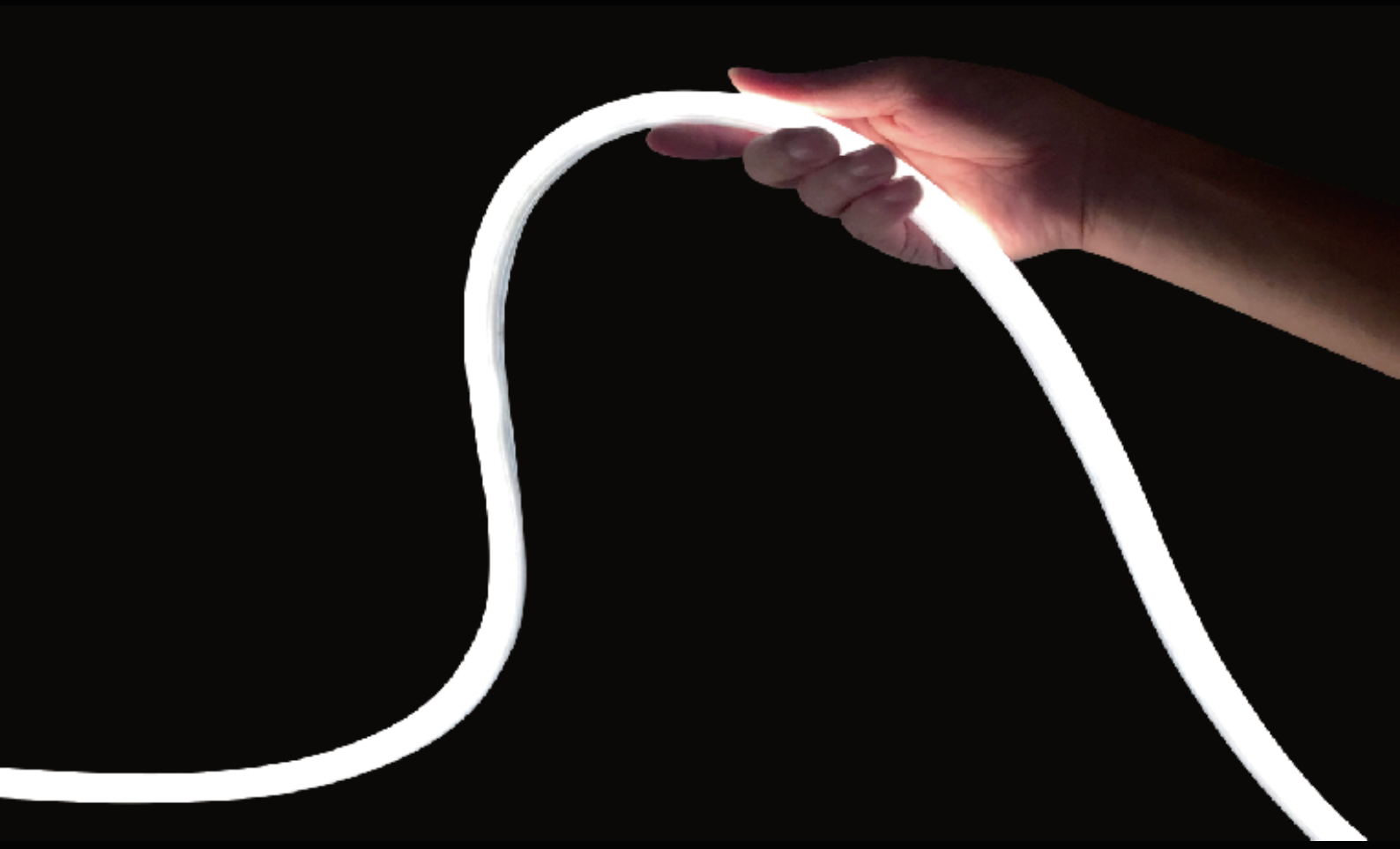
COLORS®

AF Series Specification

# AFT1615



Version：A00

www.colorsled.com

## 【Features】

**Light source**: Adopting dedicated and outdoor-specific LED, stronger reliability for outdoor application; Finished product ANSI SDCM≤5;

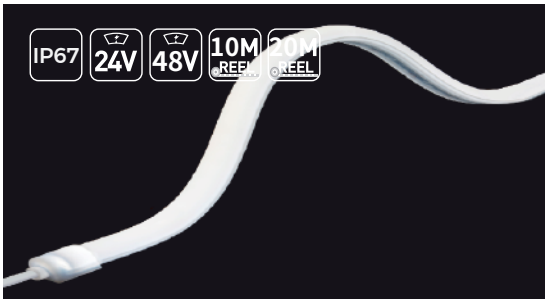
· **Structure**: New anti-tension structure, Integrated anti-tension silicone extrusion process, against internal stress and external tension;
White light double-layer circuit conductive, double power supply guarantee, broken boards without power cut;

