COLORS

MAGIC 360 Series **Specification**

NNR18

Indoor | IP65 | IK08 | CE | RoHS | CB | UKCA | UL E498657 | Reach | UV RESISTANT | FLAME RESISTANT | SALTWATER RESISTANT | SOLVENT RESISTANT

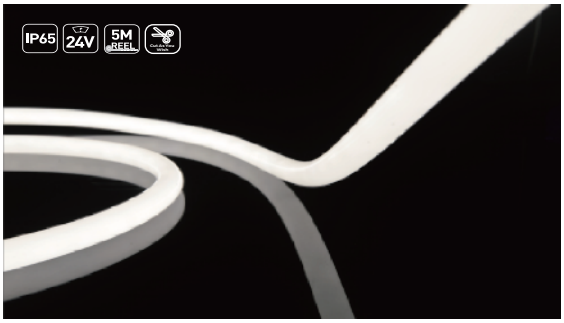


E-mail:colors@colorsled.com

Version：A01

www.colorsled.com

【Features】





· Light source: High luminous efficiency, LM80 test proved.

· Process & Material: High light transmittance, food-grade environmental silicone material, integrated extrusion molding technology,High protection level.

· Optical Design: Unique optical light distribution structure design, uniform lighting surface and no shadow.

· Appearance Design: Compared with the traditional neon tube or PVC guardrail tube, the silicone material has good flexibility, the simple and stylish appearance, which is exquisite and unique.

· Product Certification: UL、CE、ROHS、UKCA、CB.

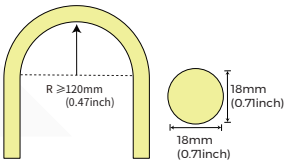
· Environmental Features: Resistance to saline solutions, acids & alkali, corrosive gases and UV.

· 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)	MAX power (W/m)	Lumens (LM/m)	Length	Remark
NNR18-9XX24CDN050CC0500 -ESD	2300K	1950-2350K	>90	24	0.6 (0.18A/ft)	14.4 (4.39W/ft)	16 (4.88W/ft)	700 (213LM/ft)	5000mm (16.4ft)	Arbitrary cut
	2700K	2450-2850K						700 (213LM/ft)		
	3000K	2800-3200K						800 (244LM/ft)		
	4000K	3800K-4300K						800 (244LM/ft)		
NNR18-0X24CDN050CC0500 -ESD	G 525-530nm	/	/		0.42 (0.13A/ft)	10 (3.05W/ft)	11 (3.35W/ft)	/		2*7LED/41.67mm
	B 465-470nm	/								
NNR18-9LWNW24CDN050CC0500 -ESD	2300-4000K	±200K	>90		0.6 (0.18A/ft)	14.4 (4.39W/ft)	16 (4.88W/ft)	850 (259LM/ft)		2*12LED/31.25mm
NNR18-0RGB24CDN050CC0500 -ESD	RGB	/	/		0.54 (0.18A/ft)	13 (3.96W/ft)	14.3 (4.39W/ft)	/		2*7LED/50mm

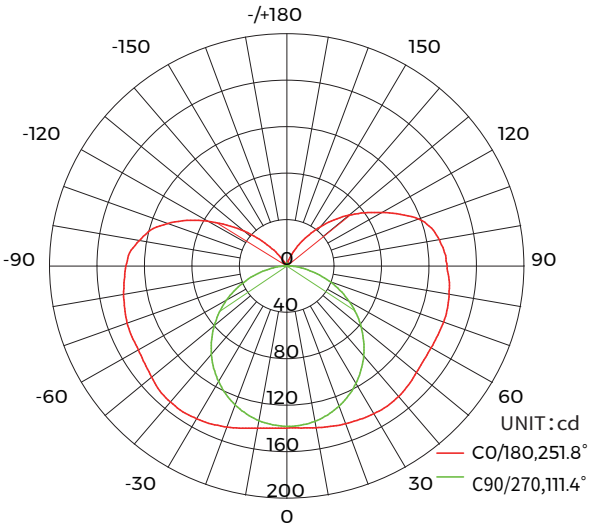
Note:

1、The above data is the testing result of 1M standard product;

2、The lumens of output data can be vary up to ±15%;

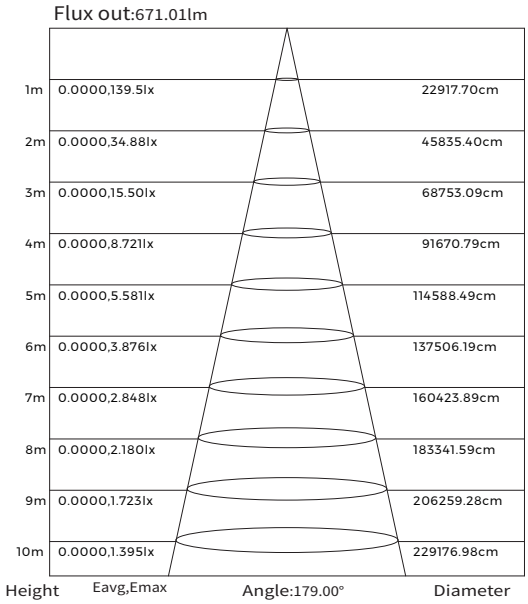
3、The above parameters are all typical values.

