





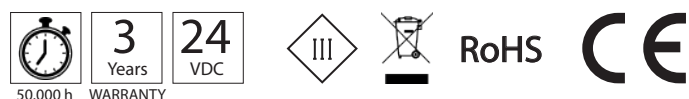




Code	Model		Color
HTL 000539	HN9E-120W24		White
HTL 000540	HN9E-120NW24		Natural White
HTL 000541	HN9E-120WW24		Warm White
HTL 000542	HN9E-120R24		Red
HTL 000543	HN9E-120G24		Green
HTL 000544	HN9E-120G24		Blue

### TECHNICAL PARAMETERS

Operating Voltage	DC 24V (±1V)
Wattage	9,6 W/m
Lenght	5.000 mm.
LEDs quantity	120 LED/m.
Minimum length of a cuttable segment	50 mm.
IP protection (only if the product has not been cut)	IP67
Operating temperature range	-30 C° ~ +50 C°
Storage temperature range	-0 C° ~ +40 C°
Storage enviroment humidity	RH < 60%
IEC protection class ( with SELV power supply )	Class III
Wires lenght	250 mm.
Viewing angle	180°
Life time ( TA ≤ 50 °C , VDC 12,0 V. )	50.000h ( L70 )
Pcs per bag	1
Warranty ( see terms and conditions )	3 Years



- SPIRALE IS MADE WITH INDEPENDENT STRUCTURE TO ENCOURAGE SLIDING BETWEEN CIRCUITS AND SILICONE TUBE DURING BEND.

### PRODUCT DESCRIPTION

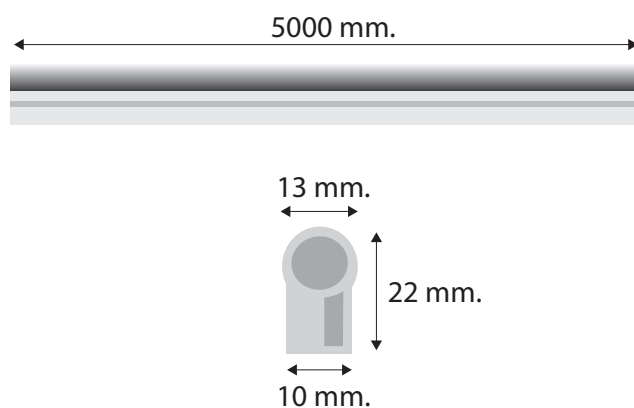
SPIRALE is a very flexible LED tube made of extruded silicone, it is mouldable and suitable for luminous decorations, for example it is ideal for making letters with luminous wire simulating neon, in particular to create luminous contours.

### APPLICATIONS

- Realization of letters and artistic contours with luminous line.
- Architectural and decorative applications.
- Linear lighting.

### FEATURES

- Minimum cutting distance: 50 mm.
- Opal silicone.
- Flexible tubular silicone structure.
- Silicone tube independent from the LED strip.
- Sideways bendable structure.
- Opal silicone caps that become luminous.
- UV resistant anti-yellowing silicone.
- Wires with silicone insulation to adhere perfectly to the silicone sealing gel



### GENERAL INFORMATIONS

Model	Nominal voltage	Voltage limits	Voltage limits in case of			
			polarity inversion	Color	Luminous flux	CRI
HN9E-120W24	24 VDC	23.....25 VDC	25 VDC	Bianco 6000-6500 k	540 Lm/m	> 80
HN9E-120NW24	24 VDC	23.....25 VDC	25 VDC	Bianco 4000-4500 k	530 Lm/m	> 80
HN9E-120WW24	24 VDC	23.....25 VDC	25 VDC	Bianco 2700-3200 k	480 Lm/m	> 80
HN9E-120R24	24 VDC	23.....25 VDC	25 VDC	Rosso 620 - 630 nm.	300 Lm/m	
HN9E-120G24	24 VDC	23.....25 VDC	25 VDC	Verde 520 - 525 nm.	455 Lm/m	
HN9E-120G24	24 VDC	23.....25 VDC	25 VDC	Blu 463 - 475 nm.	130 Lm/m	

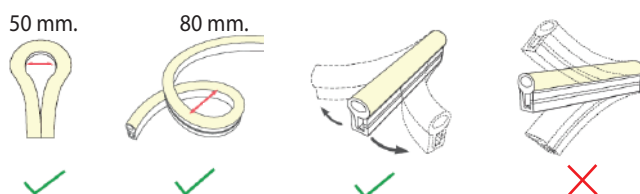
**Handling-** The silicone structure is unglued from the internal strip, it is to favor slippage between the circuit and silicone structure during bending.