· **DMX Chip model and pixel count**: white light/ RGB/RGBW: UCS512H4LB,12 Pixels/m;

· **Product applications**: outdoor illumination, architectural facade lighting; IP67

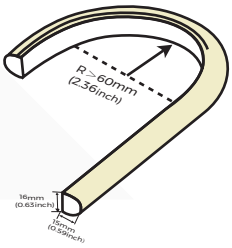
· **Working/storage temperature(White/monochromatic light)**: Ta: -40~60°C / 0～60°C
**Symphony working/storage temperature(DMX/RGB/RGBW)**: Ta: -40~50°C / 0°C～60°C

· White with 7 years warranty or working life =84000H,whichever comes first;RGB/RGBW/RGBM/RGBWM/White(DMX) with warranty 5 years or working life=60000H,whichever comes first.










Note: White/RGB/RGBW light bending radius R≥60mm(2.36inch), DMX bending radius R≥80mm(3.15inch)

## 【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 |
|---|---|---|---|---|---|---|---|---|---|---|
| AFT1615-9XX24CSW025CC XXXX-GV10-ENP-ESD | 2700K | 2600-2830K | >90 | 24 | 0.4 (0.12A/ft) | 10 (3.05W/ft) | 11 (3.35W/ft) | 708 (216LM/ft) | 10000mm (32.81ft) | 16LED/50mm |
| | 3000K | 2920-3170K | | | | | | 748 (228LM/ft) | | |
| | 4000K | 3770-4220K | | | | | | 834 (254LM/ft) | | |
| AFT1615L-9XX24CSW025CC XXXX-GV10-ENP-ESD | 2700K | 2600-2830K | >90 | | 0.2 (0.06A/ft) | 5 (1.53W/ft) | 5.5 (1.68W/ft) | 360 (110LM/ft) | 15000mm (49.21ft) | 16LED/50mm |
| | 3000K | 2920-3170K | | | | | | 390 (119LM/ft) | | |
| | 4000K | 3770-4220K | | | | | | 420 (128LM/ft) | | |
| AFT1615-0X24CSW025CC XXXX-GV10-ENP-ESD | G/B | / | / | | 0.4 (0.12A/ft) | 10 (3.05W/ft) | 11 (3.35W/ft) | / | 10000mm (32.81ft) | 16LED/50mm |
| AFT1615-0RGB24CSW025CC XXXX-GV10-ENP-ESD | RGB | | | | 0.5 (0.15A/ft) | 12 (3.66W/ft) | 13.2 (4.02W/ft) | / | 5000mm (16.4ft) | 6*3LED/50mm |
| AFT1615-0RGBXW24CSW025CC XXXX-GV10-ENP-ESD | RGB+2700K | RGB+(2550-2800K) | / | | 0.5 (0.15A/ft) | 12 (3.66W/ft) | 13.2 (4.02W/ft) | 144 (44LM/ft) | 5000mm (16.4ft) | 7*4LED/83.3mm |
| | RGB+3000K | RGB+(2800-3200K) | | | | | | 168 (51LM/ft) | | |
| | RGB+4000K | RGB+(3900-4350K) | | | | | | 170 (52LM/ft) | | |
| AFT1615-9XWM24CSW025CC XXXX-GV10-ENP-ESD | 2700K | 2550-2800K | >90 | | 0.6 (0.18A/ft) | 13.5 (4.12W/ft) | 14.8 (4.51W/ft) | 518 (158LM/ft) | 5000mm (16.4ft) | 7*3LED/83.3mm DMX-IC: UCS512H4LB 12 Pixels/m |
| | 3000K | 2800-3200K | | | | | | 659 (201LM/ft) | | |
| | 4000K | 3900-4350K | | | | | | 653 (199LM/ft) | | |
| AFT1615-0RGBM24CSW025CC XXXX-GV10-ENP-ESD | RGB | / | / | | 0.6 (0.18A/ft) | 13.5 (4.12W/ft) | 14.8 (4.51W/ft) | / | 5000mm (16.4ft) | 7*3LED/83.3mm UCS512H4LB 12 Pixels/m |
| AFT1615-0RGBXWM24CSW025 CCXXXX-GV10-ENP-ESD | RGB+2700K | RGB+(2550-2800K) | / | | 0.7 (0.21A/ft) | 16.5 (5.03W/ft) | 18.1 (5.52W/ft) | 168 (51LM/ft) | 5000mm (16.4ft) | 7*4LED/83.3mm DMX-IC: UCS512H4LB 12 Pixels/m |
| | RGB+3000K | RGB+(2900-3250K) | | | | | | 210 (64LM/ft) | | |
| | RGB+4000K | RGB+(3900-4350K) | | | | | | 214 (65LM/ft) | | |
| AFT1615-9XX48CSW025CC XXXX-GV10-ENP-ESD | 2700K | 2600-2830K | >90 | 48 | 0.21 (0.06A/ft) | 10 (3.05W/ft) | 11 (3.35W/ft) | 635 (194LM/ft) | 20000mm (65.62ft) | 32LED/100mm |
| | 3000K | 2920-3170K | | | | | | 680 (207LM/ft) | | |
| | 4000K | 3770-4220K | | | | | | 770 (235LM/ft) | | |

