

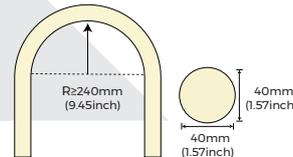
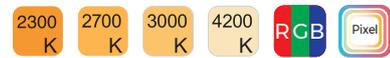
MAGIC 360 Series Specification

# NNR40



## 【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;
- Appearance design: skin-friendly surface treatment, comfortable touch, good flexibility, and simple shape;
- Product certification: UL, CE, ROHS, REACH, UKCA;
- Environmental characteristics: salt solution resistance, acid and alkali corrosion resistance, flame retardant resistance, UV resistance;
- Working/storage temperature: Ta: -25~55°C / 0°C~60°C;  
Symphony working/storage temperature: Ta: -20~40°C / 0°C~60°C;
- SPI chip mode and pixel count: R/G/B/RGB; WS2815,90Pixels/m;
- Product application: 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.



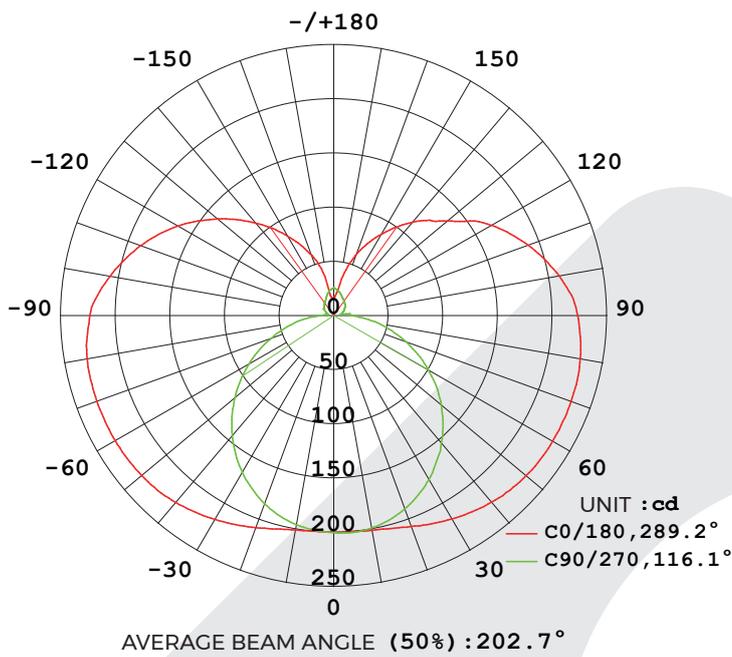
## 【Basic Parameters】

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			
NNR40-9XX 24CSN050CC0500 -ESD(LP)	2300K	1950-2400K	90	24V	0.625 (0.19A/ft)	15 (4.6W/ft)	16.5 (5.0W/ft)	1110(338.41/ft)	5000mm (16.4ft)	No cutting 14LED/41.67mm			
	2700K	2500-2900K						1260(384.15/ft)					
	3000K	2900-3350K						1310(399.39/ft)					
	4200K	4000-4500K						1310(399.39/ft)					
NNR40-9XX 24CSN050CC0500 -ESD(HP)	2300K	1950-2400K	90		24V	0.75 (0.23A/ft)	18 (5.5W/ft)	19.8 (6.0W/ft)	1890(576.22/ft)	5000mm (16.4ft)	No cutting 16LED/50mm		
	2700K	2600-2900K							2050(625.00/ft)				
	3000K	2900-3350K							2090(637.20/ft)				
	4200K	3900-4400K							2105(641.77/ft)				
NNR40-ORGB 24CSN050CC0500 -ESD	RGB	/	/			24V	0.6 (0.18A/ft)	14.4 (4.4W/ft)	16.56 (5.0W/ft)	445(135.67/ft)	5000mm (16.4ft)	No cutting 14LED/50mm	
NNR40-ORGBXX 24CSN050CC0500 -ESD	RGB-2300K	2160-2360K	/				12V	0.72 (0.22A/ft)	17.2 (5.2W/ft)	19.8 (6.0W/ft)	775(236.28/ft)	5000mm (16.4ft)	No cutting 24LED/62.5mm
	RGB-2700K	2615-2915K									895(272.87/ft)		
	RGB-3200K	2965-3365K									930(283.54/ft)		
	RGB-4000K	3715-4415K		895(272.87/ft)									
NNR40-ORGBX 12CSN050CC0500 -ESD	SPI	/	/	1.80 (0.55W/ft)				21.6 (5.2W/ft)	23.8 (7.2W/ft)	280(85.37/ft)	5000mm (16.4ft)	Arbitrary cutting 2LED/11.11mm IC:WS2815,90Pixels/m	

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  $\pm 15\%$ ;
3. The above parameters are typical values;
4. The standard size of 24V is 5m (16.4ft).