**Cut** - The product can be cut every 50 mm. and headed with special opal caps that become luminous.  
Aluminium fixing clips and aluminium profile 2000mm. are available as optionals.

**Packaging** - The product is supplied wrapped in a support roll and packaged in an antistatic bag.

### BENDING

The minimum bending diameter is 50 mm. and 80 mm. and how to bend the product is showed in below draws.






## IP67


**⚠ WARNING!!** The product is supplied without the caps at the 2 ends, this to allow the user to choose the suitable cap among the 5 available models, and perform the gluing operation following the instructions.

Therefore the degree of protection IP67 refers to the product having both ends of caps suitably glued, otherwise the resulting degree of protection is IP00.

This product comply with the following European Standard: ( Click on Icons to download documentation )

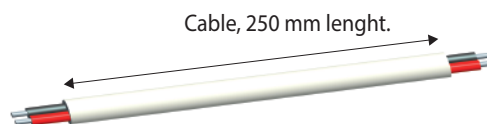
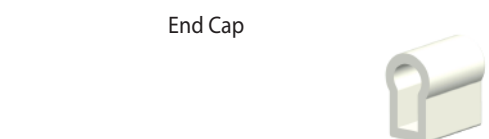
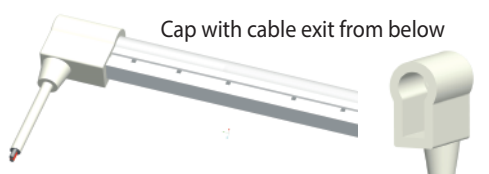
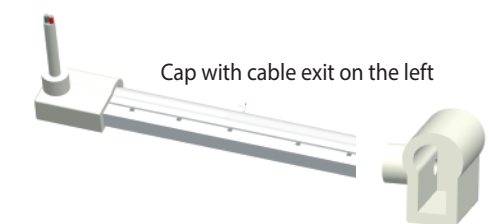
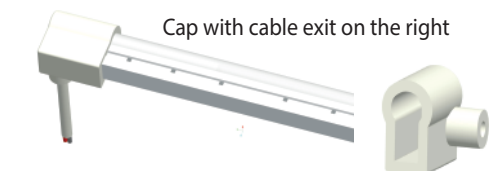
 EMC - Directive 2014/30/EU  
EN 55015:2019/A11:2020  
EN 61000-3-2:2019/A1:2021  
EN 61000-3-3:2013/A1:2019  
EN 61547:2009

 Safety - LED modules for general lighting  
EN 62031:2020  
 IP protection  
IEC 60598-1:2020 Section 9  
IEC 60529:1989+A1:1999+A2:2013

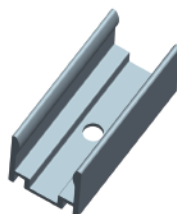
 RoHS  
Directive 2011/65/EU  
Directive 2015/863 EU

## ACCESSORIES

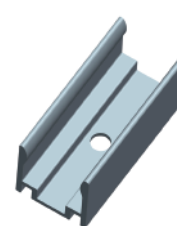
Model	Code	Description
CAP SPIRALE RIGHT	HTL 000504	Cap with cable exit on the right
CAP SPIRALE LEFT	HTL 000505	Cap with cable exit on the left
CAP SPIRALE BOTTOM	HTL 000506	Cap with cable exit from below
CAP SPIRALE STREIGHT	HTL 000507	Cap with streight cable exit
CAP SPIRALE END CAP	HTL 000508	End cap
CABLE	HTL 000496	Lenght 250 mm. ( +25 , +25 wires)
Aluminium CLIP	HTL 000531	Aluminium CLIP
ALUMINIUM BAR FOR SPIRALE	HTL 000558	Aluminium profile, lenght 2000 mm.
SILICONE GEL	HTL 000497	Silicone Gel 310 ml.
PRIMER	HTL 000512	Primer for silicone gel



