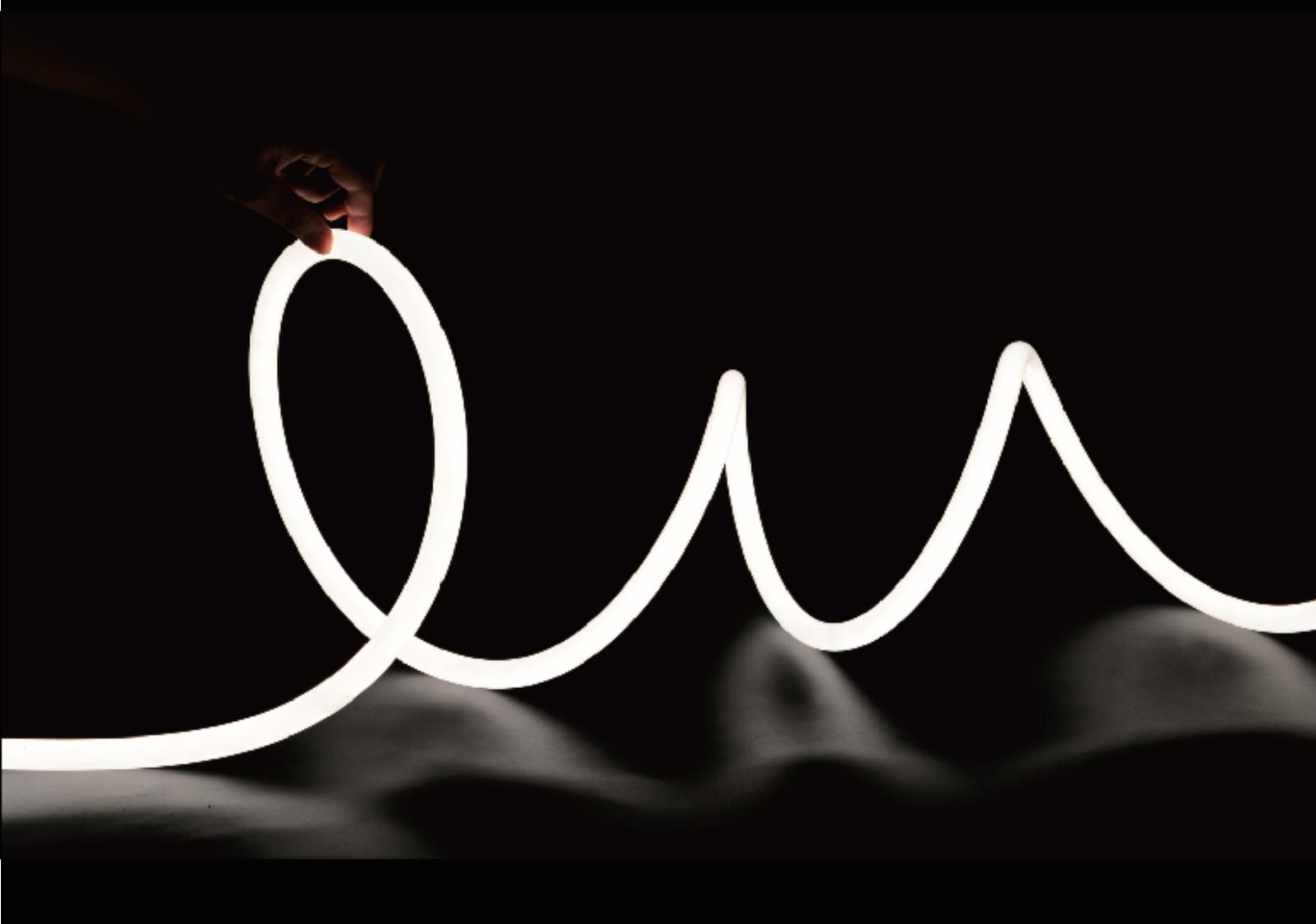# COLORS®

MAGIC 360 Series | Specification

NNR25

Indoor | IP65 | IK08 | CB | UV RESISTANT | CE | RoHS

UL E498657 | UKCA | Reach | FLAME RESISTANT | SALTWATER RESISTANT | SOLVENT RESISTANT
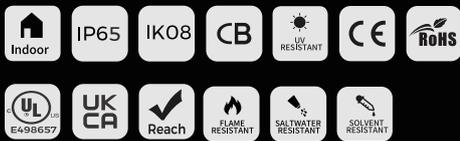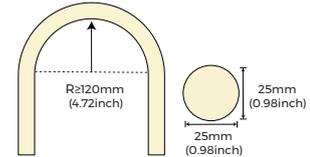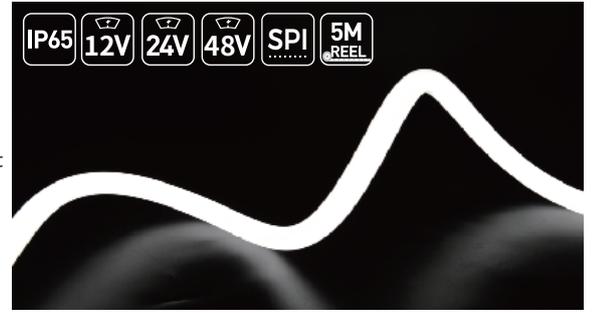
【Features】

· Light source: high luminous efficiency LED lamp beads, LM80 test certification;

· 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, CB;

· Environmental characteristics: salt solution resistance, acid and alkali corrosion resistance, flame retardant resistance, UV resistance;

· Working/storage temperature: Ta: -25~55℃ / 0℃～60℃;

  Symphony working/storage temperature: Ta: -20~40℃ / 0℃～60℃;

· SPI chip mode and pixel count: R/G/B/RGB: WS2815,90Pixels/m;

· Product application: office lighting, decorative lighting, artistic lighting, modeling contrast;

· 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】

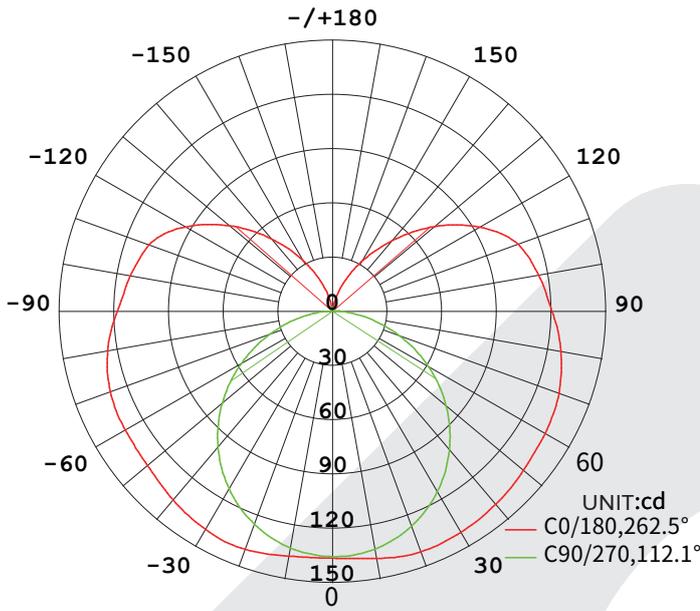| Model	CCT/colors	Color range	CRI	Input voltage (V)	Rated current (A/m)	Rated power (w/m)	Maximum power (w/m)	Lumens (LM/m)	Standard Length	Remark
NNR25-9XX 24CSN050BCXXXX-ESD	2300K	2000-2350K	>90	24V	0.6 (0.18A/ft)	14.4 (4.39W/ft)	16 (4.88W/ft)	750(225/ft)	5000mm (16.4ft)	Arbitrary cutting 4LED/11.97mm
	2700K	2550-2850K						950(285/ft)		
	3000K	2850-3250K						950(285/ft)		
	3500K	/						950(285/ft)		
	4000K	3900K-4500K						950(285/ft)		
