lm/W. The body of the device, made of PVC, has a white finish; the diffuser is in opal polyurethane resin. The protection degree is IP65-68. The power supply driver is not supplied and must be ordered separately. The total absorbed power by the device is 30 W/3.3 ft (1m), available with various color temperatures. Maximum length 6.6' (2 m), custom made and not cuttable. The power cable is included and has a length of 1.64' (50cm) (2x0.5mm²). The device is vertical bendable, with a minimum curvature radius of 6.56' (200cm), and can be installed using the different accessories available.



Available sizes and lengths



Technical data

Product type	Flexible non-sectional strip
Bending	Only vertical bendable, one axis
Min. bend radius	78.74"
IP rating	IP65-68
Working Temperature	-30° / +55°
LED Life / Failure Ratio	L80 B10 >50,000h
Max strip length	6.56' (2m)
Driver included	NO
Orientability	NO
Walkability	NO
Cable included	Yes - 1.97 in 2x0.5mm ²

Electrical data

LED number	720 LED/3.28 ft
LED type	SMD 3014 SHINEON
Consumption / 3.28 ft (1m)	30 W/3.28 ft
Voltage	24VDC
Color Temperature	See table
Chroma Rendering Index	>90 Ra
Optic	Diffused
Cut internal strip	Every 0.98"
Dimmable	Yes

Body material and finish

Material	PVC
Finish	White

Diffuser material and finish

Material	Polyurethane resin
Finish	Opal

Energy efficiency class

The product belongs to G class refer to Energy Efficiency Class, referred to Regulation (EU) 2019/2015.

Lighting features

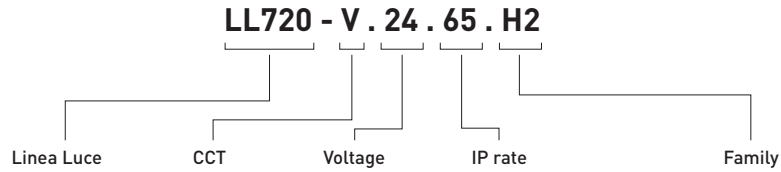
Code	CCT (K)	Luminous Flux** (lm/mt)
LL720- V8 .24.65/68.H2	2200	980
LL720- V2 .24.65/68.H2	2600	1010
LL720- V5 .24.65/68.H2	2850	1030
LL720- V .24.65/68.H2	3300	1050
LL720- W .24.65/68.H2	3850	1120
LL720- W5 .24.65/68.H2	4100	1200
LL720- N .24.65/68.H2	4750	1270
LL720- C .24.65/68.H2	5850	1350

** The give data are typical values. Due to tolerance of the production process and the electrical components, values for light output and electrical power can vary up to 5%. Binning: 3 MacAdam. .LDT e .IES files available on the site or on demand.

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Code composition example



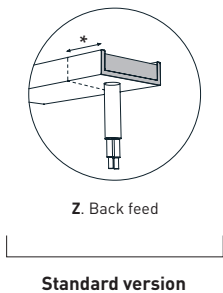
Cable type	Description	Code
	<p>Outdoor PVC power cable. White. IP65. 2x0.50mm². External Ø0.17".</p>	SP-CA-65-2-1
	<p>Water immersion and outdoor FEP R5F power cable with thermoplastic polyurethane sheath. Black. IP68. 2x0.50mm²+ n. 2 Kevlar wires (maximum tensile stress 3.3 lbs - CEI EN 50565-1 : 2015-02). External Ø0.21".</p>	SP-CA-68-2-1

*Standard cable length 19.7 in. Longer cable lengths can be ordered, considering extra cable not included in the price.

Definition Max. cable length			
L. Module	3.3 ft (1m)	6.7' (2m)	
24VDC	42.7'	21.3'	

Calculation based on a max. voltage drop of 0.85V

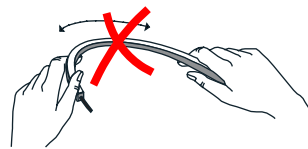
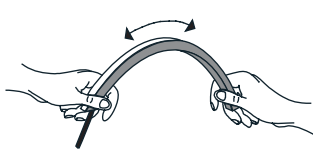
Power cable exit



Power supply area with possible reduced light.