## [Light Distribution]



Light distribution

Flux out: 1034 lm

Height	Eavg, Emax	Diameter
1m	0.4013, 200.7lx	4580.75cm
2m	0.1003, 50.18lx	9161.50cm
3m	0.0446, 22.30lx	13742.26cm
4m	0.0251, 12.54lx	18323.01cm
5m	0.0161, 8.02lx	22903.76cm
6m	0.0111, 5.57lx	27484.51cm
7m	0.0082, 4.09lx	32065.26cm
8m	0.0063, 3.13lx	36646.01cm
9m	0.0050, 2.47lx	41226.77cm
10m	0.0040, 2.00lx	45807.52cm

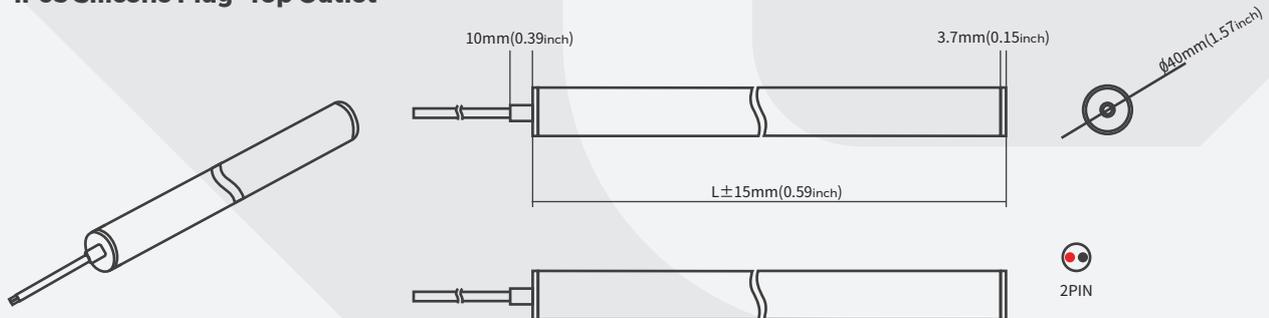
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

Effective average illuminance

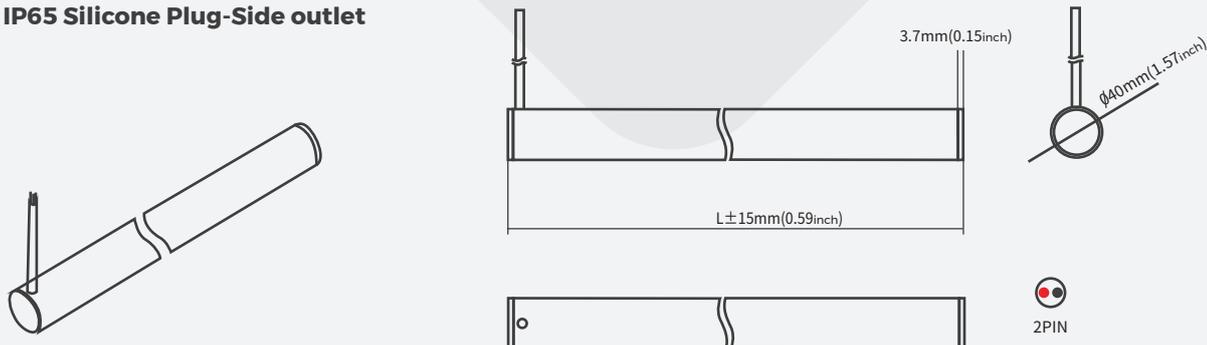
Note: The above data is based on 24V monochrome 4000K color temperature. If you need other models of IES files, please download the corresponding models from the IES database.

## [Product mechanical parameters]

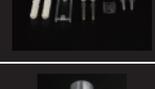
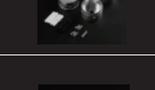
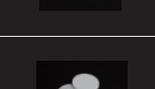
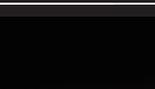
### • IP65 Silicone Plug -Top Outlet



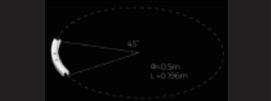
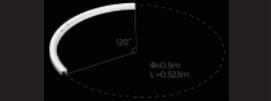
### • IP65 Silicone Plug -Side outlet