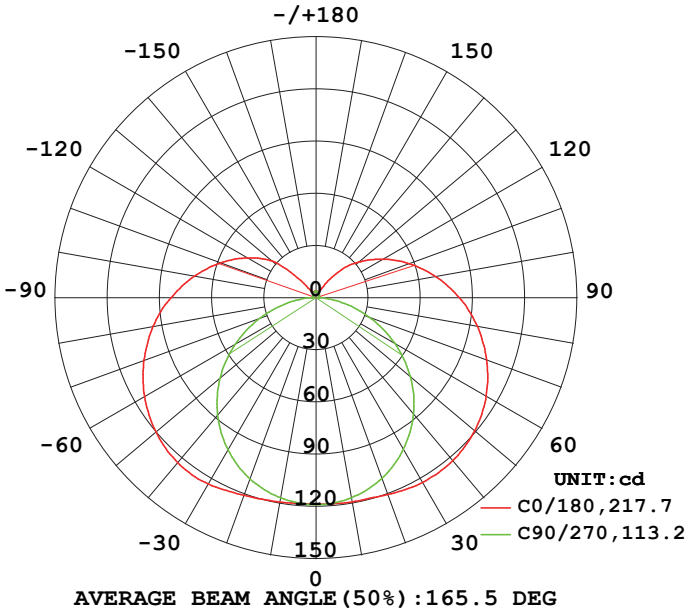
Note：

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

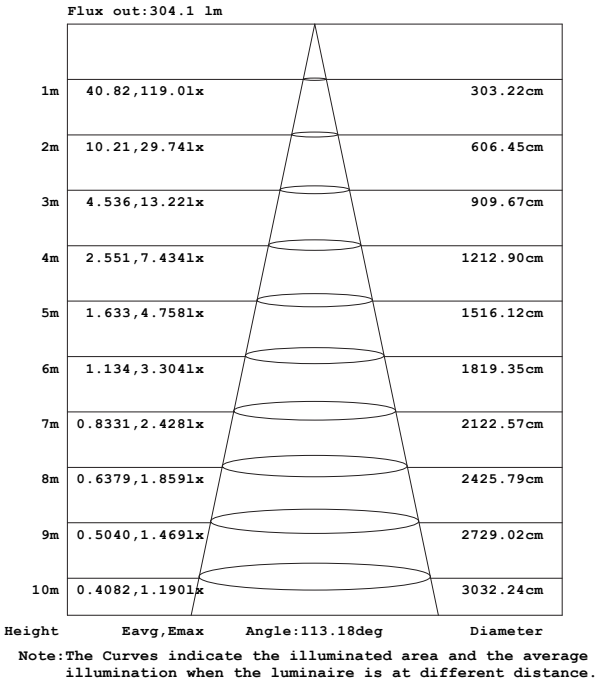
2、The luminous flux is allowed to have an error range of -15%~+∞;

3、The above parameters are all typical values.

