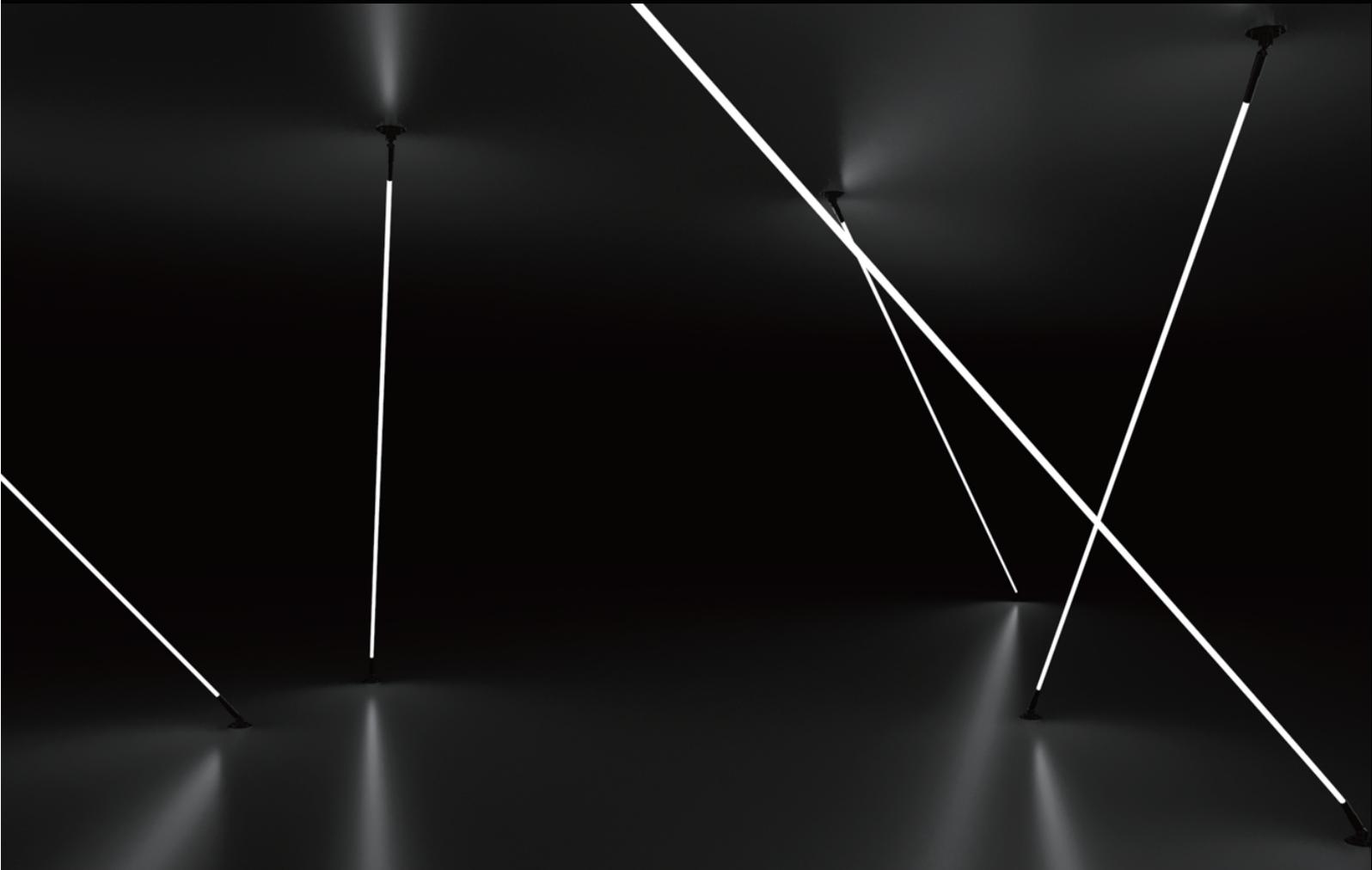
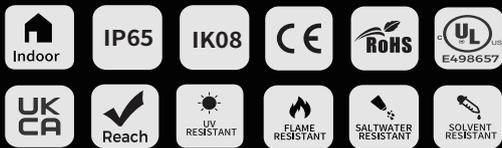