## [Accessory information]

Installation schematic	Accessories Picture	name	Order model	quantity/		Per box net weight (kg)	Gross weight (kg)	Packing (mm)	Remark
				case (PCS)	net weight (kg)				
/		NNR40 Trimless embedded accessory	AS-NNR40VTD-XX-2	36	0.14	5.04	7.48	410*410*260	Appearance size: $\phi 78 \times 25$ mm Mounting hole size: $\phi 55$ mm
/		NNR40 Embedded accessory	AS-NNR40VRD-XX-2	36	0.22	7.92	10.36	410*410*260	Appearance size: $\phi 80 \times 25$ mm Mounting hole size: $\phi 55$ mm
/		NNR40 N-buckle accessory	AS-NNR40PI-25	100	0.015	1.5	2.1	250*250*150	Appearance size: L25mm*W59mm*H43.3mm 3pcs/1M;5pcs/2.5M;8pcs/5M
/		NNR40 N-groove accessory	AS-NNR40LCX-1000	8	0.37	2.96	4.06	1180*125*115	Appearance size: L1000mm*W59mm*H43.3mm
/		NNR40 invisible buckle	AS-NNR40DCX-XX	600	0.01	6	6.6	250*250*150	Appearance size: PC:W14.3*H4.9*L32.2mm SUS304:W12.1*H1.5*L17.1mm Recommended dosage:1PCS/0.5M
/		NNR40 Ceiling mounting accessory	AS-NNR40VCC-XX-2	36	0.16	5.76	8.2	410*410*260	Appearance size: $\phi 50$ mm*47mm
/		NNR40 Hole Diameter 4.5mm top cap	AS-NNR40GHO-EC	540	0.01	5.4	6.4	410*410*260	suit to: White light, RGB
/		NNR40 Hole Diameter 4.5mm side cap	AS-NNR40GSO-EC	540	0.01	5.4	6.4	410*410*260	suit to: White light, RGB
/		NNR40 Hole Diameter 5.6mm top cap	AS-NNR40GH1-EC	540	0.01	5.4	6.4	410*410*260	suit to: SPI, RGBW
/		NNR40 Hole Diameter 5.6mm side cap	AS-NNR40GS1-EC	540	0.01	5.4	6.4	410*410*260	suit to: SPI, RGBW
/		2P PVC wire (0.5M)	AS-WS-0001	150	0.01541	2.31	2.61	250*250*150	suit to white light strip
/		2P PVC wire (2M)	AS-WS-0002	125	0.0616	7.7	8	250*250*150	
/		4P PVC wire (0.5M)	AS-WS-0003	150	0.0194	2.91	3.21	250*250*150	suit to RGB strip
/		4P PVC wire (2M)	AS-WS-0004	125	0.0776	9.7	10	250*250*150	
/		NNR40 Lifting accessories	AS-NNR40LHX-S2000	96	0.08	7.68	8.8	365*365*190	suit to:NNR40
/		NNR40 Splicing accessories	AS-NNR40LCX-0070SW	240	0.025	6	7.2	365*365*190	suit to:NNR40

## [Accessory information]

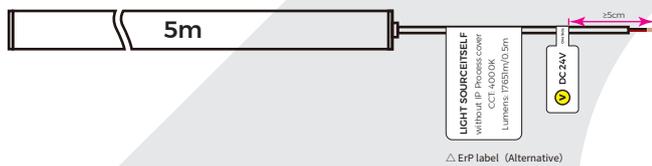
Installation schematic	Accessories Picture	name	Order model	quantity/		Per box net weight (kg)	Gross weight (kg)	Packing (mm)	Remark
				case	net weight (kg)				
/		0.5m linear profiles	AS-NNR40LH/CX-0500	40	0.16	6.4	7.8	1180*125*115	Appearance size: L500*W21*H12.2mm
/		1m linear profiles	AS-NNR40LH/CX-1000	20	0.32	6.4	7.8	1180*125*115	Appearance size: L1000*W21*H12.2mm
/		φ500mm side-bending 45° profile	AS-NNR40LH/CX-S50A45	144	0.056	8.06	9.16	560*560*125	Appearance size: φ500*21*12.2mm
/		φ500mm side-bending 90° profile	AS-NNR40LH/CX-S50A90	50	0.113	5.65	6.75	560*560*125	Appearance size: φ500*21*12.2mm
/		φ500mm side-bending 120° profile	AS-NNR40LH/CX-S50A120	30	0.151	4.53	5.63	560*560*125	Appearance size: φ500*21*12.2mm
/		φ500mm side-bending 180° profile	AS-NNR40LH/CX-S50A180	6	0.228	1.37	2.47	560*560*125	Appearance size: φ500*21*12.2mm
/		φ500mm upward bending 90° profile	AS-NNR40LH/CX-T050A90	50	0.115	5.75	6.85	560*560*125	Appearance size: φ500*21*12.2mm
/		φ500mm downward bending 90° profile	AS-NNR40LH/CX-D050A90	50	0.115	5.75	6.85	560*560*125	Appearance size: φ500*21*12.2mm
/		φ1000mm side-bending 45° profile	AS-NNR40LH/CX-S100A45	66	0.113	7.46	8.56	560*560*125	Appearance size: φ1000*21*12.2mm
/		φ1000mm side-bending 90° profile	AS-NNR40LH/CX-S100A90	6	0.226	1.36	2.46	560*560*125	Appearance size: φ1000*21*12.2mm
/		φ1000mm side-bending 120° profile	AS-NNR40LH/CX-S100A120	6	0.306	1.84	2.94	1135*305*100	Appearance size: φ1000*21*12.2mm
/		φ1000mm upward bending 90° profile	AS-NNR40LH/CX-T100A90	6	0.23	1.38	2.48	560*560*125	Appearance size: φ1000*21*12.2mm
/		φ1000mm downward bending 90° profile	AS-NNR40LH/CX-D100A90	6	0.23	1.38	2.48	560*560*125	Appearance size: φ1000*21*12.2mm
/		φ1500mm side-bending 45° profile	AS-NNR40LH/CX-S150A45	30	0.171	5.13	6.23	560*560*125	Appearance size: φ1500*21*12.2mm
/		φ1500mm side-bending 90° profile	AS-NNR40LH/CX-S150A90	6	0.344	2.06	3.16	1135*305*100	Appearance size: φ1500*21*12.2mm