【Light Distribution】



AVERAGE BEAM ANGLE(50%):181.6°

Light distribution



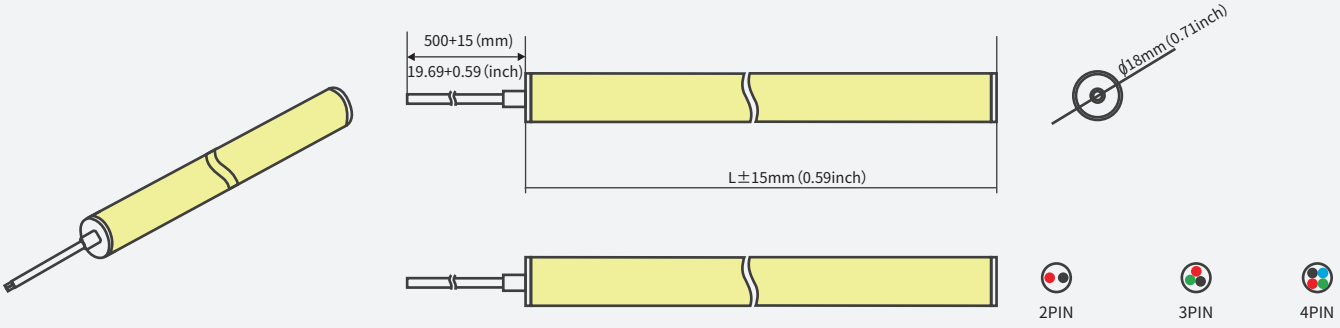
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

Effective average illuminance

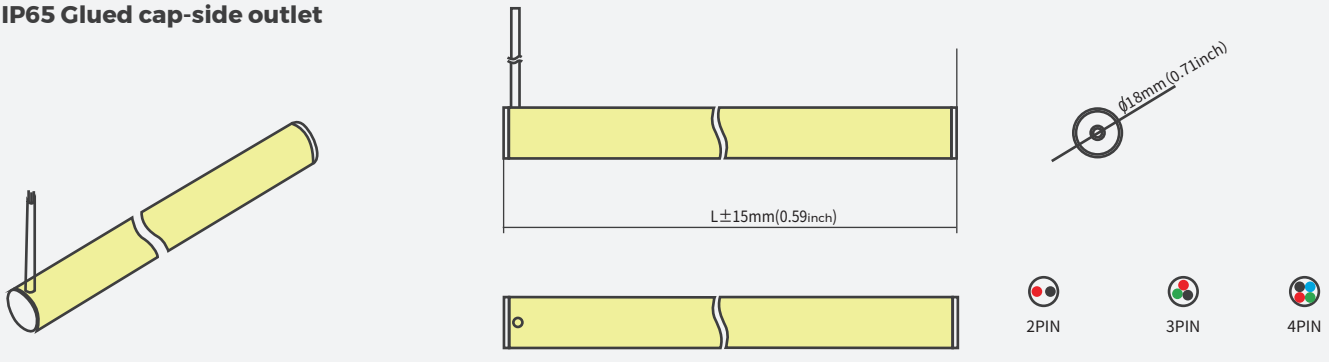
Note: The above data is based on 24V monochrome 4000K color temperature. If you need other models of IES files, please download the corresponding models from the IES database.