SKYLINE 360 Series Specification

NNR13S



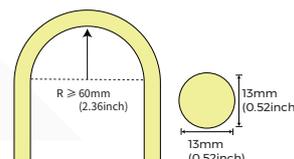
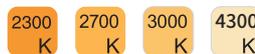
【Features】

- Light source: High luminous efficiency, LM80 test proved.
- Process & Material: high light transmittance, high purity silica gel material, IP65 protection level.
- Optical Design: unique optical light distribution structure design, 360° light output uniformly without shadows.
- Appearance Design: skin-friendly surface treatment, comfortable touch, good flexibility, and simple shape.
- Product Certification: UL、CE、ROHS、REACH、UKCA.
- Structure Features: the built-in wire take the gravity of this neon strip, the neon strip can be strained, long stretching without need of accessory in between, long stretching without deformation
- Working/Storage Temperature: Ta:-25~55°C / 0°C~60°C.
- Application: 3-dimensional space styling, Indoor decorative lighting.
- Warranty: **Indoor**: 5 years warranty or working life = 60000H, whichever comes first;

Semi-outdoor: 3 years warranty or working life = 36000H, whichever comes

first.

【Basic Parameters】

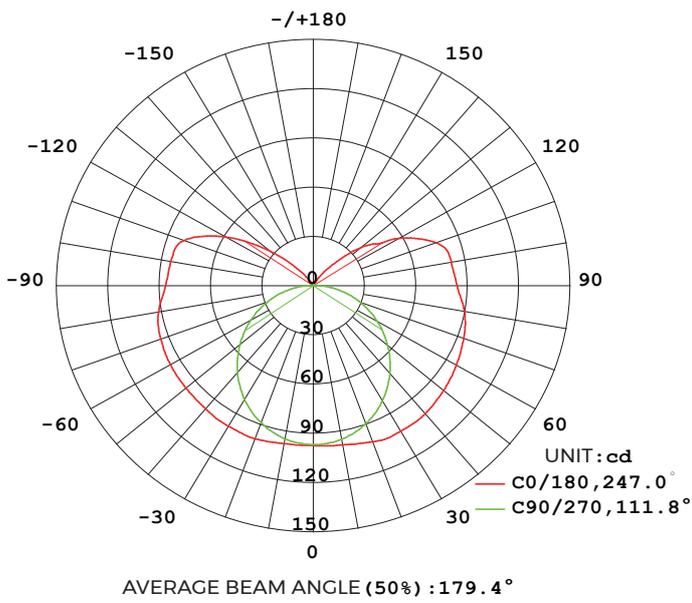


Model	CCT/colors	Color range	CRI	Input voltage (V)	Rated current (A/m)	Rated power (w/m)	Maximum power (w/m)	Lumens (LM/m)	Standard Length	Remark
NNR13S-9XX 24CSN050CC0500-ESD	2300K	2050-2350K	>90	24V	0.54 (0.16A/ft)	13 (3.96W/ft)	14.3 (4.36W/ft)	585(178/ft)	5000mm (16.4ft)	No cutting 14LED/25mm
	2700K	2600-2900K						675(206/ft)		
	3000K	2930-3330K						700(213/ft)		
	4300K	3980-4680K						700(213/ft)		
NNR13S-9XX 48CSN050CC1000-ESD	2300K	2050-2350K	>90	48V	0.27 (0.082A/ft)			585(178/ft)	10000mm (32.8ft)	No cutting 28LED/50mm
	2700K	2550-2850K						675(206/ft)		
	3000K	2930-3330K						700(213/ft)		
	4300K	3990-4690K						700(213/ft)		

Note:

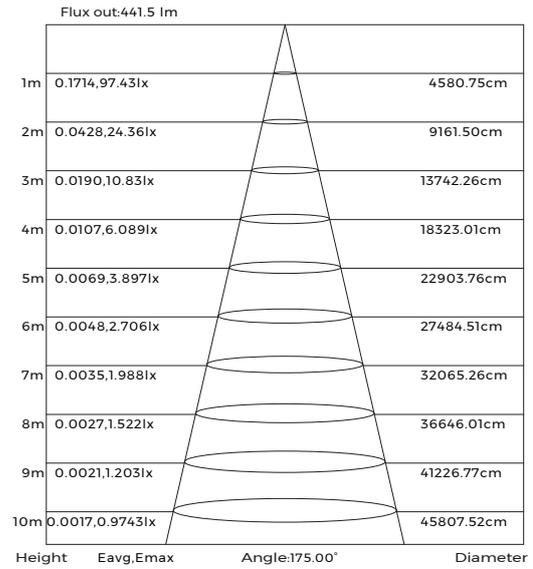
1. The above data is the testing result of 1M standard product;
2. The lumens of output data can be vary up to $\pm 15\%$;
3. The above parameters are all typical values.