## 【Light Distribution】




Light distribution

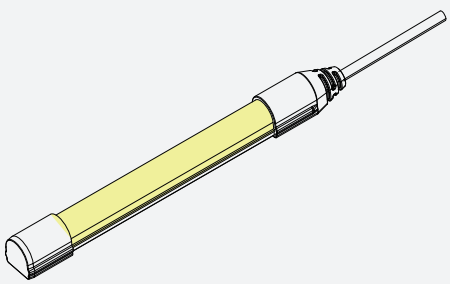


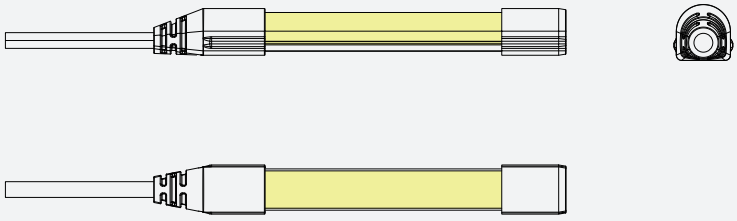

Effective average illuminance

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】

**·IP67 Full encapsulted cap(EP)-top outlet**

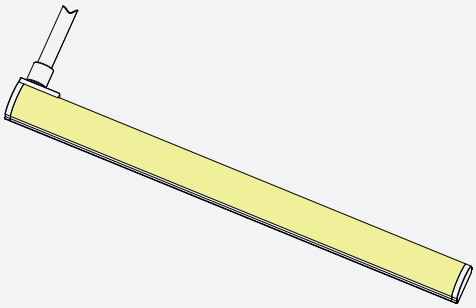


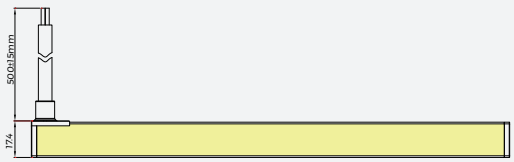




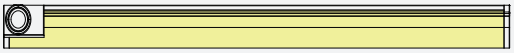
2PIN 4PIN 5PIN

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





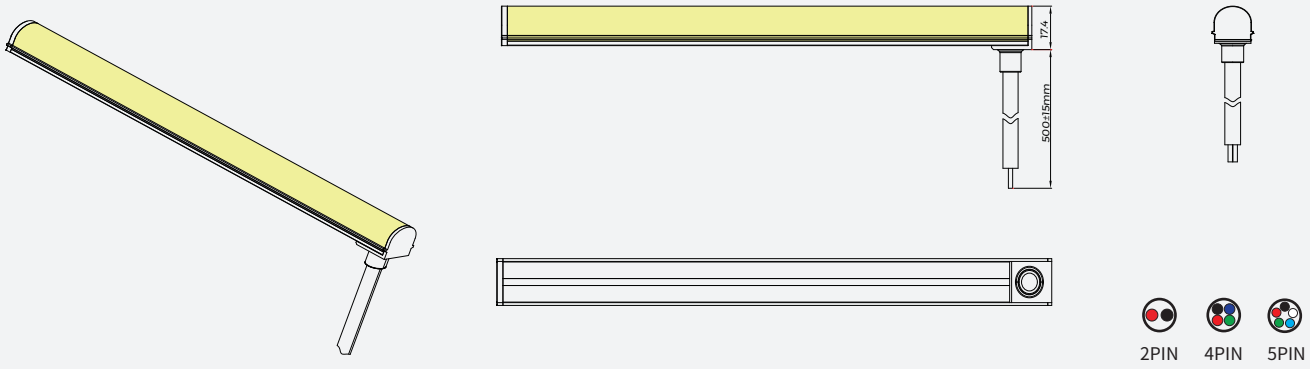


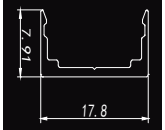
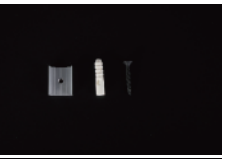
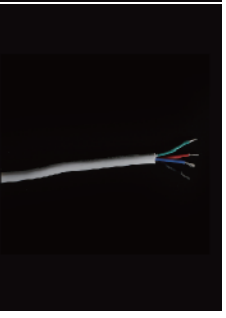


2PIN 4PIN 5PIN

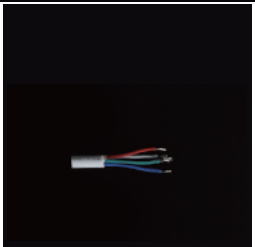
· IP67 No dark cap(ENP)- bottom outlet




## 【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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Alumina carrier | Flat mounting aluminum groove |  |   | AS-NNT1615A-1000 | 100 | 0.098 | 9.8 | 10.8 | 1180*125*115 | Size: L1000*W17.8*H7.9mm with screws |
| Aluminum clip | Flat mounting of clip |  | | AS-NNT1615A-25 | 800 | 0.0047 | 3.76 | 4.06 | 250*250*150 | Size: L25*W17.8*H7.9mm with screws |
| 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 light strip |
| Wire | 2P PVC Wire (2M) | | | AS-WS-0002 | 125 | 0.0616 | 7.7 | 8 | | |
| Wire | 4P PVC Wire (0.5M) |  | / | AS-WS-0003 | 150 | 0.0194 | 2.91 | 3.21 | 250*250*150 | Suitable for RGB light strip |
| Wire | 4P PVC Wire (2M) | | | AS-WS-0004 | 125 | 0.0776 | 9.7 | 10 | | |

