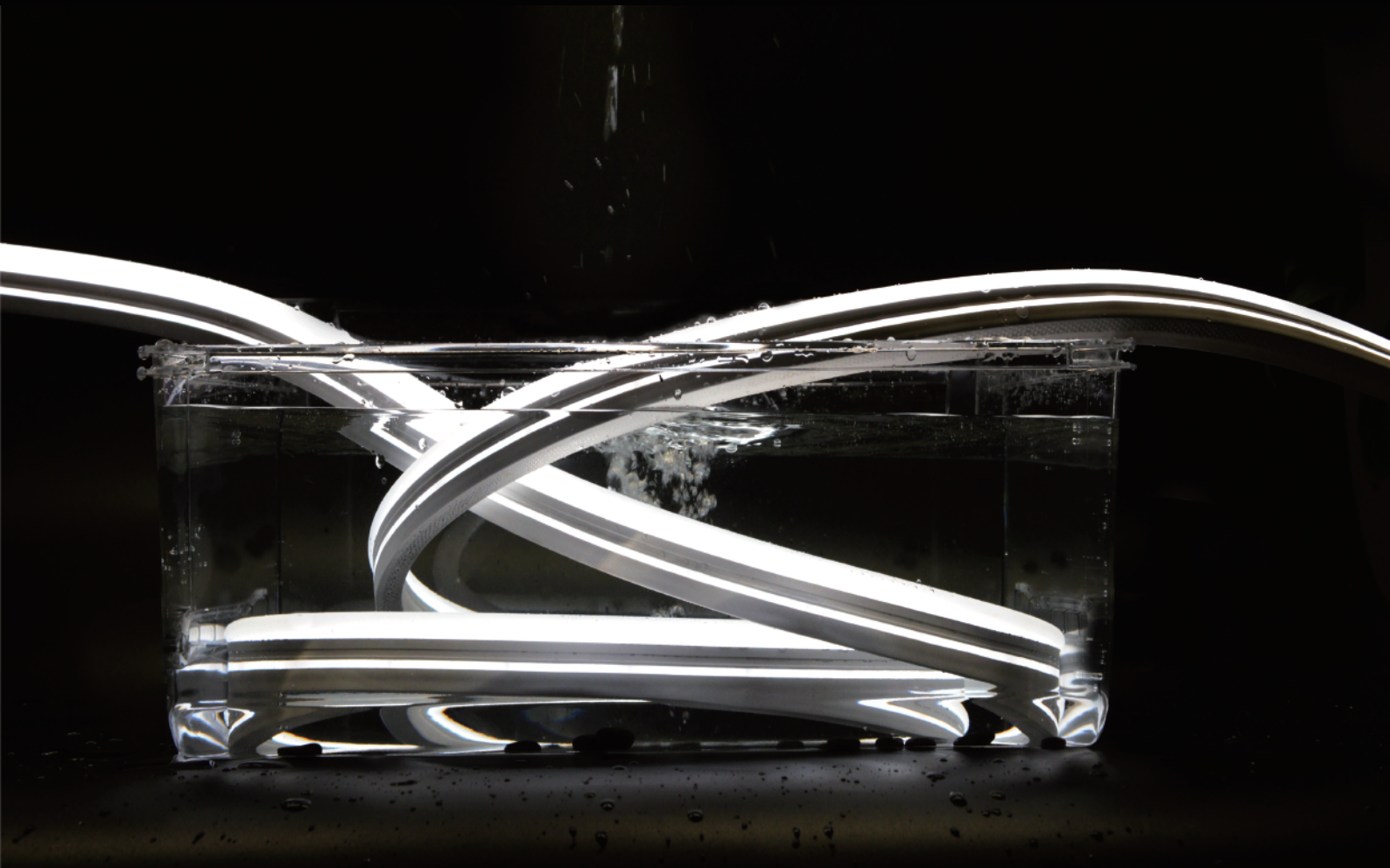


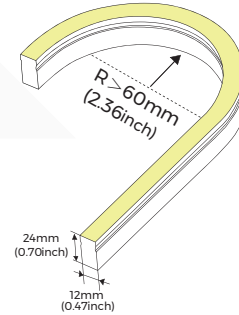
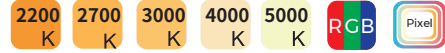
Neon Specification