[Light Distribution]



Light distribution

Note: The above data is based on 24V monochrome 4000K color temperature. If you need other models of IES files, please download the corresponding models from the IES database.

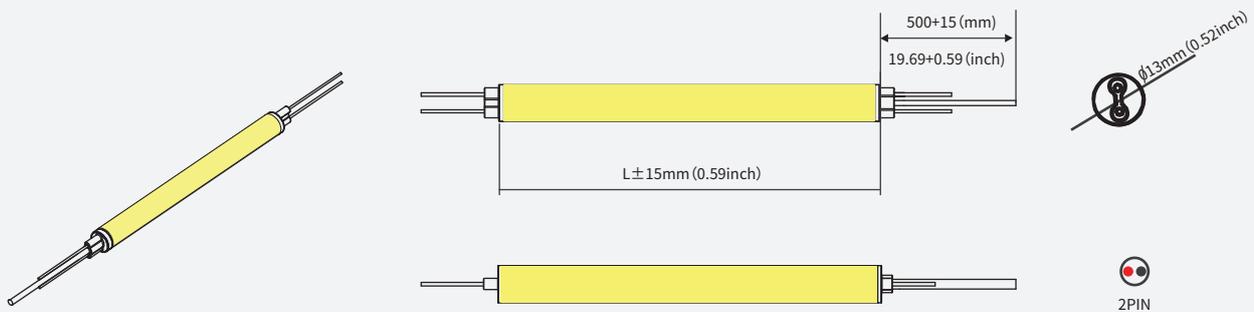


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

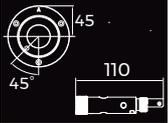
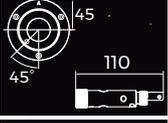
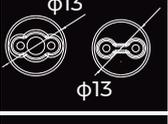
Effective average illuminance

[Product Mechanical Parameters]

• IP65 Glued cap -top outlet



[Accessory Information]

Name	Description	Image	Sectional size	Ordering code	Quantity case (PCS)	net weight (kg)	Per box net weight (kg)	Gross weight (kg)	Packing (mm)	Remark
accessories	double end suspension kit			AS-NNR13SA-182	5	0.443	2.217	3.7	255*255*260	Size: φ90mm*L182mm with screws
accessories	double end suspension kit			AS-NNR13SA3-182	5	0.443	2.217	3.7	255*255*260	Size: φ90mm*L182mm with screws
plug	silicone plug and tail plug			AS-NNR13SCH0-EC	2400	0.00075	1.8	2.8	250*250*150	Size: φ13mm*L13.5mm
wire	2P wire		/	AS-WS-0030	150	0.0128	1.92	2.92	250*250*150	/
				AS-WS-0029	50	0.0512	2.56	3.56	250*250*150	/
wire	2P wire		/	AS-WS-0032	150	0.0128	1.92	2.92	250*250*150	/
				AS-WS-0031	50	0.0512	2.56	3.56	250*250*150	/

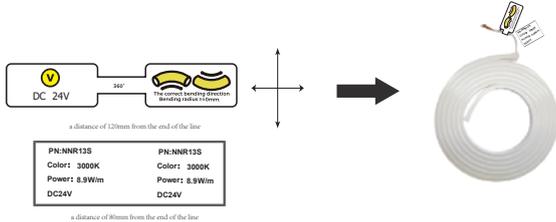
[Product control system solutions]

Product Image	product name	Product number	Product specifications	Applicable Products
	Monochrome remote	R6-1	output signal: RF Working voltage: 3VDC (CR2032) Remote control distance: 30m Working temperature: Ta: 0-30 °C-0+55 °C	Monochrome light strip (Use with CR1-GBA)
	Monochrome light controller	CR1-GBA	Input voltage: DC12-48V Output current: 15A@12V/24V, 10A@36V/48V Output Power: Max 180W@12V/Max 360W@24V/Max 360W@36V/Max 480W@48V Working temperature: -30°C-+55°C	Monochrome light strip (Use with R6-1)

