



VIVID LED LIGHT STRIP PIXEL

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Technical Specifications

Light Dimension 0.59 x 0.24in (15x6mm)

| Output | RGB | Single Color | RGBW | W+WW |
|---------------------------------|--|---------------|---------------|---------------|
| LED Light | Epistar SMD LED Chip | | | |
| Max Run Length ^{*1 *2} | | | | |
| Single Feed (Dynamic) | 49.21ft (15m) | 49.21ft (15m) | 32.81ft (10m) | 49.21ft (15m) |
| Single Feed (Full Load) | 32.81ft (10m) | 32.81ft (10m) | 16.4ft (5m) | 32.81ft (10m) |
| Double Feed (Dynamic) | 98.43ft (30m) | 98.43ft (30m) | 65.62ft (20m) | 98.43ft (30m) |
| Double Feed (Full Load) | 65.62ft (20m) | 65.62ft (20m) | 32.81ft (10m) | 65.62ft (20m) |
| Light Surface | Flat Profile 160° | | | |
| Lumen Maintenance | 70,000 Hours L70 @ 25°C : 90,000 L50 @ 25°C 50,000 Hours L70 @ 50°C : 70,000 Hours L50 @ 50°C | | | |

Electrical

| | | | | |
|-------------------|------------------|------------------|------------------|------------------|
| Input Voltage | 24V DC | | | |
| Power Consumption | 3.66W/ft (12W/m) | 3.66W/ft (12W/m) | 4.57W/ft (15W/m) | 3.05W/ft (10W/m) |

Physical

| | | | | |
|-----------------------|--------------------------------|----------------------------|----------------------------|----------------------------------|
| LED Count | 17 LED/ft (56 LEDs/m) | 17 LED/ft (56 LEDs/m) | 17 LED/ft (56 LEDs/m) | 18 + 18 LEDs/ft (60+60LEDs/m) |
| LED Spacing | 0.7in (17.8mm) | 0.7in (17.8mm) | 0.7in (17.8mm) | 0.66in (16.7mm) |
| Cutting Unit Length | 4.92in (125mm) (7 LEDs) | 4.92in (125mm) (7 LEDs) | 4.92in (125mm) (7 LEDs) | 3.94in (100mm) (6 + 6 LEDs) |
| IC Type | UCS2903 | UCS2903 | UCS2904 | UCS2903 |
| Thermal Management | Free air convection | | | |
| Fixture Connections | End, side & bottom lead wires | | | |
| Minimum Bend Diameter | 1.97in (50mm) (Top Bending) | | | |

Temperature Ranges

| | |
|--------------|--------------------------------|
| Installation | 32°F to 140°F (0°C to 60°C) |
| Operating | -13°F to 140°F (-25°C to 60°C) |
| Humidity | 0-95% non condensing |

Dependability

| | |
|----------|-------------------------|
| Warranty | 5 Year Limited Warranty |
|----------|-------------------------|

Safety

| | |
|---------------|---|
| Certification | Tested to UL & CSA by Underwriters Laboratory for use in USA and Canada, complies with California Title 24 Requirements, Lighting Facts. Exceeds ANSI C78.377A, CE & RoHS Compliant. |
| IP Rating | IP68 with appropriately rated accessories |

*1 Max Run Length: Dynamic = when the R, G, B channels are not operating at 100%
 Full Load = when the R, G, B channels are operating at 100%

*2 Max Run Length: Unless otherwise stated, snap and seamless run lengths are the same.

Technical Specifications

RGB/RGBW

Available Colors

| Color | CCT Wavelength |
|------------|----------------|
| Red | 620-630nm |
| Green | 520-530nm |
| Blue | 465-475nm |
| Amber | 585-595nm |
| 2700K (WW) | 2725 ± 145K |
| 4500K (CW) | 4503 ± 243K |
| 6500K | 6532 ± 510K |

Lumen Count

| Color | Per Foot | Per Meter | Power |
|------------|-----------|-----------|-------|
| Red | >33.53lm | >75lm | / |
| Green | >83.82lm | >185lm | / |
| Blue | >16.76lm | >40lm | / |
| Amber | >33.53lm | >300lm | / |
| 2700K (WW) | >137.16lm | >250lm | / |
| 4500K (CW) | >137.16lm | >250lm | / |
| 6500K | >137.16lm | >250lm | / |
| R + G + B | >91.44lm | >300lm | / |