# NNS1224



## 【Features】

- Light source: High luminous efficiency, LM80 test proved.
- Process & Material: three-color silicone extrusion technique is applied, Cutting mark more clear; integrated extrusion molding technology, IP67.
- Optical Design: Unique optical light distribution structure design, uniform lighting surface and no shadow.
- Appearance Design: Standard ESD oil spray, anti-dust; 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.
- DMX chip model and pixel count: RGBW: UCS512C1L, 8Pixels/m.
- Product Certification: UL、CE、ROHS、UKCA、CB.
- Environmental Features: Resistance to saline solutions, acids & alkali, corrosive gases and UV.
- Working/Storage Temperature: Ta: -20~55°C / 0°C~60°C;  
Symphony working/storage temperature: Ta: -20~40°C / 0°C~60°C;
- Application: Signage Lighting, Outdoor/indoor decorative lighting, Architectural Contour lighting.
- White/RGB with 3 years warranty or working life = 36000H, whichever comes first; SPI/D MX512 with warranty 2 years or working life = 20000H, whichever comes first.



Note: White/RGB light bending radius  $R \geq 60\text{mm}$  (2.36inch), SPI/DMX bending radius  $R \geq 80\text{mm}$  (2.6inch)

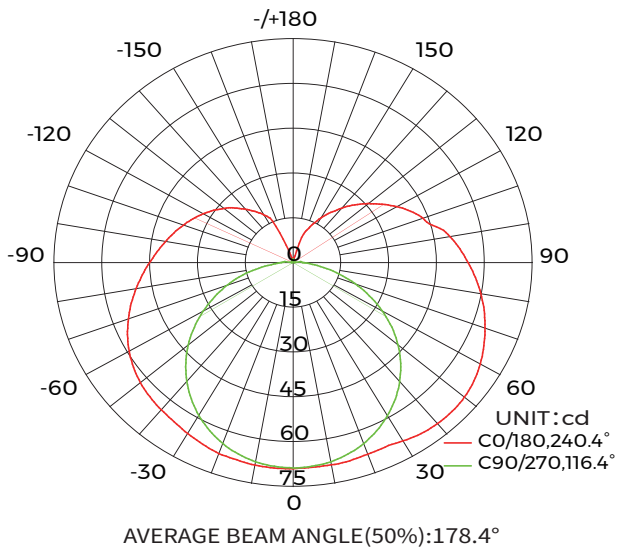
## 【Basic Parameters】

| Model                                 | CCT/colors | CRI | Input voltage (V) | Rated current (A/m) | Rated power (W/m) | MAX power (W/m)     | Lumens (LM/m)     | Length                                     | Remark                                    |
|---------------------------------------|------------|-----|-------------------|---------------------|-------------------|---------------------|-------------------|--|---|
| NNSI224-9XX24CSS050XCXXXX             | 2200K      | >90 | 24                | 0.4<br>(0.12A/ft)   | 9.6<br>(2.93W/ft) | 10.6<br>(3.23W/ft)  | 360<br>(109LM/ft) | 5000mm<br>(16.4ft)<br>10000mm<br>(32.81ft) | 7LED/50mm                                 |
|                                       | 2700K      |     |                   |                     |                   |                     | 420<br>(128LM/ft) |  |   |
|                                       | 3000K      |     |                   |                     |                   |                     | 440<br>(134LM/ft) |  |   |
|                                       | 4000K      |     |                   |                     |                   |                     | 430<br>(131LM/ft) |  |   |
|                                       | 5000K      |     |                   |                     |                   |                     | 430<br>(131LM/ft) |  |   |
| NNSI224-0RGB24CSS050XC0500            | RGB        | /   |                   | 0.5<br>(0.15A/ft)   | 12<br>(3.66W/ft)  | 13.2<br>(4.02W/ft)  | /                 | 5000mm<br>(16.4ft)                         | 7LED/83.3mm                               |
| NNSI224-0RGBXWM24CDS025XC0500(DMX512) | RGB+2700K  | /   | 24                | 0.63<br>(0.19A/ft)  | 15<br>(4.57W/ft)  | 17.25<br>(5.26W/ft) | 140<br>(42LM/ft)  | 5000mm<br>(16.4ft)                         | 7LED/125mm<br>(IC:UCS512C1L)<br>8Pixels/m |
|                                       | RGB+3000K  |     |                   |                     |                   |                     | 150<br>(45LM/ft)  |  |   |
|                                       | RGB+3500K  |     |                   |                     |                   |                     | 150<br>(45LM/ft)  |  |   |
|                                       | RGB+5000K  |     |                   |                     |                   |                     | 150<br>(45LM/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.