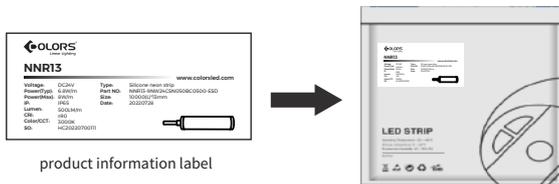
[Packaging Solutions]

• 5m Engineering Packaging

1. Line marking, the line marking is affixed at a distance of 80mm from the end of the line;



2. Put the product information label on the back of the static bag inside the marking line;



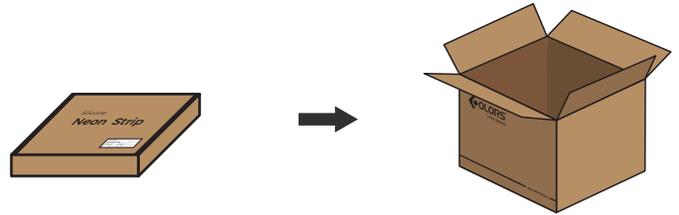
3. Put the light strip into an electrostatic bag, close the bag;



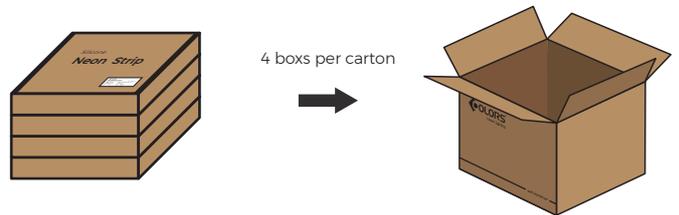
4. Put the product into the box, four bag per box, 10 meters in total ;



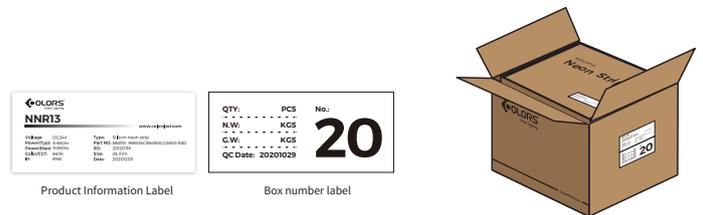
5. Label the carton and pack it into the carton



6. Pack 4 boxes of products in the carton



7. Put the product information label and the box number label on the side of the carton, and the QC inspection stamp

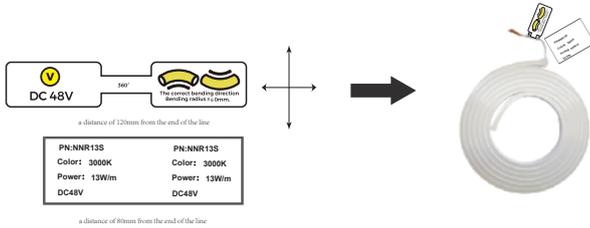


8. seal the box with transparent tape, packing tape;

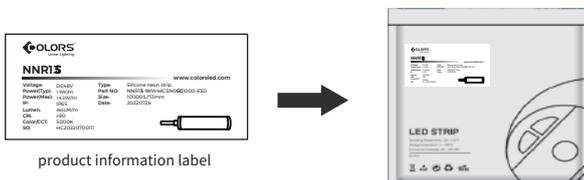


• 10m Engineering Packaging

1. Line marking, the line marking is affixed at a distance of 80mm from the end of the line;



2. Put the product information label on the back of the static bag inside the marking line;



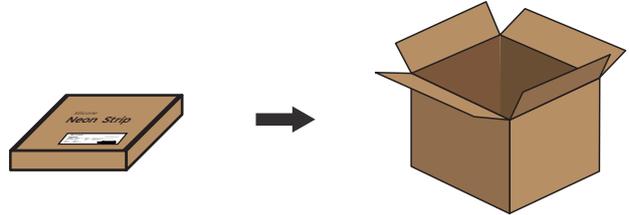
3. Put the light strip into an electrostatic bag, close the bag;



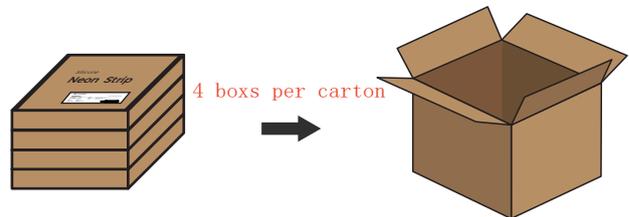
4. Put the product into the box, four bag per box, 10 meters in total ;