*Pay attention to the difference between internal cut strip and final length!

Flexibility Bendius Radius


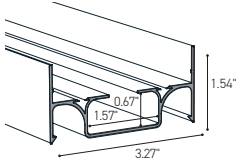

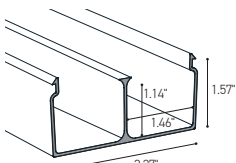









Curve the profile only in the indicated axis. In case of non-observance of the given indication, the electrical functionality of the product will be compromised, with consequent luminous interruption of the LED strip. Do not twist it.

Do not bend the profile with radius less than 6.56 ft. In case of curvature less than the indicated value, the electrical functionality of the product will be compromised, with consequent luminous interruption of the LED strip.



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Mounting accessories	Description	Code
 	<p>Rigid aluminum outercase for wiring and connectors for H2 LINE model 3.15" x 0.79".</p> <p>L max 6.56 ft (2m)</p>	PRO1-AL-80X20-AL
 	<p>Rigid aluminum outercase for power supply for H2 LINE model 3.15" x 0.79".</p> <p>L max 6.56 ft (2m)</p>	PRO2-AL-80X20-AL

Connection accessories	Description	Code
<p>MONO color</p>   	<p>Micro plug and socket connector. 2PIN. male+female. IP68. Ø0.55" x 3.54".</p> <p>Compatible for all models except RGB, RGBW and Tunable white.</p>	THB.381.A2A.R
 	<p>Connector type "T". 3PIN. IP68. Ø1.26" x 3.62" x 2.87" mm. Compatible for all models except RGB and RGBW.</p>	THB.390.C1A
 	<p>Connector type "H". 4PIN. IP68. Ø1.10" x 2.13" x 3.15".</p> <p>Compatible for all models except RGBW.</p>	THB.392.A4A

Certifications

100% MADE IN ITALY

The model is entirely manufactured in Italy, factory is located in Carmagnola (TO) Italy. Both PCB manufacture, LEDS soldering, resin processing are made with automated lines under our internal specifications. The product is compliant to EUR1 rules.

LED ITALY is applicant to ISO 9001-2015.

LED ITALY is applicant to ISO 14001-2015.

LED ITALY is applicant to 100% Made in Italy

WARRANTY

The product is guaranteed for 5 years from the purchasing data. The guarantee covers against all the manufacturing defects. The guarantee is valid only when the product is used under its specifications and without any pilfering, breaking, alterations, modifications and uses according to wrong technical directions or set up in inadequate mechanical parts. LED ITALY has the right to verify technically the product to validate the guarantee.

REFERENCE STANDARDS

LED ITALY products comply with the following International standards:

- LED modules for general lighting - Safety specifications: IEC EN 62031:2008+A1:2013+A2:2015;

- Low voltage directive: 2006/95 / CEE EMC- EN5008-1-1.2004 / 108 / CE, EC 61140, EN 62471, ERP 98 / 1EC, 92 / 75EEC EN55022, EN5008 -2 Directive EMC: 93/68 / CEE 89/336 CEE.

- Annex 2006/95 / CE / 2004/108 / CE: EN 60598-1, EN 60598-2-1 EN 61347-2-12, EN61347-2-13, EN62031, EN632384, EN 55015, EN 61000-3-2 , EN 61000-3-3 EN 61547.

- IP68 Test: IEC 60598-1:2014+A1:2017

Note: All strips are low voltage operating on 12-24Vdc. Without direct connection to the mains supply, products are therefore inherently Ae as they operate from less than 75Vdc as specified in the Low Voltage Directive 72/23/EEC.