Flux out:181.2lm

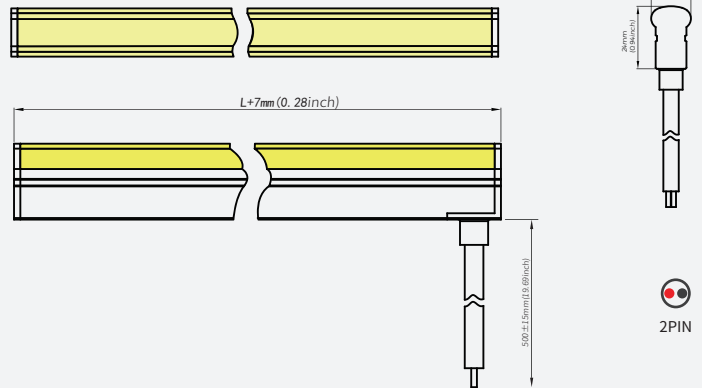
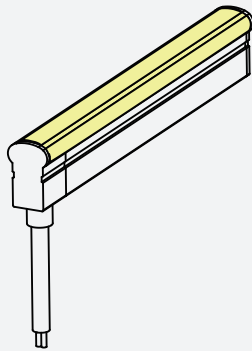
| Height | Eavg,Emax       | Angle:116.21° | Diameter  |
|--------|-----------------|---------------|-----------|
| 1m     | 20.82,69.01lx   |               | 321.41cm  |
| 2m     | 5.206,17.25lx   |               | 642.81cm  |
| 3m     | 2.314,7.668lx   |               | 964.22cm  |
| 4m     | 1.302,4.313lx   |               | 1285.62cm |
| 5m     | 0.8330,2.760lx  |               | 1607.03cm |
| 6m     | 0.5785,1.917lx  |               | 1928.43cm |
| 7m     | 0.4250,1.408lx  |               | 2249.84cm |
| 8m     | 0.3254,1.078lx  |               | 2571.24cm |
| 9m     | 0.2571,0.8519lx |               | 2892.65cm |
| 10m    | 0.2082,0.6901lx |               | 3214.06cm |

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

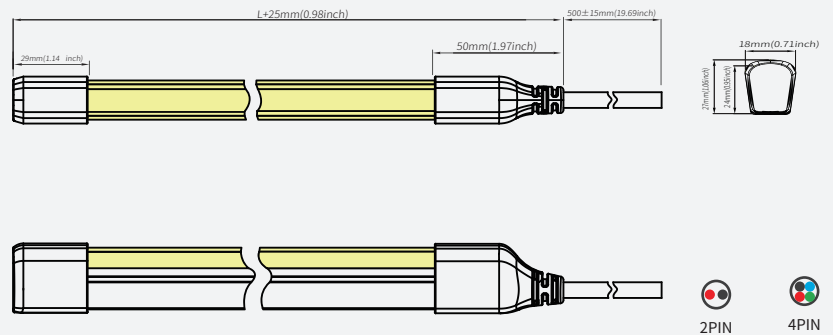
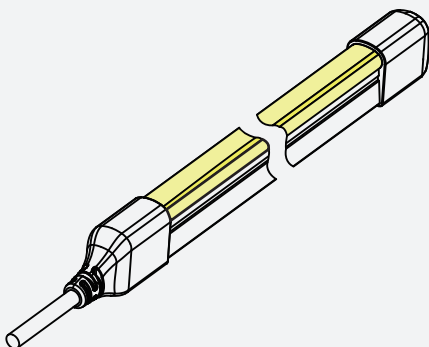
Effective average illuminance