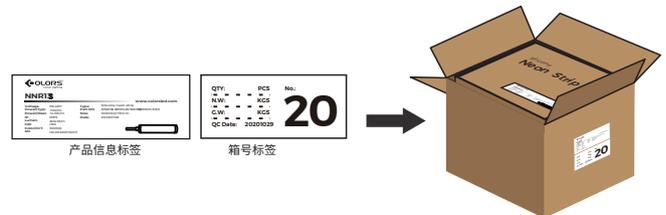
5. Label the carton and pack it into the carton



6. Pack 4 boxes of products in the carton



7. Put the product information label and the box number label on the side of the carton, and the QC inspection stamp

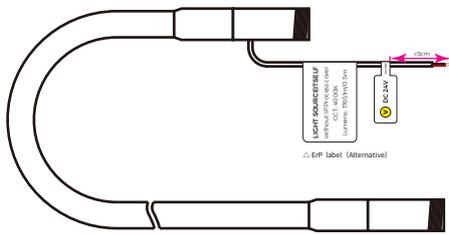


8. seal the box with transparent tape, packing tape;

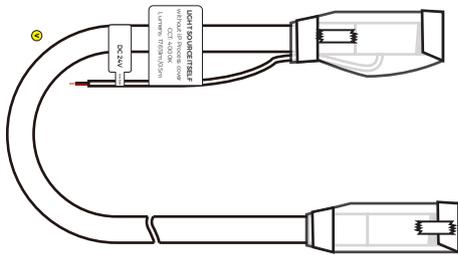


NNR13S Distribution Packaging 5m/10m

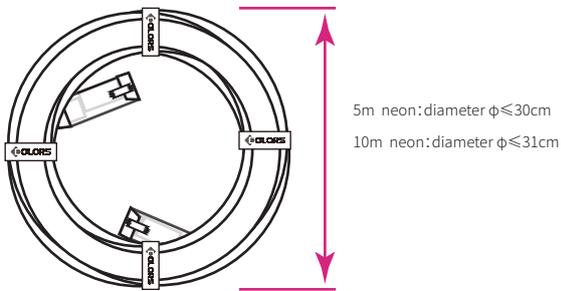
1. The line marking is affixed at the end of the line;



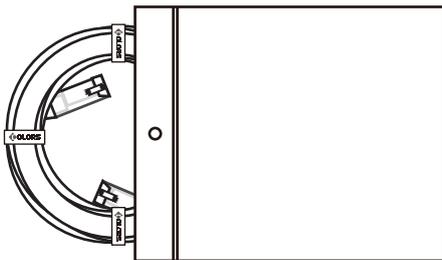
2. put the metal parts which installed on the head into the PE bag, seal with transparent tape



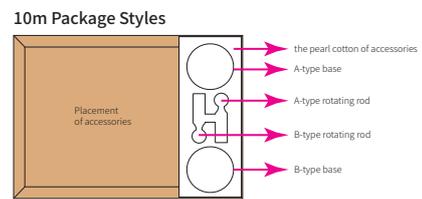
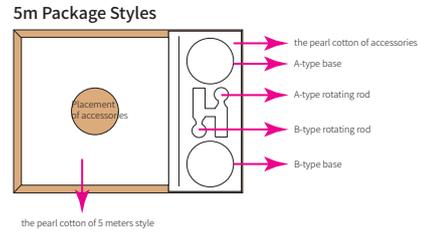
3. Wrap the product into a circle, stick Velcro on the product.



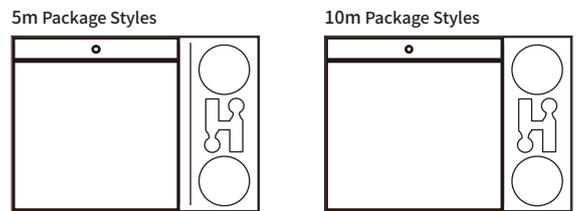
4. Put the product into an electrostatic bag