NNR25-0X 24CSN050BCXXXX-ESD	G 620-630nm	/	/		0.42 (0.13A/ft)	10 (3.05W/ft)	11 (3.35W/ft)	/		No cutting 14LED/41.67mm
	B 465-470nm	/	/					/		
NNR25-0RGB 24CSN050BCXXXX-ESD	RGB	/	/		0.6 (0.18A/ft)	14.4 (4.39W/ft)	16.5 (5.03W/ft)	510(155/ft)		No cutting 14LED/50mm
NNR25-9LWNW 24CSN050BCXXXX-ESD	2300K~4000K	2300±200K 4150±250K	>90		0.6 (0.18A/ft)	14.4 (4.39W/ft)	16 (4.88W/ft)	950(285/ft)		No cutting 24LED/31.25mm
NNR25-0RGBXW 24CSN050BC0500 -ESD	RGB~2300K	2160-2360K	/		0.72 (0.22A/ft)	17.2 (5.21W/ft)	19.8 (6W/ft)	LW:460(140/ft)		No cutting 24LED/62.5mm
	RGB~2700K	2620-2920K						SW:550(168/ft)		
	RGB~3200K	2960-3360K						WW:570(174/ft)		
	RGB~4500K	4120-4820K						NW:570(174/ft)		
NNR25-9XX 48CSN050BC2000 -ESD	2300K	2050-2350K	>90	48V	0.26 (0.08A/ft)	12.5 (3.81W/ft)	13.7 (4.18W/ft)	875(265/ft)	20000mm (65.6ft)	No cutting 28LED/83.33mm
	2700K	2600-2900K						1000(303/ft)		
	3000K	2750-3200K						1000(303/ft)		
	4000K	3900-4500K						1060(321/ft)		
NNR25-0RGBXW 48CSN050BC1000 -ESD	RGB~2300K	2180-2380K	/		0.36 (0.11A/ft)	17.2 (5.21W/ft)	19.8 (6W/ft)	LW:440(134/ft)	10000mm (32.8ft)	No cutting 48LED/125mm
	RGB~2700K	2640-2940K						SW:510(155/ft)		
	RGB~3200K	2990-3390K						WW:540(165/ft)		
	RGB~4500K	4200-4900K						NW:540(165/ft)		
NNR25-0RGBX 12CSN050BC0500 -ESD	R	/	/	12V	1.8 (0.55A/ft)	21.6 (6.5W/ft)	23.8 (7.2W/ft)	/	5000mm (16.3ft)	Arbitrary cutting 2LED/11.11mm IC:(WS2815) 90Pixels/m
	G	/						/		
	B	/						/		
	RGB	/						302(92.1/ft)		