## [Product control system solutions]

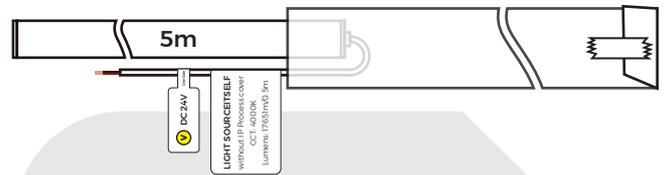
Product Image	product name	Product number	Order code	Product specifications	Applicable Products
	Monochrome remote	CK1-GBA	402-02-000000-00001	output signal: RF Working voltage: 3VDC(CR2032) Remote control distance: 30m Working temperature: Ta: 0-30 °C-0+55 °C	Monochrome light strip (Use with CR1-GBA)
	Monochrome 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)

## [Packaging Solutions]

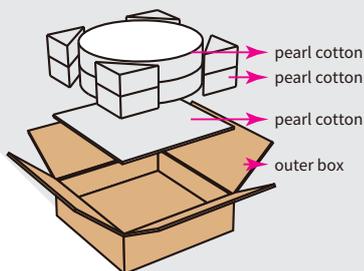
Step 1: Stick the line label, stick ErP label and UL label to suit reality;



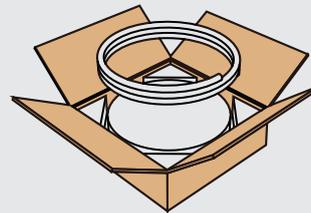
Step 2: Cover with PE film and seal with transparent glue;



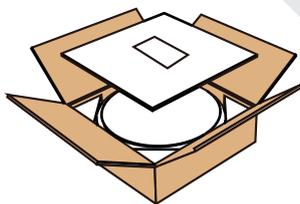
Step 3: Put the pearl cotton into the box;



Step 4: Wrap the product in the pearl cotton as required;



Step 5: Put the last pearl cotton on the surface, put instructions into the box, sealing the box;



Step 6: The outer box is sealed with sealing glue and the relevant labels are attached. QC inspection, covered with PASS stamp



Step 7: Play four packing tapes.



## 【Packaging Solutions】

Model	Size	Product Quantity (box)	Product Quantity (case)	Net weight (kg)	Net weight per box (kg)	Gross weight (kg)	Carton size(m)
NNR40-9XX24CDN050CC0500-ESD	5M	/	5M	6.55	6.55	9.55	0.59*0.59*0.21
NNR40-9XX24CDN050CC0500-ESD(HP)							
NNR40-0RGB24CDN050CC0500-ESD							
NNR40-0RGBX24CDN050CC0500-ESD							
NNR40-0RGBXX24CDN050CC0500-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]

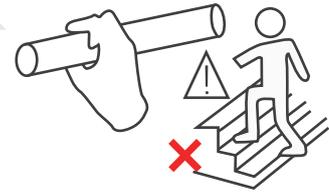
- Please use an isolated power supply to drive the LED light bar, and the ripple of the constant voltage source is less than 5%. Do not use resistance-capacitance step-down, non-isolated power supplies to drive the LED light bar.
- In actual applications, the power supply should reserve 20% of the margin (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