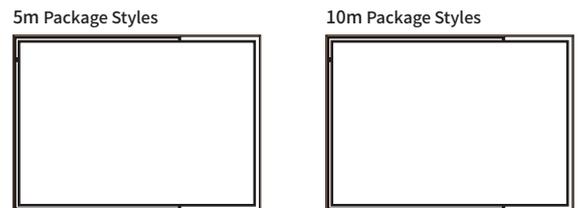
5. Put the pearl cotton into the box



6. Put the bag of accessory into the box, put the product into the box



7: Cover the box with thin cotton (attention: use the thin cotton of 5mm thickness)



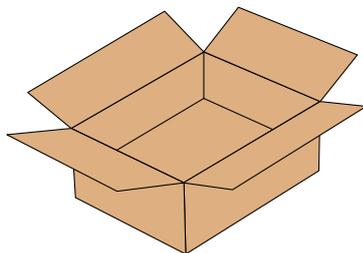
8.Put the brochure on the thin cotton



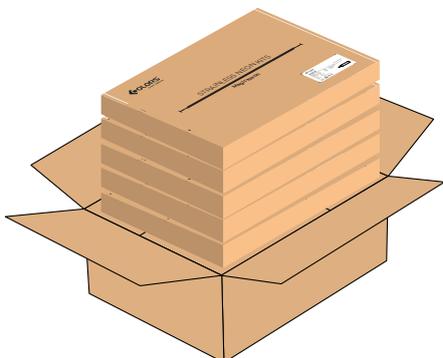
9.Close the box,stick the product information label on the bottom right corner of the box.



9.Prepare the carton



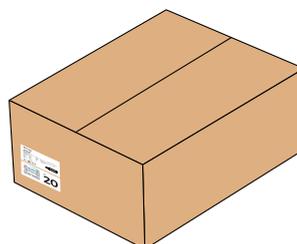
11.packing,5 box per carton



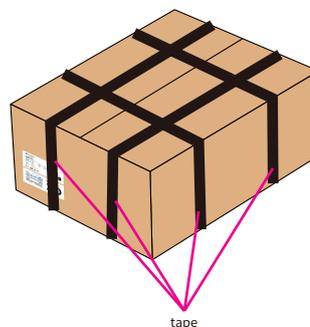
12.Put the product information label and the box number label on the side of the carton



13.the QC inspection stamp

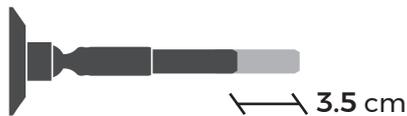


14.seal the box with transparent tape, packing tape.