Note:

1. The above parameters are tested based on 1m (3.28ft) standard products;

2. The luminous flux is allowed to have an error range of ±15%;

3. The above parameters are typical values;

【Light Distribution】

UNIT:cd
C0/180,262.5°
C90/270,112.1°

AVERAGE BEAM ANGLE(50%):187.3 DEG

Light distribution

Flux out:630.0 lm

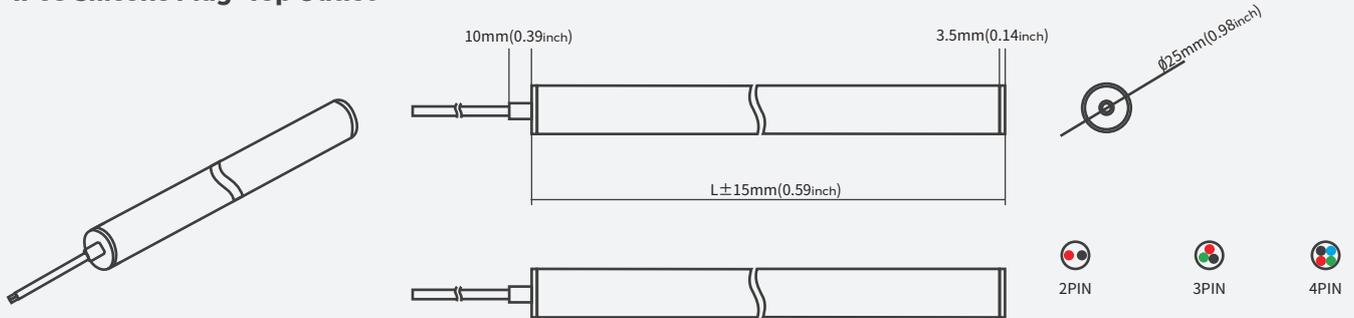| Height	Eavg,Emax	Angle:179.00deg	Diameter
1m	0.0000,136.61x		22917.70cm
2m	0.0000,34.151x		45835.40cm
3m	0.0000,15.181x		68753.09cm
4m	0.0000,8.5371x		91670.79cm
5m	0.0000,5.4641x		114588.49cm
6m	0.0000,3.7941x		137506.19cm
7m	0.0000,2.7881x		160423.89cm
8m	0.0000,2.1341x		183341.59cm
9m	0.0000,1.6861x		206259.28cm
10m	0.0000,1.3661x		229176.98cm