【Product Mechanical Parameters】

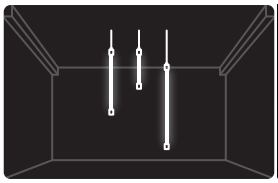
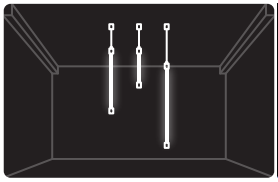
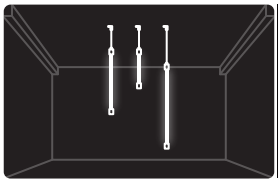
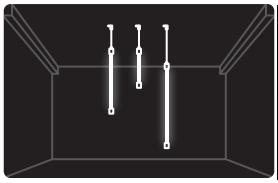
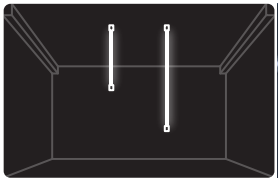
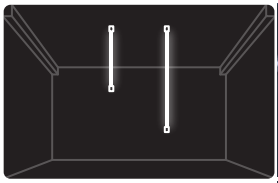
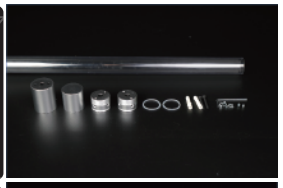
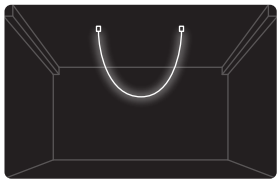
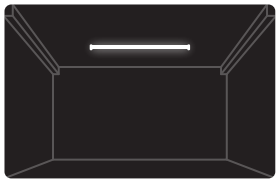
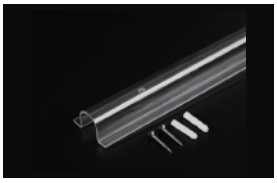
· IP65 Glued cap -top outlet



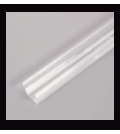
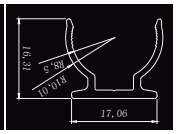
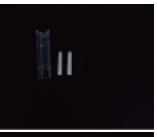
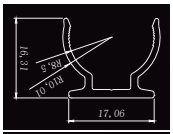
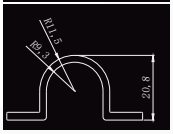
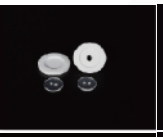
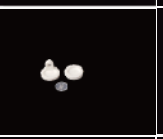
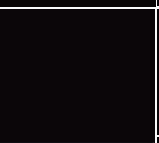
· IP65 Glued cap-side outlet



【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
		Hang the top vertically Outlet installation accessory kit (1m)	AS-NNR18VHD-1000	23	0.21	4.83	5.72	1285*160*160	NNR18-XXXXBC0100 Round tube:1M;Wire rope:2M For white, monochrome light only
		Vertical hanging from the top Install accessory kit (2.5m)	AS-NNR18VHD-2500	28	0.35	9.8	11.52	2580*165*165	NNR18-XXXXBC0250; Round tube:2.5M;Wire rope:2M For white, monochrome light only
		Vertical hanging side outlet Install accessory kit (1m)	AS-NNR18VHS-1000	23	0.19	4..37	5.26	1285*160*160	NNR18-XXXXBC0100 Round tube:1M;Wire rope:2M For white, monochrome light only
		Vertical hanging side outlet Install accessory kit (2.5m)	AS-NNR18VHS-2500	28	0.33	9.24	10.96	2580*165*165	NNR18-XXXXBC0250 Round tube:2.5M;Wire rope:2M For white, monochrome light only
		Single-ended vertical ceiling Install accessory kit (1m)	AS-NNR18VCC-1000	23	0.14	3.22	4.11	1285*160*160	NNR18-XXXXBC0100 Round tube:1M;
		Single-ended vertical ceiling Install accessory kit (2.5m)	AS-NNR18VCC-2500	28	0.28	7.84	9.56	2580*165*165	NNR18-XXXXBC0250 Round tube:2.5M;
		Double-ended vertical ceiling Kits	AS-NNR18VCC-XX-2	48	0.16	7.68	8.28	365*365*190	NNR18-XXXXBC0100 NNR18-XXXXBC0250 NNR18-XXXXBC0500
		Horizontal ceiling installation components	AS-NNR18LCX-1000	20	0.06	1.20	1.80	1180*125*115	NNR18-XXXXBC0100 NNR18-XXXXBC0500 PC slot:1M;