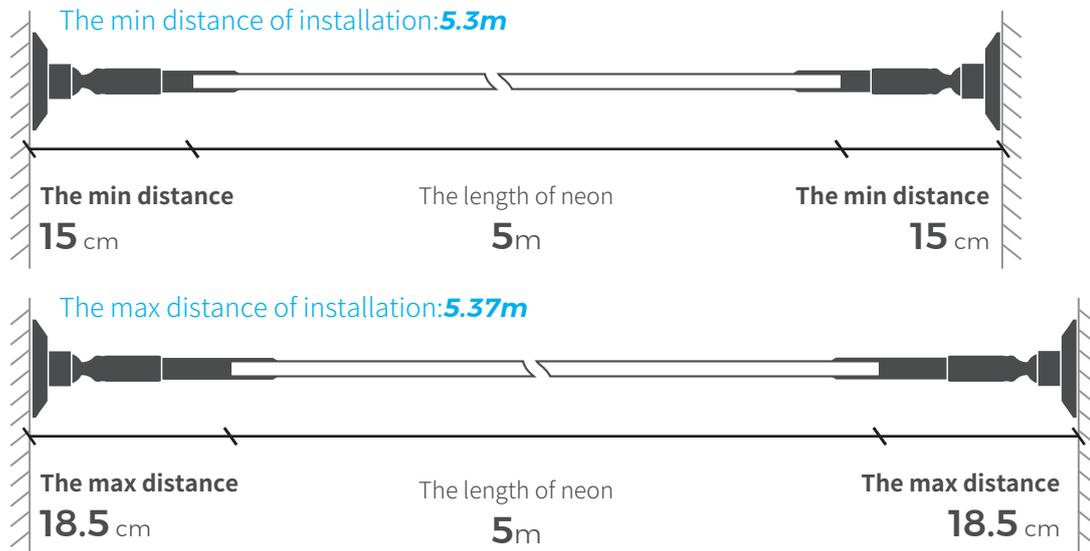


🔧 Tips

- Adjustable range of base length



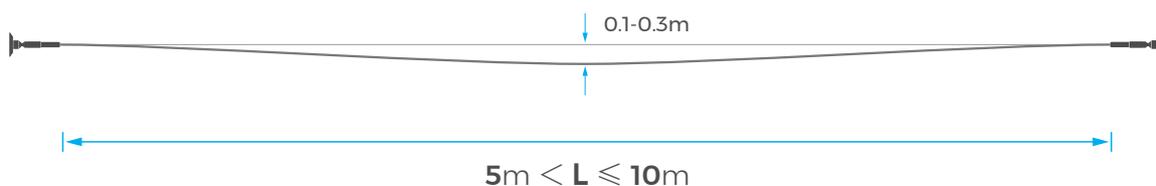
- Distance of installation (Taking the 5-meter neon as an example)



Tip:

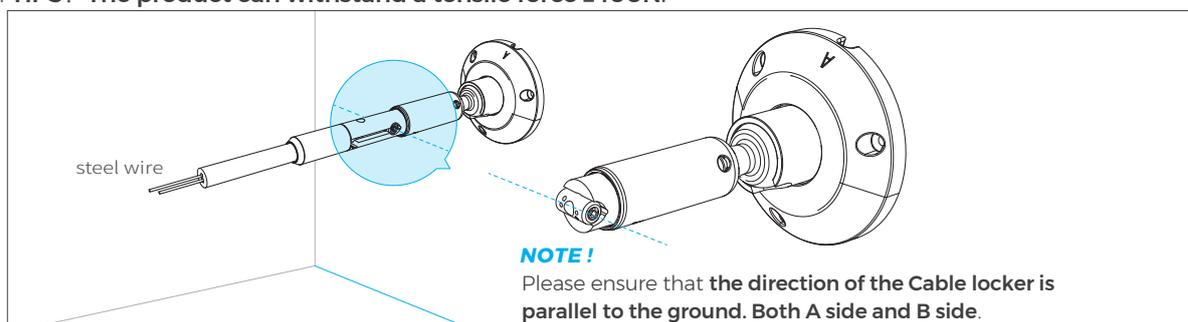
1. Neon strip length = distance of installation points - 0.33m
2. 5m, 10m refer to the length of neon strip. The actual installation length should include length of accessories, which is adjustable. Take 5m neon strip for an example. Its whole set of actual installation length, is 5.3m at least, and 5.37m at most.
3. For details of installation, please consult our customer service or sales.
4. It is recommended to install the B-side first, then the A-side.

● Gravitational Factors



TIPS:

1. If the length of the NNR13S neon exceeds 5 meters, due to its own gravity, a slight bend will appear at the midpoint of the suspended and tensioned part, which is a normal phenomenon.
2. When hanging and tightening the neon lights, the rotating rods at both ends should be tightened in the same direction simultaneously to prevent the steel wire from coiling. After achieving an appropriate degree of tension, ensure that the steel wire inside the neon light is horizontal to the ground to distribute the force evenly, as shown in the figure.
3. **TIPS: The product can withstand a tensile force $\leq 400N$.**



【Packaging Solutions】

Model	Size	Product Quantity (box)	Product Quantity (case)	Net weight (kg)	Net weight per box (kg)	Gross weight (kg)	Carton size(m)
NNR13S-9XX24CSN050CC0500-ESD	L5000*φ13mm	5M*2	40M	0.937	7.496	9.0	0.41*0.41*0.26
NNR13S-9XX48CSN050CC1000-ESD	L10000*φ13mm	10M*1	40M	1.874	7.496	9.0	0.41*0.41*0.26
NNR13S-9XX24CSN050BC0500-ESD	L5000*φ13mm	5M*1	25M	1.74	8.7	9.6	0.47*0.34*0.3
NNR13S-9XX48CSN050BC1000-ESD	L10000*φ13mm	10M*1	50M	3.69	14.75	15.88	0.47*0.34*0.3