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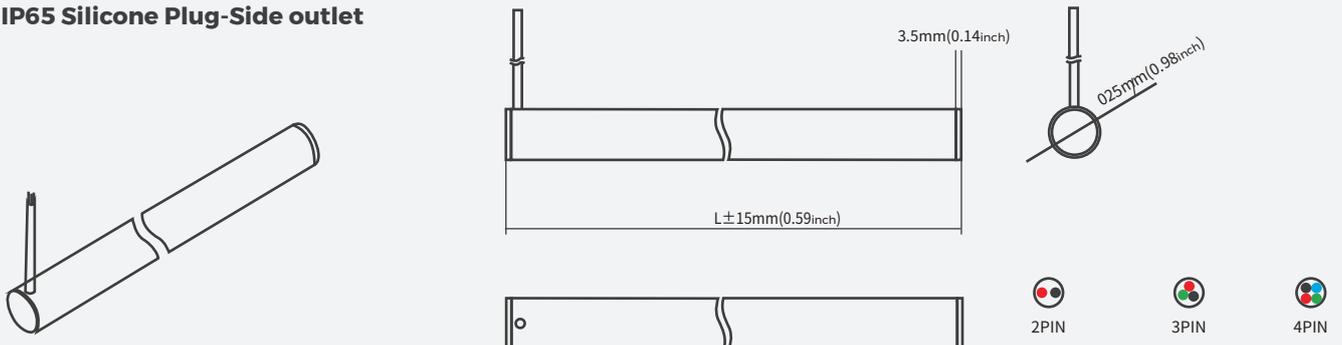
Effective average illuminance

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.

【Product mechanical parameters】

· IP65 Silicone Plug -Top Outlet

10mm(0.39inch)   3.5mm(0.14inch)   Ø25mm(0.98inch)

L±15mm(0.59inch)

2PIN   3PIN   4PIN

· IP65 Silicone Plug-Side outlet

3.5mm(0.14inch)   Ø25mm(0.98inch)

L±15mm(0.59inch)

2PIN   3PIN   4PIN

【Accessory information】

Installation schematic	Accessories Picture	name	Order model	quantity/ case (PCS)	net weight (kg)	Per box net weight (kg)	Gross weight (kg)	Gross weight (mm)	Remark
/		NNR25 ceiling Fixed installation components	AS-NNR25P1-25	100	0.01	1.00	1.20	250*250*150	Size:L25*W51.6*H27.8mm , With screws; 3pcs/1M;5pcs/2.5M;8pcs/5M
		Vertical hanging side outlet Install accessory kit (1m)	AS-NNR25VHS1-1000	16	0.28	4.40	5.29	1285*160*160	NNR25-XXXXBC0100 Round tube:1M;Wire rope:2M For white, monochrome light only
		Vertical hanging side outlet Install accessory kit (2.5m)	AS-NNR25VHS1-2500	16	0.52	8.40	10.12	2580*165*165	NNR25-XXXXBC0250 Round tube:2.5M;Wire rope:2M For white, monochrome light only
		Hang the top vertically Outlet installation accessory kit (1m)	AS-NNR25VHD1-1000	16	0.31	4.90	5.79	1285*160*160	NNR25-XXXXBC0100 Round tube:1M;Wire rope:2M For white, monochrome light only
		Vertical hanging from the top Install accessory kit (2.5m)	AS-NNR25VHD1-2500	16	0.55	8.83	10.55	2580*165*165	NNR25-XXXXBC0250; Round tube:2.5M;Wire rope:2M For white, monochrome light only
		Single-ended vertical ceiling Install accessory kit (1m)	AS-NNR25VCC1-1000	16	0.23	3.63	4.52	1285*160*160	NNR25-XXXXBC0100 Round tube:1M;
		Single-ended vertical ceiling Install accessory kit (2.5m)	AS-NNR25VCC1-2500	16	0.47	7.57	9.29	2580*165*165	NNR25-XXXXBC0250 Round tube:2.5M;
		Horizontal ceiling installation components	AS-NNR25LCX-1000	15	0.08	1.20	1.80	1180*125*115	NNR25-XXXXBC0100 NNR25-XXXXBC0500 PC slot:1M;
		Horizontal hoisting Install components (38mm)	AS-NNR25LHX-0038	96	0.07	6.75	7.35	365*365*190	NNR25-XXXXBC0100 NNR25-XXXXBC0250 NNR25-XXXXBC0500 Round tube:38mm; Wire rope 2pcs，L:2M; Recommended dosage:1PCS/0.5M
		Horizontal hoisting Install components (1M)	AS-NNR25LHX-1000	16	0.18	2.88	3.48	1180*125*115	NNR25-XXXXBC0100 Round tubeL:1020mm; Wire rope 2pcs, L:2M;