# 【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 |
|---|---|---|---|---|---|---|---|---|---|---|
| wire | 5P PVC wire（0.5M） |  | / | AS-WS-0013 | 150 | 0.0195 | 2.925 | 3.364 | 250*250*150 | Suitable for RGBW strip |
| wire | 5P PVC wire（2M） | | | AS-WS-0014 | 125 | 0.0755 | 9.4375 | 10.86 | | |
| Connector | 2PIN IP68 waterproof connector |  | / | AS-FC-0001 | 512 | 0.016 | 8.192 | 9.5 | 365*365*190 | Suitable for single light strip |
| Connector | 4PIN IP68 waterproof connector | | | AS-FC-0003 | 288 | 0.03 | 8.64 | 9.6 | | Suitable for RGB light strip |
| wire | 2P T-Connection Wire |  | / | AS-FC-0027 | 20 | 0.065 | 1.31 | 1.6 | 250*250*150 | Suitable for monochromatic led strip Wire length 150mm, IP67 |
| wire | 2P male connector wire |  | / | AS-FC-0009(0.25M)<br>AS-FC-0010(0.5M)<br>AS-FC-0011(2M) | 200<br>200<br>50 | 0.0193<br>0.031<br>0.1012 | 3.86<br>6.2<br>5.06 | 4.16<br>6.5<br>5.36 | 250*250*150 | suitable for monochromatic led strip Wire lengths are optional: 0.25M/0.5M/2M |
| wire | 2P female connector wire |  | / | AS-FC-0012 (0.25M)<br>AS-FC-0013(0.5M)<br>AS-FC-0014(2M) | 200<br>200<br>50 | 0.0212<br>0.0329<br>0.1031 | 4.24<br>6.58<br>5.16 | 4.54<br>6.88<br>5.48 | 250*250*150 | suitable for monochromatic led strip Wire lengths are optional: 0.25M/0.5M/2M |
| wire | 4P T-Connection Wire |  | / | AS-FC-0028 | 20 | 0.068 | 1.35 | 1.65 | 250*250*150 | suitable for RGB led strip Wire length 150mm |
| wire | 4P male connector wire |  | / | AS-FC-0015 (0.25M)<br>AS-FC-0016(0.5M)<br>AS-FC-0017(2M) | 200<br>200<br>50 | 0.0196<br>0.0316<br>0.1036 | 3.92<br>6.32<br>5.18 | 4.22<br>6.62<br>5.48 | 250*250*150 | suitable for RGB led strip Wire lengths are optional: 0.25M/0.5M/2M |
| wire | 4P female connector wire |  | / | AS-FC-0018 (0.25M)<br>AS-FC-0019(0.5M)<br>AS-FC-0020(2M) | 200<br>200<br>50 | 0.0215<br>0.0354<br>0.1188 | 4.3<br>7.08<br>5.94 | 4.6<br>7.38<br>6.24 | 250*250*150 | suitable for RGB led strip Wire lengths are optional: 0.25M/0.5M/2M |
| wire | 5P T-Connection Wire |  | / | AS-FC-0029 | 20 | 0.069 | 1.39 | 1.69 | 250*250*150 | suitable for RGBW led strip Wire length 150mm |