## [Product Mechanical Parameters]

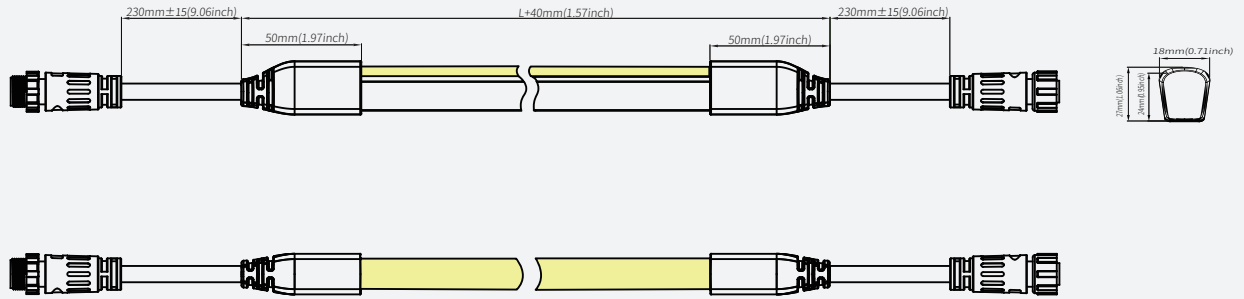
· IP67 No dark cap(ENP)-bottom outlet(white light)



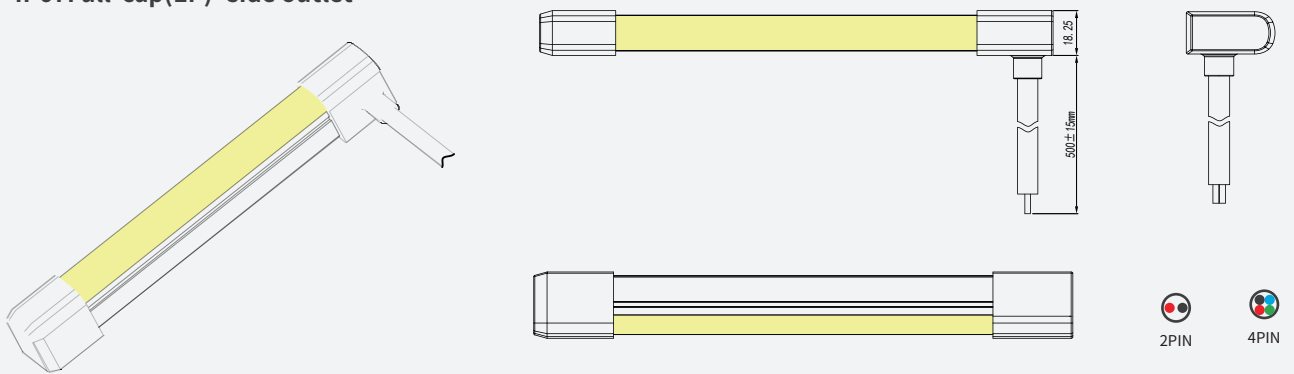
· IP67 Full encapsulated cap(EP)-top outlet



• IP67 Full cap(EP)- top outlet



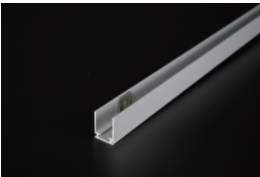
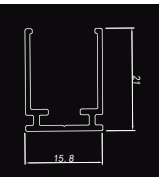