Warnings and Maintenance

WARNINGS

- The degree of protection offered by the system is only guaranteed if the installation is completed correctly;
- The cable cannot be replaced; if it is damaged, you must replace the product;
- Best temperature for assembly is between +18 °C and +45 °C;
- Best temperature for storage is between -30° C and +85 ° C;
- Keep the product switched on for at least 30 minutes in the place of installation, before unrolling it;
- The installation surface must be dry and clean, free of dust, grease, oil or separating agents.

MAINTENANCE

- Attention: previously cut off the mains supply and allow system to cool down;
- Clean the appliance regularly with a smooth damp cloth. Use only water and neutral soap.
- Avoiding the use of chemical solvents and/or abrasive cloths.
- Detergents must have a low solid content for easy removal.
- It is important to make sure that the detergents that are used for cleaning must be removed once the washing is finished, either manually or by simple evaporation;
- Check that there are no cleaning products in contact with the luminaires for a long time;
- Do NOT use pressure washers. The pressure of the water jet can damage the surface of the the luminaires.

CHEMICAL SUBSTANCES INCOMPATIBLE WITH POLYURETHANE RESIN

List of chemical substances that can interact with two-component polyurethane resins, causing deterioration and cracking of the structure:

- Acetone
- Methylene chloride
- Toluene, Xylene, Benzene, Diesel in general
- Turpentine
- Hydrochloric acid
- Sulfuric acid
- Nitric acid
- Caustic soda or potash
- Some anti-algae or anti-fungus products on the market
- Non-neutral soaps or detergents

In general, the combination of a strong jet of pressurized water, at temperatures greater than or equal to 40°C, with the addition of one of these substances significantly increases the possibility that the polyurethane will be degraded in just 6 months.

They do not attack polyurethane, chlorine in various forms and bleach (sodium hypochlorite), neutral soaps, weak acids and bases and polar protic solvents, methanol, ethanol, propanol, butanol.

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Test Report

The materials used on LED ITALY products have been subjected to the following tests:

Type of resins: Transparent (VT 3402 KK NV) Opal (VT3402 Opal) Type of support: PVC

DESCRIPTION	NORM	ESECUTION	RESULTS
Gloss at 60°	UNI EN ISO 2813	Gloss value at 60°	Compliant
Neutral salt spray	ISO 7253	Exposition 1500 h, purity degree of salt 99,5% NaCl in solution with demineralized water; Electric conductivity < 20 μS/cm, concentration of test solution 50 ± 5 g/l	Checked cracking, blistering or water absorption. Compliant
Humidity chamber	UNI EN ISO 6270	Exposition 1500 h, at 50°C RH>95% in constant saturated atmosphere	No cracks, blistering, softening of the resin layer, no gloss variation or water adsorption. Compliant
Resistance against immersion of the following fluids:			
Swimming pool	N.D.	5 ppm sodium hypochlorite, derived from the hydrolysis of the pool disinfectant (sodium dichloroisocyanurate 56%) approx. pH 7 (obtained with sodium bisulphate hydrolysed in sulfuric acid)	No softening, color change or deformation of the resin film. Compliant
Water	ISO 2812 - part 1 method 1	Exposition 250 h at 25°C	Resin layer unaffected, no chngement or softening. Compliant
Hydrochloric Acid	ISO 2812 - part 1 method 2	Exposition 240 h - sol. 8,5% at 20°C	Resin layer unaffected, no chngement or softening. Compliant
Sodium hydroxide	ISO 2812 - part 1 method 2	Exposition 240 h - sol. 20% at 20°C	Resin layer unaffected, no chngement or softening. Compliant
Isopropyl alcohol	ISO 2812	Exposition 48 h at 20°C	Film slightly modified, no softening, mass alteration (-5-6%)
Stone chipping	ASTM D 3170	Resistance to stone and gravel chipping. ASTM D 3170: <7B	Compliant
QUV test	ISO 16474	Exposition 1000h ΔE check	Compliant
Heat Resistance	MS CG-12	Exposition 500 h at 80°C	Resin layer unaffected, no deformation, color chngement or softening. Compliant
Resistance to high temperatures	GM 6073	Exposition 1 h at 93°C	Resin layer unaffected no deformation, color chngement or softening. Compliant