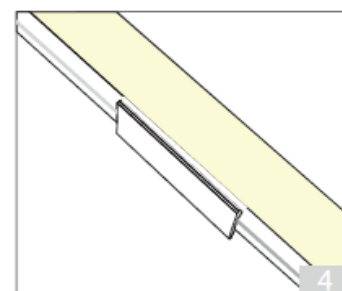
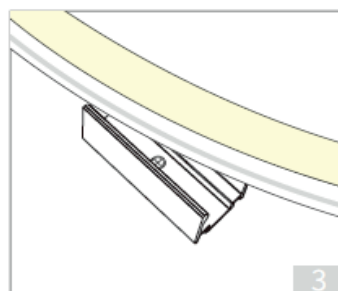
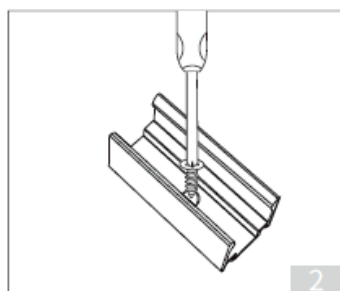
Aluminium CLIP



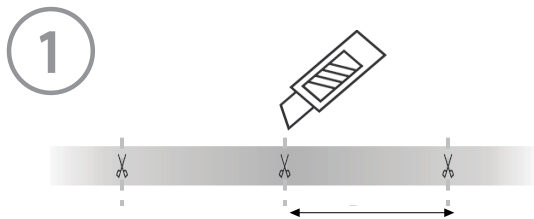
Aluminium profile, 2000mm lenght



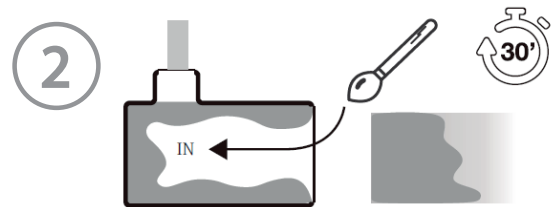
## FIXING



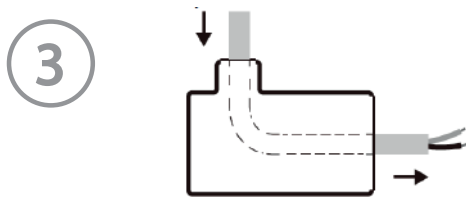
### SEGMENTATION AND GLUING OF THE CAPS



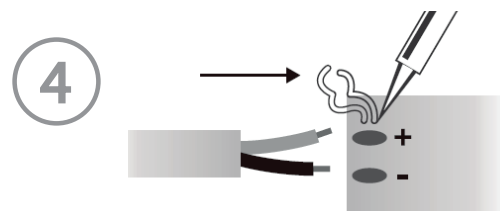
The cut must be made in correspondence with the marker line that transpires from the side strip of the product, using a sharp cutter and sliding it as if for slicing.



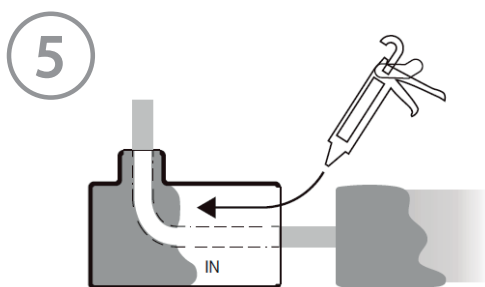
Spread the primer on the outside of the tube and also inside the cap with a brush and wait 30 minutes for drying.



Insert the cable into the silicone Cap in the direction indicated by the arrows.



Weld the wires to the corresponding pads (+ and -).



Apply the silicone gel inside the cap in the right quantity, make sure to fill in the empty spaces and spread it also around the outer surface of the tube that will enter the cap.



Wait for the silicone gel to dry