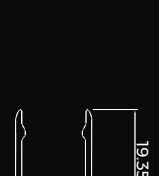


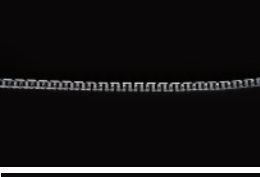
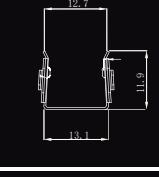


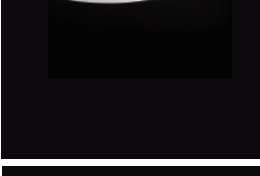
• IP67 Full cap(EP)- side outlet



**[Accessory information]**




| name            | describe                                       | Accessories Picture | Section size | Order model       | quantity/<br>case<br>(PCS) | net<br>weight<br>(kg) | Per box<br>net<br>weight<br>(kg) | Gross<br>weight<br>(kg) | Gross<br>weight<br>(mm) | Remark                                    |
|-----------------|--|---------------------|--------------|-------------------|----------------------------|-----------------------|----------------------------------|-------------------------|-------------------------|---|
| Alumina carrier | Flat mounting<br>aluminum groove               |                     |              | AS-NMS1217A-1000  | 60                         | 0.1755                | 10.53                            | 11.53                   | 1180*125*115            | size: L1000*W14.4*H18.85mm<br>With screws |
| Aluminum clip   | Flat mounting of clip                          |                     |              | AS-NMS1217A-25    | 300                        | 0.0044                | 2.01                             | 2.16                    | 250*250*150             | size: L25*W14.4*H18.85mm<br>With screws   |
| Alumina carrier | Aluminum groove<br>reserved outlet<br>position |                     |              | AS-NMS1217A1-1000 | 48                         | 0.1755                | 8.424                            | 9.5                     | 1180*125*115            | size:L1000*W14.4*H24.85mm<br>With screws  |
| Aluminum clip   | Clip of reserved<br>outlet position            |                     |              | AS-NMS1217A1-25   | 300                        | 0.0044                | 2.01                             | 2.16                    | 250*250*150             | size:L25*W14.4*H24.85mm<br>With screws    |

## [Accessory information]






| name             | describe                       | Accessories Picture   | Section size  | Order model       | quantity/<br>case<br>(PCS) | net<br>weight<br>(kg) | Per box<br>net<br>weight<br>(kg) | Gross<br>weight<br>(kg) | Gross<br>weight<br>(mm) | Remark   |
|------------------|--------------------------------|---|---|-------------------|----------------------------|-----------------------|----------------------------------|-------------------------|-------------------------|--|
| Alumina carrier  | Pre-installed aluminium groove |    |  | AS-NMS1217A2-1000 | 48                         | 0.17                  | 8.16                             | 9.16                    | 1180*125*115            | size:<br>L1000*W15.8*H21mm<br>With screws, One meter<br>with 5 clips<br>Cannot be used upside down |
| PC carrier       | Flat mounting PC groove        |    |  | AS-NMS1217P-1000  | 60                         | 0.08                  | 4.8                              | 5.8                     | 1180*125*115            | size: L1000*W14.6*H19.35mm<br>With screws  |
| PC carrier       | Flat mounting of PC clip       |    |  | AS-NMS1217P-25    | 350                        | 0.004                 | 1.505                            | 1.655                   | 250*250*150             | size:L25*W14.6*H19.35mm<br>With screws   |
| Moldable carrier | Moldable groovez               |    |  | AS-NMS1217M1-500  | 100                        | 0.0377                | 3.77                             | 6.49                    | 500*290*290             | size: L500*W13.1*H11.9mm<br>With screws<br>Cannot be used upside down                              |
| 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 single color strip  |
| Wire             | 2P PVC wire (2M)               |   | /   | AS-WS-0002        | 125                        | 0.0616                | 7.7                              | 8                       | 250*250*150             | Suitable for single color strip  |
| Wire             | 4P PVC wire (0.5M)             |  | /   | AS-WS-0003        | 150                        | 0.0194                | 2.91                             | 3.21                    | 250*250*150             | Suitable for RGB strip   |
| Wire             | 4P PVC wire (2M)               |   | /   | AS-WS-0004        | 125                        | 0.0776                | 9.7                              | 10                      | 250*250*150             |  |