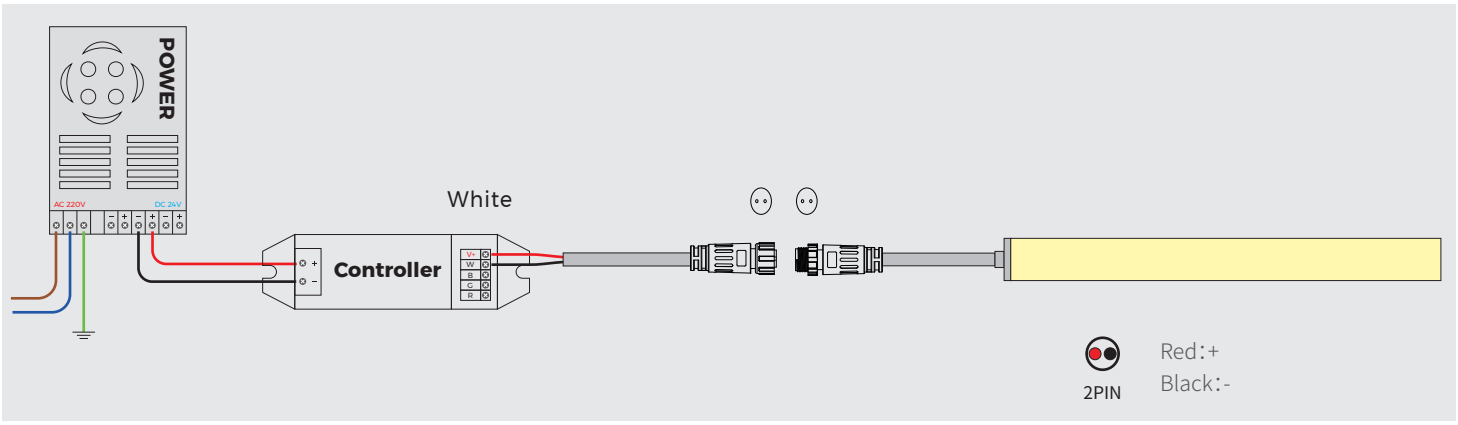
## 【Accessory Information】

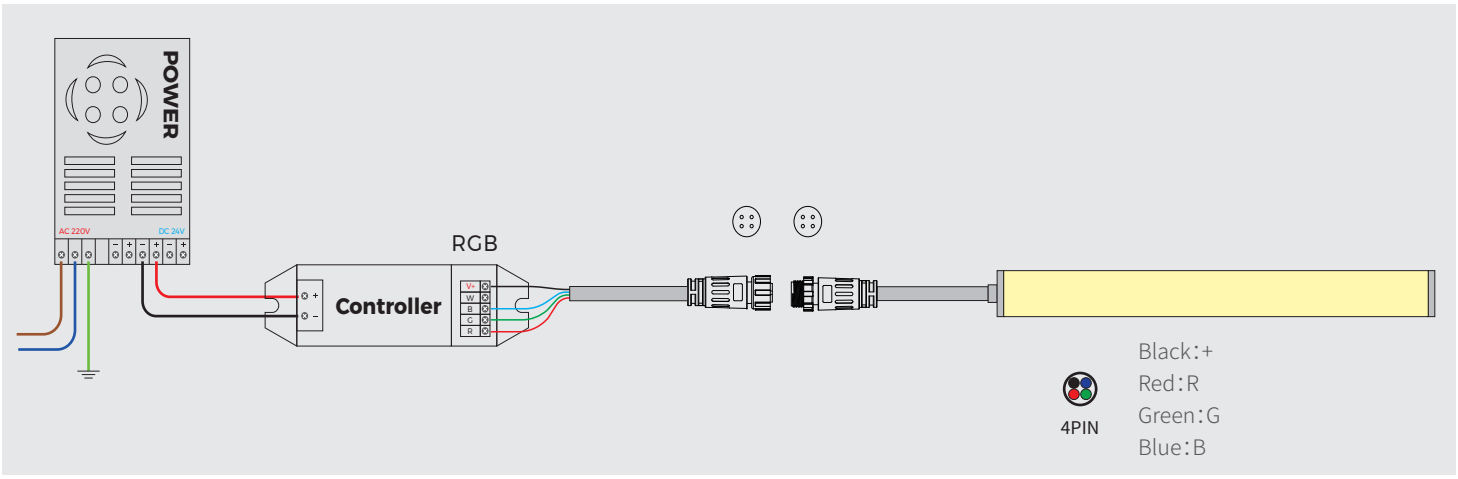
| Name | Description | Imgae | Sectional size | Ordering code | Quantity case (PCS) | net weight (kg) | Per box net weight (kg) | Gross weight (kg) | Packing (mm) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| wire | 5P male connector wire |  | / | AS-FC-0021 (0.25M)<br>AS-FC-0022(0.5M)<br>AS-FC-0023(2M) | 200<br>200<br>50 | 0.0196<br>0.0316<br>0.1036 | 3.92<br>6.32<br>5.18 | 4.22<br>6.62<br>5.48 | 250*250*150 | suitable for RGBW/DMX led strip<br>Wire lengths are optional: 0.25M/0.5M/2M |
| wire | 5P female connector wire |  | / | AS-FC-0024 (0.25M)<br>AS-FC-0025(0.5M)<br>AS-FC-0026(2M) | 200<br>200<br>50 | 0.0215<br>0.0354<br>0.1188 | 4.3<br>7.08<br>5.94 | 4.6<br>7.38<br>6.24 | 250*250*150 | suitable for RGBW/DMX led strip<br>Wire lengths are optional: 0.25M/0.5M/2M |
| wire | 5P T-Connection Wire |  | / | AS-FC-0030 | 20 | 0.0698 | 1.396 | 1.696 | 250*250*150 | suitable for DMX led strip<br>Wire length 150mm |