【Accessory Information】

Name	Description	Imgae	Sectional size	Ordering code	Quantity case (PCS)	net weight (kg)	Per box net weight (kg)	Gross weight (kg)	Packing (mm)	Remark
PC carrier	Flat mounting PC groove			AS-NNR18P-1000	48	0.08	3.84	4.84	1180*125*115	Size: L1000*W17.1*H16.3mm with screws
PC carrier	Flat mounting PC groove			AS-NNR18P-60	200	0.008	1.6	1.8	250*250*150	Size: L60*W17.1*H16.3mm with screws Recommended dosage: 1PCS/0.5M
PC carrier	Flat mounting PC groove			AS-NNR18P1-25	200	0.005	1	1.2	250*250*150	Size: L25*W44.6*H20.8mm with screws 3pcs/1M;5pcs/2.5M; 8pcs/5M
Glued cap	Glued cap		/	AS-NNR18GH0-EC	500	0.0003	0.15	0.8	250*250*150	/
Glued cap	Glued cap		/	AS-NNR18GS0-EC	500	0.0003	0.15	0.8	250*250*150	/
connector	2PIN IP68 Waterproof connector		/	AS-FC-0001	512	0.016	8.192	9.5	365*365*190	Suitable for single color strip
connector	3PIN IP68 Waterproof connector		/	AS-FC-0002	512	0.018	9.216	10.2	365*365*190	Suitable for SWW strip
connector	4PIN IP68 Waterproof connector		/	AS-FC-0003	512	0.018	9.216	10.2	365*365*190	Suitable for RGB strip
fixture	Cutting Fixture		/	AS-NNRSS0-CM	1	8.1	8.1	8.6	335*200*560	/
woven	woven		/	AS-NNR18CCX S-B-4/3	13	0.3	3.9	4.9	410*410*260	Size: φ115*H21mm with screws
				AS-NNR18CCX M-B-4/3	13	0.44	5.72	6.72	410*410*260	Size: φ150*H21mm with screws
				AS-NNR18CCX L-B-4/3	13	0.6	7.8	8.8	410*410*260	Size: φ175*H21mm with screws
woven	woven material		/	AS-NNR18C-046	48	0.06	2.88	3.38	365*365*190	Size: ϕ34*h46mm
woven	woven material		/	AS-NNR18C-076	48	0.11	5.28	5.78	365*365*190	Size: ϕ34*h76mm

【Accessory Information】

Name	Description	Imgae	Sectional size	Ordering code	Quantity case (PCS)	net weight (kg)	Per box net weight (kg)	Gross weight (kg)	Packing (mm)	Remark
Embedded accessory	Embedded accessory		/	AS-NNR18VRD-XX-2	36	0.14	5.04	5.54	410*410*260	Appearance size: ϕ57mm*H20mm Mounting hole size: ϕ35mm
Trimless embedded accessory	Trimless embedded accessory		/	AS-NNR18VTD-XX-2	36	0.09	3.24	3.84	410*410*260	Appearance size: ϕ55mm*H20mm Mounting hole size: ϕ35mm
Stealth accessories	Stealth accessories		/	AS-NNR13DCX-XX	500	0.0003	0.15	0.8	250*250*150	Size: L26*W9.4*H4mm with screws Recommended dosage: 1PCS/0.5M

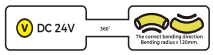
【Product control system solutions】

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 °C~0+55 °C	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°C— +55°C	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 °C~0+55 °C	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°C— +55°C	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 °C~0+55 °C	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°C— +55°C	RGB light strip (Use with CK4-GBA)

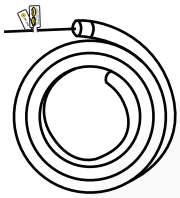
【Packaging Solutions】

· Standard Packaging

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



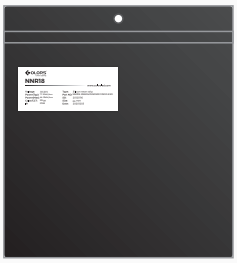
Voltage & bending warning signs



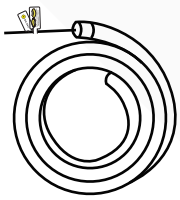
2. Put the product information label on the back back of the static bag inside the marking line;



Product Information Label



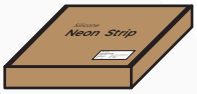
3.Put the light strip into anelectrostatic bag, one roll per bag, and seal the bag;





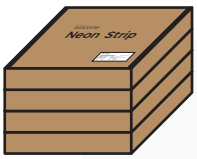


4. Label the carton and pack it into the carton





5. Pack 4 boxes of products in the carton

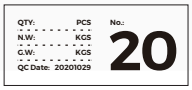




6. Put the product information label and the box number label on the side of the carton, and the QC inspection stamp



Product Information Label



Box number label



Model	Size	Product Quantity (bax)	Product Quantity (case)	Net weight (kg)	Net weight per box (kg)	Gross weight (kg)	Carton size(m)
NNR18-9XX24CDN050CC0500-ESD	L5000*φ18mm	5M*1	20M	1.6	7	8.2	0.41*0.41*0.26
NNR18-9LWNW24CDN050CC0500-ESD							
NNR18-0X24CDN050CC0500-ESD							
NNR18-0RGB24CDN050CC0500-ESD							

【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 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 120mm 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.

· 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.

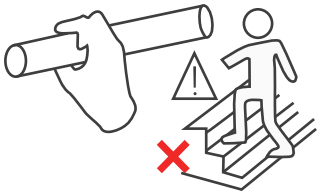
.When using dimmer and dimming power supplies like Triac, etc, conduct compatibility tests on the product, dimmers and power supplies to ensure full compatibility. If any issues arise, contact COLORS for technical support.



It is forbidden to wrap objects less than 120mm



NO stretching



No trampling