【Accessory information】

Installation schematic	name	Accessories Picture	Order model	quantity/case (PCS)	net weight (kg)	Per box net weight (kg)	Gross weight (kg)	Gross weight (mm)	Remark
	Horizontal hoisting Install components (2.5M)		AS-NNR25LHX-2500	16	0.33	5.28	6.28	2580*165*165	Round tubeL：2520mm； Wire rope 2pcs 2pcs，L：2M；
	Double-ended vertical ceiling Kits		AS-NNR25VCC1-XX-2	48	0.13	6.05	6.65	365*365*190	NNR25-XXXXBC0100 NNR25-XXXXBC0250 NNR25-XXXXBC0500
	Can be spliced Install components		AS-NNR25DHS-XX	48	0.05	2.30	2.91	365*365*190	NNR25-XXXXBC0100 NNR25-XXXXBC0250 NNR25-XXXXBC0500
	Concealed Install components		AS-NNR25DCX-XX	480	0.01	2.40	3.13	365*365*190	NNR25-XXXXBC0100 NNR25-XXXXBC0250 NNR25-XXXXBC0500 Recommended dosage:1PCS/0.5M
	Can be shaped and hoisted Install components		AS-NNR25DHX-0038	15	0.20	3.00	3.62	415*250*230	NNR25-XXXXBC0100 NNR25-XXXXBC0250 NNR25-XXXXBC0500 Round tube L:38mm； Telescopic rodL:0.6M Recommended dosage:1PCS/0.5M
/	NNR25 Plug set		AS-NNR25GH0-EC	500	0.0004	0.20	1.00	250*250*150	**top-out wire** Suit to NNR25 white/ monochrome light/ CCT/RGB/RGBW
/	NNR25 Plug set		AS-NNR25GS0-EC	500	0.0004	0.20	1.00	250*250*150	side-out wire Suit to NNR25 white/ monochrome light/CCT/RGB
/	NNR25 Plug set		AS-NNR25GH1-EC	500	0.0004	0.20	1.00	250*250*150	**top-out wire** Suit to NNR25 SPI
/	NNR25 Plug set		AS-NNR25GS1-EC	500	0.0004	0.20	1.00	250*250*150	side-out wire Suit to NNR25 SPI/ RGBW
/	connectors		AS-FC-0001	512	0.018	9.216	10.2	365*365*190	Suitable for monochromatic light strip
/	connectors		AS-FC-0002	512	0.018	9.216	10.2	365*365*190	Suitable for CCT light strip
/	connectors		AS-FC-0003	512	0.018	9.216	10.2	365*365*190	Suitable for RGB light strips