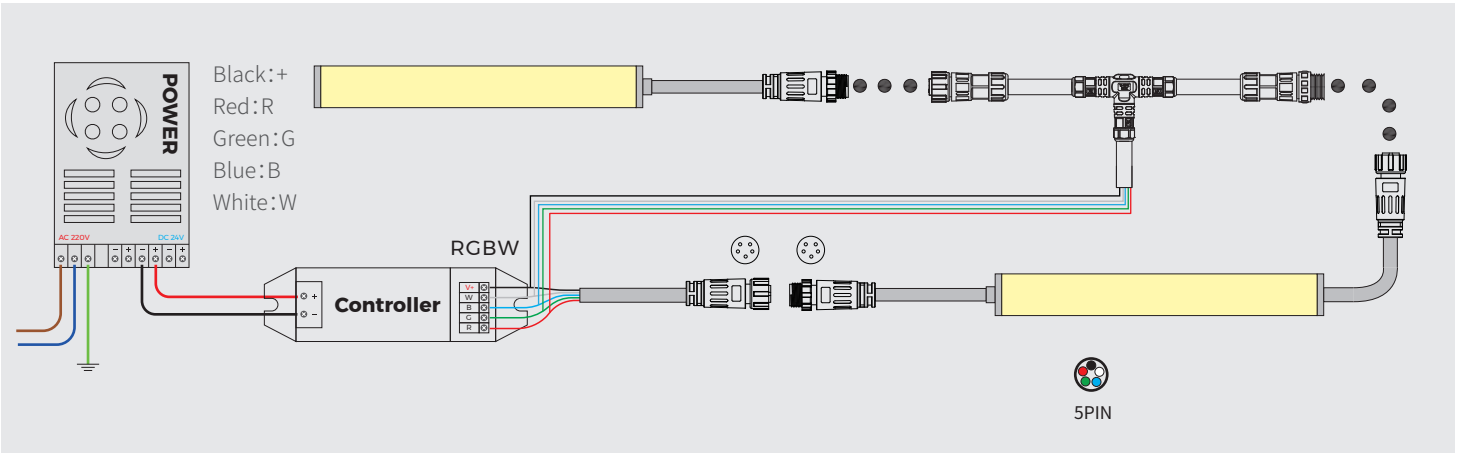
## 【Product control system solutions】

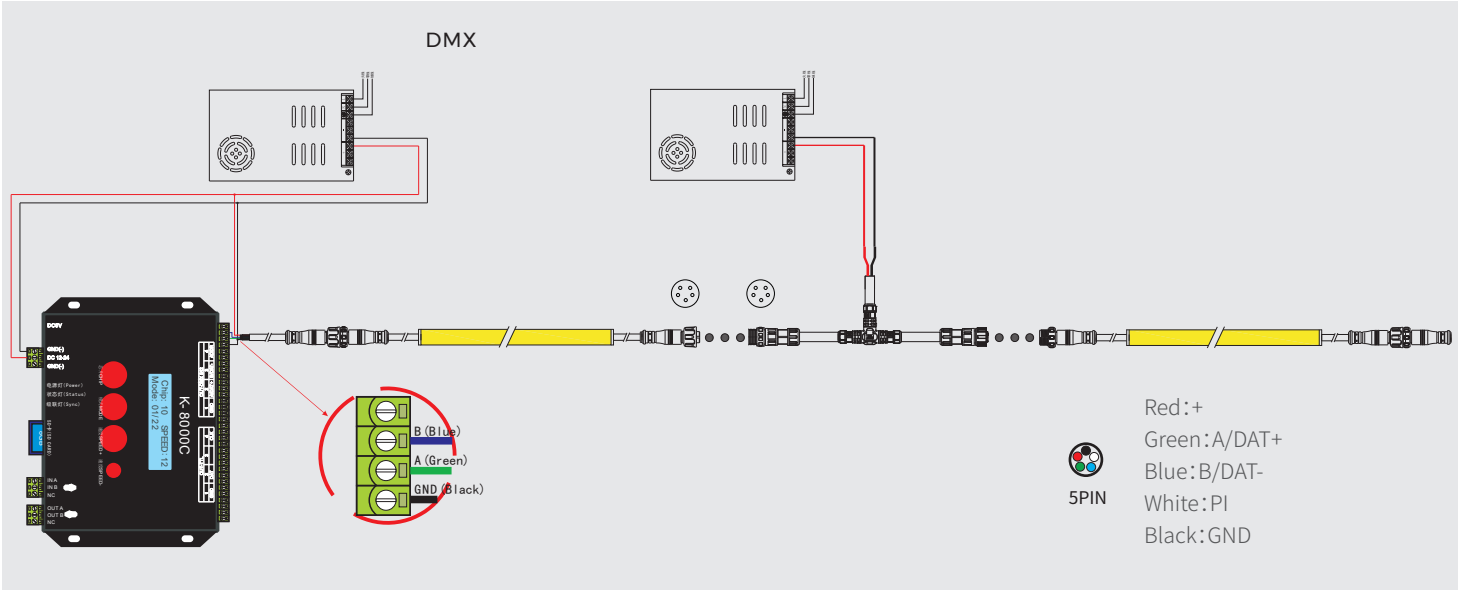
| Product Image | product name | Product number | Product specifications | Applicable Products |
|---|---|---|---|---|
|  | Monochrome remote | R6-1 | output signal：RF<br>Working voltage：3VDC(CR2032)<br>Remote control distance：30m<br>Working temperature:Ta:0-30 °C~0+55 °C | Monochrome light strip (Use with CR1-GBA) |
|  | Monotone light controller | CR1-GBA | 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 (Use with R6-1) |
|  | RGB/RGBW remote control | R8-1 | 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 (Use with CR3-GBA/ CR4-GBA) |
|  | RGB controller | CR3-GBA | 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 (Use with R8-1) |
|  | RGBW controller | CR4-GBA | 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 (Use with R8-1) |
|  | Symphony Controller | K-8000C | 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 |