Note: AS-NMS1217A2-1000/AS-NMS1217M1-500 cannot be installed with the lighted side down, if you need to install it downward, we recommend using AS-NMS1217A-1000




## [Accessory information]

| name      | describe                       | Accessories Picture   | Section size | Order model        | quantity/  |                 | Per box net weight (kg) | Gross weight (kg) | Gross weight (mm) | Remark  |
|-----------|--------------------------------|---|--------------|--------------------|------------|-----------------|-------------------------|-------------------|-------------------|---|
|           |                                |   |              |                    | case (PCS) | net weight (kg) |                         |                   |                   |   |
| Connector | 2PIN IP68 waterproof connector |  | /            | AS-FC-0001         | 512        | 0.016           | 8.192                   | 9.5               | 365*365*190       | Suitable for single color strip                   |
| Connector | 4PIN IP68 waterproof connector |   |              | AS-FC-0003         | 288        | 0.03            | 8.64                    | 9.6               | 365*365*190       | Suitable for RGB strip<br>Suitable for RGBX strip |
| wire      | 5P T-Connection Wire           |  | /            | AS-FC-0030         | 20         | 0.07            | 1.4                     | 1.7               | 250*250*150       | Suitable for DMX led strip<br>Wire length 150mm   |
| wire      | 5P DC wire (Female)            |  | /            | AS-FC-0024 (0.25M) | 200        | 0.0215          | 4.3                     | 4.6               | 250*250*150       | Suitable for DMX led strip                        |

## [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<br>Working voltage:3VDC(CR2032)<br>Remote control distance:30m<br>Working temperature:Ta:0-30 °C-0+55 °C   | Monochrome light strip<br>(Use with CR1-GBA) |
|   | Monochrome light controller  | CR1-GBA        | 402-01-000000-00001 | Input voltage:DC12-48V<br>Output current:15A@12V/24V,10A@36V/48V<br>Output Power:Max 180W@12V/Max 360W@24V/Max 360W@36V/Max 480W@48V<br>Working temperature: -30°C— +55°C | Monochrome light strip<br>(Use with CR1-GBA) |
|  | CCT remote control           | CK2-GBA        | 402-02-000000-00002 | output signal:RF<br>Working voltage:3VDC(CR2032)<br>Remote control distance:30m<br>Working temperature:Ta:0-30 °C-0+55 °C   | CCT light strip<br>(Use with CR2-GBA)        |
|   | Color temperature controller | CR2-GBA        | 402-01-000000-00002 | Input voltage:DC12-48V<br>Output current:8A<br>Output Power:Max 192W@12V/Max 284W@24V/Max 576W@36V/Max 768W@48V<br>Working temperature: -30°C— +55°C                      | CCT light strip<br>(Use with CK2-GBA)        |
|  | RGB/RGBW remote control      | CK4-GBA        | 402-02-000000-00003 | output signal:RF<br>Working voltage:3VDC(CR2032)<br>Remote control distance:30m<br>Working temperature:Ta:0-30 °C-0+55 °C   | RGB/RGBW light strip<br>(Use with CR3-GBA)   |

## [Product control system solutions]

| Product Image  | product name        | Product number | Order code          | Product specifications  | Applicable Products                    |
|--|---------------------|----------------|---------------------|---|--|
|  | RGB controller      | CR3-GBA        | 402-01-000000-00003 | Input voltage: DC12-48V<br>Output current: 18A<br>Output Power: Max 216W@12V/Max 432W@24V/Max 648W@36V/Max 864W@48V<br>Working temperature: -30°C—+55°C | RGB light strip<br>(Use with CK4-GBA)  |
|  | RGBW controller     | CR4-GBA        | 402-01-000000-00004 | Input voltage: DC12-48V<br>Output current: 20A<br>Output Power: Max 240W@12V/Max 480W@24V/Max 720W@36V/Max 960W@48V<br>Working temperature: -30°C—+55°C | RGBW light strip<br>(Use with CK4-GBA) |
|  | Symphony Controller | K-8000C        | 23-01-00-0050       | Power supply: DC 5V-24V input<br>Power consumption: 5W<br>Working temperature: Ta: 0-20 °C-0+85 °C  | DMX/SPI magic lights with universal    |