【Accessory information】

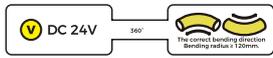| name	describe	Accessories Picture	Section size	Order model	quantity/case (PCS)	net weight (kg)	Per box net weight (kg)	Gross weight (kg)	Gross weight (mm)	Remark
/	woven material		/	AS-NNR25CCXS-B-3	13	0.3	3.9	4.9	410*410*260	Size: ⌀110*H34mm with screws
				AS-NNR25CCXM-B-3	13	0.44	5.72	6.72	410*410*260	Size: ⌀150*H34mm with screws
				AS-NNR25CCXL-B-3	13	0.6	7.8	8.8	410*410*260	Size: ⌀175*H34mm with screws
woven material	woven material		/	AS-NNR25C-053	48	0.07	3.36	4.34	365*365*190	Suitable for NNR25 strips Size:⌀41*H53mm
woven material	woven material		/	AS-NNR25C-090	16	0.13	2.08	3.06	365*365*190	Suitable for NNR25 strips Size:⌀41*H90mm
Trimless embedded accessory	NNR25 Trimless embedded accessory		/	AS-NNR25VTD-XX-2	36	0.11	3.96	4.96	410*410*260	Appearance size：φ62*20mm Mounting hole size：φ40mm
Embedded accessory	NNR25 Embedded accessory		/	AS-NNR25VRD-XX-2	36	0.18	6.48	7.48	410*410*260	Appearance size：φ64*20mm Mounting hole size：φ40mm
No dark areas accessory	NNR25 No dark areas accessory		/	AS-NNR25LHS-0080	48	0.07	3.36	3.96	365*365*190	Suit to NNR25/NNR25P /NNR25BLK (side out wire)
Glue	588G acidic glue		/	AS-PG-0002	150	0.014	2.1	2.4	250*250*150	10ml/pcs
Wire	2P PVC wire (0.5M)		/	AS-WS-0001	150	0.01541	2.31	2.61	250*250*150	Suitable for monochromatic light strips (Use the top-out line)
Wire	2P PVC wire (2M)			AS-WS-0002	125	0.0616	7.7	8	250*250*150	
Wire	4P PVC wire (0.5M)		/	AS-WS-0003	150	0.0194	2.91	3.21	250*250*150	Suitable for RGB strips (Use the top-out line)
Wire	4P PVC wire (2M)			AS-WS-0004	125	0.0776	9.7	10	250*250*150	

【Product control system solutions】

Product Image	product name	Product number	Order code	Product specifications	Applicable Products
	Monochrome remote	CK1-GBA	402-02-000000-00001	output signal：RF Working voltage：3VDC(CR2032) Remote control distance：30m Working temperature:Ta:0-30 ℃~0+55 ℃	Monochrome light strip (Use with CR1-GBA)
	Monotone light controller	CR1-GBA	402-01-000000-00001	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℃— +55℃	Monochrome light strip (Use with CR1-GBA)
	CCT remote control	CK2-GBA	402-02-000000-00002	output signal：RF Working voltage：3VDC(CR2032) Remote control distance：30m Working temperature:Ta:0-30 ℃~0+55 ℃	CCT light strip (Use with CR2-GBA)
	Color temperature controller	CR2-GBA	402-01-000000-00002	Input voltage：DC12-48V Output current：8A Output Power：Max 192W@12V/Max 284W@24V/Max 576W@36V/Max 768W@48V Working temperature：-30℃— +55℃	CCT light strip (Use with CK2-GBA)
	RGB/RGBW remote control	CK4-GBA	402-02-000000-00003	output signal：RF Working voltage：3VDC(CR2032) Remote control distance：30m Working temperature:Ta:0-30 ℃~0+55 ℃	RGB/RGBW light strip (Use with CR3-GBA)
	RGB controller	CR3-GBA	402-01-000000-00003	Input voltage：DC12-48V Output current：18A Output Power：Max 216W@12V/Max 432W@24V/Max 648W@36V/Max 864W@48V Working temperature：-30℃— +55℃	RGB light strip (Use with CK4-GBA)
	Symphony Controller	K-8000C	23-01-00-0050	Power supply：DC 5V-24V input Power consumption：5W Working temperature:Ta:0-20 ℃~0+85 ℃	DMX/SPI magic lights with universal

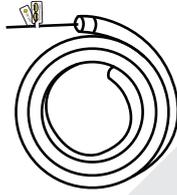# 【Packaging Solutions】

· standard packaging

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

DC 24V

The correct bending direction
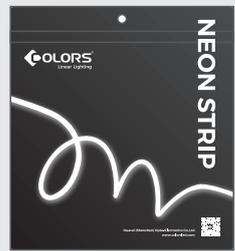Bending radius ≥ 120mm.
360°

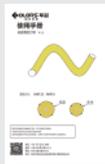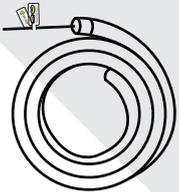Voltage & bending warning signs

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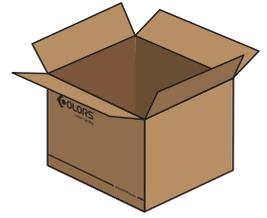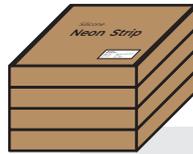
Product Information Label