【Reliability test】

Test Item	Classification	Reference	Test method or condition
Safety test	Mechanical strength	IEC 60598-1; IEC 60598-2-21	The hammer spring Impact energy 0.35J
	IP	IEC 60598-1; IEC 60598-2-21	IP65
	Winding Test	IEC 60598-1; IEC 60598-2-21	φ150mm cylinder, 60N pull, winding 10 times at (-25°C ±2°C), and 10 times after(-15°C±2°C, 16h).
	Cold Bend Test	IEC 60598-1; IEC 60598-2-21	wound on mandrel, low-temperature (-15°C±2°C, 16h), around the mandrel for two turns
	Cold Impact test	IEC 60598-1; IEC 60598-2-21	Low-temperature (-15°C±5°C, 16h), hammer falls from a height of 100mm.
	Insulation Resistance	IEC 60598-1; IEC 60598-2-21	≤ 2MΩ
	Electrical strength	IEC 60598-1; IEC 60598-2-21	500V
Mechanical reliability testing	Bending test	Colors	Each 200mm, bending up and down 100 times
	Bending test	Colors	Each 200mm, bending left and right 100 times
	Torsion test	Colors	Twist clockwise 5 times and then release, repeat 200 times
	Disassembly and assembly test	Colors	Repeat disassembly and assembly, 10 times
Environment Reliability testing	High temperature storing test	IEC 60068-2-2	80°C, 168h
	Low temperature storing test	IEC 60068-2-1	-40°C, 168h
	High temperature and Humidity impact	IEC 60068-2-78	60°C, 85%RH
	Salt Spray test	IEC 60068-2-11	5% salt solution concentration, 24h
	IK	IEC 62262	5 times of impact on each exposed surface
	Lifetime aging test	Colors	35°C, 6000h
	switch test	Colors	10s On, 10s Off, 10000 times

【Precautions】

· Use a 24V DC, 48V DC isolated power supply to drive the neon lamp strip and the ripple wave of constant voltage source shall be less than 5%.

It is not allowed to use RC voltage reduction or non-isolated power supply to drive the neon lamp strip.

· In actual applications, 20% of the power supply shall be kept (only 80% of the power is used) to guarantee that sufficient voltage is available to drive the product.

· Attention shall be paid to safe operation. After powering on, it is not allowed to touch the AC power supply to avoid an electric shock.

· Attention shall be paid to the positive and negative poles of the wires during installation and whether the power supply conforms to required voltages to avoid damages.

· Avoid scratching, distortion and irregular bending of the product during installation; otherwise it may cause irreparable damage to the product.

· Please do not bend the strip into an arc with a diameter less than 60mm to ensure the longevity and reliability, the bending diameter too small will damage the product itself.

· If the actual length of application exceeds the specified using length, it will lead to overload heating and uneven brightness.

· To keep the eyes from being harmed, try to avoid staring at the glowing side of the LED strip for a long time.

· Non-professionals are prohibited from installing, disassembling and repairing the product.

· Do not use any acid or alkaline adhesive to fix products (including not limited to glass cement, etc.)

· Product is not suitable for use in swimming pools and fountains.

· Please confirmed before usage as products of varied sizes show slight differences in their color under same color temperature due to their structural differences.

· Colored products are prohibited from cutting to avoid damage to the lamp body caused by improper operation.

· Due to the characteristics of the silicone material, it is normal for the color of the colloid to change slightly after the neon product is used for a long time.

· It is strictly forbidden to use 502/705 and other adhesives that are prone to chemical reactions with silica gel during construction and installation. It is recommended to use silicone sealant for bonding.

· Long-term storage and the remaining products after cutting and use must be sealed to avoid exposure to organic environments such as aldehydes/benzenes.

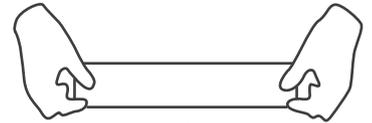
· When the product is installed and used, it is recommended that the product as a whole be in the same environmental conditions to avoid inconsistent color changes of the product colloid due to differences in product exposure and environmental conditions.

· During the installation process, pay attention to the installation in strict accordance with the maximum installation distance defined in the warm tips, first install the B end, then install the A end, and the actual installation distance must not exceed the maximum installation distance.

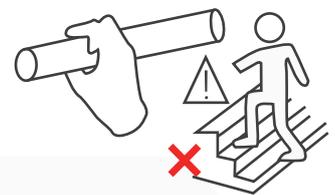
.When using dimmer and dimming power supplies like Triac, etc, conduct compatibility tests on the product, dimmers and power supplies to ensure full compatibility. If any issues arise, contact COLORS for technical support.



It is forbidden to wrap objects less than 120mm



NO stretching



No trampling