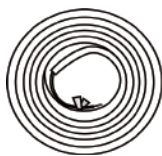
## [Packaging Solutions]

### • Standard Packaging

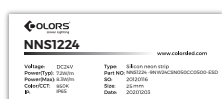
1. Line marking, the line marking is affixed at a distance of 80mm from the end of the line;



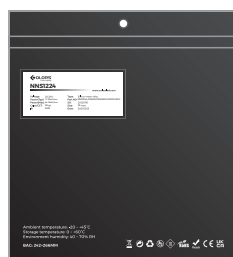
Voltage & bending warning signs



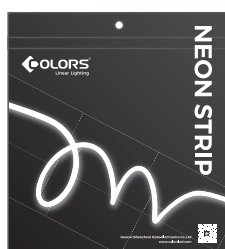
2. Put the product information label on the back back of the static bag inside the marking line;



Product Information Label



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



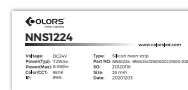
4. Label the carton and pack it into the carton



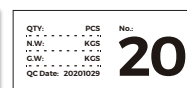
5. Pack 4 boxes of products in the carton



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 (box) | Product Quantity (case) | Net weight (kg) | Net weight per box (kg) | Gross weight (kg) | Carton size(m)   |
|---------------------------------------|----------------|------------------------|-------------------------|-----------------|-------------------------|-------------------|------------------|
| NNS1224-9XX24NSN050CC0500             | L5000*12*24mm  | 5M*4                   | 20M                     | 1.95            | 7.8                     | 9.12              | 0.365*0.365*0.19 |
| NNS1224-9XX24NSN050CC1000             | L10000*12*24mm | 10M*4                  | 40M                     | 3.65            | 14.6                    | 16.8              | 0.41*0.41*0.26   |
| NNS1224-ORGB24NSN050CC0500            | L5000*12*24mm  | 5M*4                   | 20M                     | 1.95            | 7.8                     | 9.12              | 0.365*0.365*0.19 |
| NNS1224-ORGBXWM24CDS050XC0500(DMX512) | L5000*12*24mm  | 5M*4                   | 20M                     | 1.95            | 7.8                     | 9.12              | 0.365*0.365*0.19 |

## [Reliability test]

| test item                       | Classification                       | Reference                      | Test method or condition   |
|---------------------------------|--------------------------------------|--------------------------------|--|
| Safety test                     | Mechanical strength                  | IEC 60598-1;<br>IEC 60598-2-21 | The hammer spring Impact energy 0.7J   |
|                                 | IP                                   | IEC 60598-1;<br>IEC 60598-2-21 | IP67   |
|                                 | Winding Test                         | IEC 60598-1;<br>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;<br>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;<br>IEC 60598-2-21 | Low-temperature (-15°C±5°C, 16h), hammer falls from a height of 100mm.                           |
|                                 | Insulation Resistance                | IEC 60598-1;<br>IEC 60598-2-21 | ≤ 2MΩ  |
|                                 | Electrical strength                  | IEC 60598-1;<br>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 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.)
- Please confirmed before usage as products of varied sizes show slight differences in their color under same color temperature due to their structural differences.
- When IP68 protective products are installed and applied, the waterproofing grade should be degraded after self-processing and cutting.
- Please use professional cutting tools when cutting.
- Attention, there are 2 soldering parts per reel (5m/reel) at most when mass production.
- Not suitable for immersion in an environment containing HClO.
- 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