3.Put the light strip into an electrostatic bag, one roll per bag, and seal the bag；

NEON STRIP

4. Label the carton and pack it into the carton；

Silicone
Neon Strip

5. Pack 4 boxes of products in the carton；

Silicone
Neon Strip

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

QTY:	PCS	No.:
N.W:	KGS	**20**
G.W:	KGS	
QC Date: 20201029		

Product Information Label   Box number label

Model	Product size	Product Quantity/box	Product Quantity/case	Product net weight (kg)	Net weight per box (kg)	Gross weight (kg)	Carton size (m)
NNR25-XXXX24CSN050BC0100-ESD	L1000*φ25mm	1M*2	8M	0.64	5.12	6.62	0.41*0.41*0.26
NNR25-XXXX24CSN050BC0250-ESD	L2500*φ25mm	2.5M*1	10M	1.625	6.5	8	0.41*0.41*0.26
NNR25-XXXX24CSN050BC0500-ESD	L5000*φ25mm	5M*1	20M	3.4	13.5	15	0.41*0.41*0.26
NNR25-9XX48NSN050BS2000 -ESD	L20000*φ25mm	20M*1	20M	12.35	14.7	15	0.365*0.365*0.335
NNR25-0RGBX12CSN050BC0500 -ESD	L5000*φ25mm	5M*1	20M	3.4	13.5	15	0.41*0.41*0.26

【Reliability test】

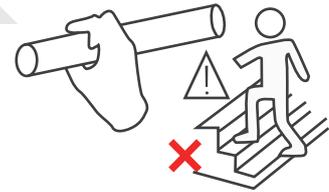| test item	Classification	Reference	Test method or condition
Safety test	Mechanical strength	IEC 60598-1； IEC 60598-2-21	The hammer spring Impact energy 0.35J
	IP	IEC 60598-1； IEC 60598-2-21	IP65
	Winding Test	IEC 60598-1； IEC 60598-2-21	φ150mm cylinder, 60N pull, winding 10 times at（-25℃ ±2℃），and 10 times after(-15℃±2℃, 16h).
	Cold Bend Test	IEC 60598-1； IEC 60598-2-21	wound on mandrel, low-temperature (-15℃±2℃, 16h)，around the mandrel for two turns
	Cold Impact test	IEC 60598-1； IEC 60598-2-21	Low-temperature（-15℃±5℃, 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℃, 168h
	Low temperature storing test	IEC 60068-2-1	'-40℃, 168h
	High temperature and Humidity impact	IEC 60068-2-78	60℃, 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℃, 6000h
	switch test	Colors	10s On, 10s Off，10000 times

【Precautions】

·Please use an isolated power supply to drive the LED light bar, and the ripple of the constant voltage source is less than 5%. Do not use resistance-capacitance step-down, non-isolated power supplies to drive the LED light bar.

·In actual applications, the power supply should reserve 20% of the margin (it is recommended to use only 80% of the power) to ensure sufficient voltage to drive the product.

· Please operate carefully, do not touch the AC power terminal when the power is on to prevent electric shock.

·Pay attention to the positive and negative poles of the power cord, and do not connect it wrongly. Whether the voltage of the power supply and the product are the same, so as to avoid damage to the product.

·During the installation process, please avoid scratching, twisting and irregular bending of the product, otherwise it may cause irreparable damage to the product.

· In order to ensure the life and reliability of the light strip, please do not bend it in an arc with a radius of 120mm or less. A too small bending radius will damage the product itself.

·If the actual application length exceeds the specified use length, it will cause the lamp belt to overload and heat, and the brightness is uneven.

·In order to prevent your eyes from being hurt, try to avoid staring at the light-emitting surface of the light bar for a long time.

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

· It is strictly forbidden to use any acidic or alkaline adhesives to fix products (including but not limited to glass glue, etc.).

· Different IP grades are used in different scenarios, and IP65 is not suitable for immersed environments.

· Products of different sizes and specifications under the same color temperature value due to structural differences, the final color of the product is slightly deviated, and it needs to be confirmed before use.

· Light strips that can be cut arbitrarily need to be glued or plugged after cutting. Colored light and color temperature are strictly prohibited to be cut to avoid damage to the lamp due to cutting.

· Please use professional cutting tools when cutting.

· 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.

.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