## 【Product Wiring Schematic】



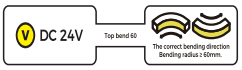



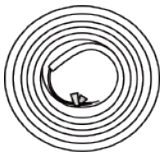
## 【Packaging Solutions】

- **Standard Packaging**

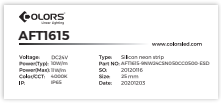
1. Line marking, the line marking is affixed at a distance of 80mm from the end of the line;



Voltage & bending warning signs



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



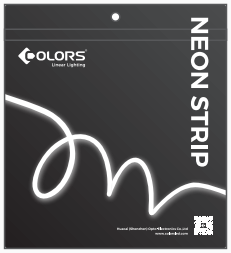
Product Information Label



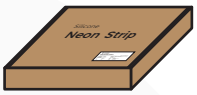
3.Put the light strip into anelectrostatic bag, one roll per bag, and seal the bag;







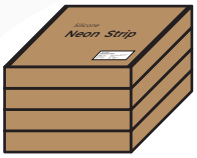

4. Label the carton and pack it into the carton







5. Pack 4 boxes of products in the carton



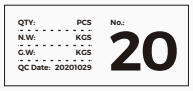




6. Put the product information label and the box number label on the side of the carton, and the QC inspection stamp



Product Information Label



Box number label




| Model | Product size | Product Quantity/ box | Product Quantity/ case | Product net weight (kg) | Net weight per box (kg) | Gross weight (kg) | Carton size (m) |
|---|---|---|---|---|---|---|---|
| AFT1615-9XX24CSW050CCXXXX -GV10-ENP-ESD | L10000*16*15mm | 10M*1 | 40M | 1.9 | 7.6 | 9.24 | 0.41*0.41*0.26 |
| AFT1615L-9XX24CSW050CCXXXX -GV10-ENP-ESD | L15000*16*15mm | 15M*1 | 45M | 2.85 | 8.55 | 10.05 | 0.48*0.48*0.23 |
| AFT1615-0X24CSW050CCXXXX -GV10-ENP-ESD | L10000*16*15mm | 10M*1 | 40M | 1.9 | 7.6 | 9.24 | 0.41*0.41*0.26 |
| AFT1615-9XX48CSW050CCXXXX -GV10-ENP-ESD | L20000*16*15mm | 20M*1 | 60M | 3.8 | 11.4 | 12.9 | 0.48*0.48*0.23 |
| AFT1615- 0RGB24CSW025CCXXXX -GV10-ENP-ESD | L5000*16*15mm | 5M*3 | 60M | 0.95 | 11.4 | 13.6 | 0.41*0.41*0.26 |
| AFT1615- 0RGBXW24CSW025CCXXXX -GV10-ENP-ESD | L5000*16*15mm | 5M*3 | 60M | 0.95 | 11.4 | 13.6 | |
| AFT1615- 9XWM24CDW025CCXXXX -GV10-ENP-ESD | L5000*16*15mm | 5M*3 | 60M | 0.95 | 11.4 | 13.6 | |
| AFT1615- 0RGBM24CDW025CCXXXX -GV10-ENP-ESD | L5000*16*15mm | 5M*3 | 60M | 0.95 | 11.4 | 13.6 | |
| AFT1615- 0RGBXWM24CDW025CCXXXX -GV10-ENP-ESD | L5000*16*15mm | 5M*3 | 60M | 0.95 | 11.4 | 13.6 | |

## 【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 | IP67 |
| | 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 30mm 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.)

· Products with different IP grade shoulde be used in different environments, the product with IP65 is not suitable for use in water-immersed environment .

· The final color of products with different sizes and specifications is slightly deviated due to structural differences under the same color temperature, which should be confirmed before use.

· Please use professional cutting tools when cutting.

· Attention,there are 2 soldering parts per reel (5m/reel) at most when mass production.

. 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.



No stretching



No distortion



No trampling