Single Color

Available Colors

| Color | CCT Wavelength |
|------------|----------------|
| Red | 620-630nm |
| Green | 520-530nm |
| Blue | 465-475nm |
| Amber | 585-595nm |
| 2700K (WW) | 2725 ± 145K |
| 3000K | 3045 ± 175K |
| 3500K (W) | 3465 ± 245K |
| 4000K | 3985 ± 275K |
| 4500K (CW) | 4503 ± 243K |
| 5000K | 5029 ± 283K |
| 5700K (DW) | 5669 ± 355K |
| 6500K | 6532 ± 510K |

Lumen Count

| Color | Per Foot | Per Meter | Power |
|------------|-----------|-----------|------------------|
| Red | >67.06lm | >200lm | 3.66W/ft (12W/m) |
| Green | >167.64lm | >500lm | 3.66W/ft (12W/m) |
| Blue | >33.52lm | >100lm | 3.66W/ft (12W/m) |
| Amber | >67.06lm | >200lm | 3.66W/ft (12W/m) |
| 2700K (WW) | >274.32lm | >650lm | 3.66W/ft (12W/m) |
| 3000K | >274.32lm | >650lm | 3.66W/ft (12W/m) |
| 3500K (W) | >274.32lm | >650lm | 3.66W/ft (12W/m) |
| 4000K | >274.32lm | >650lm | 3.66W/ft (12W/m) |
| 4500K (CW) | >274.32lm | >650lm | 3.66W/ft (12W/m) |
| 5000K | >274.32lm | >650lm | 3.66W/ft (12W/m) |
| 5700K (DW) | >274.32lm | >650lm | 3.66W/ft (12W/m) |
| 6500K | >274.32lm | >650lm | 3.66W/ft (12W/m) |

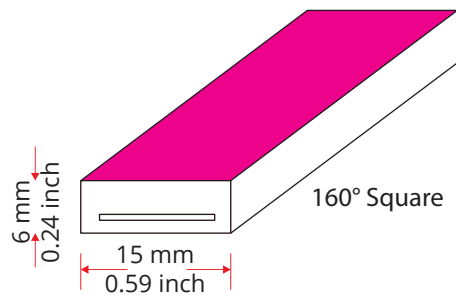
Available in Transparent, White, and Black casings.

Custom Color Wavelengths available; please contact us for details.

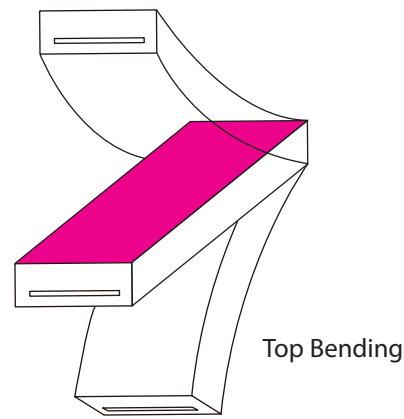
Physical Specifications



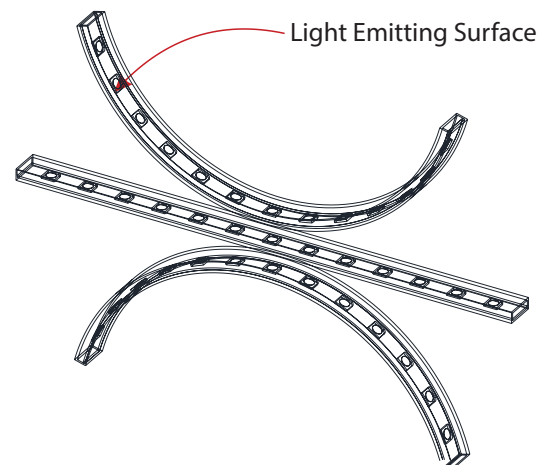
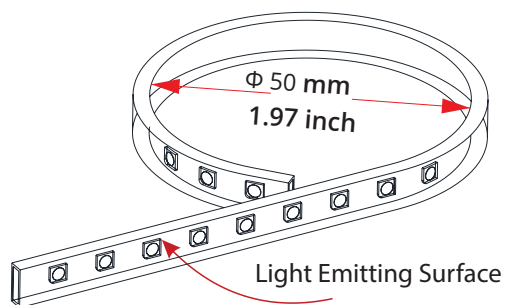
Light Profile



Bending Direction

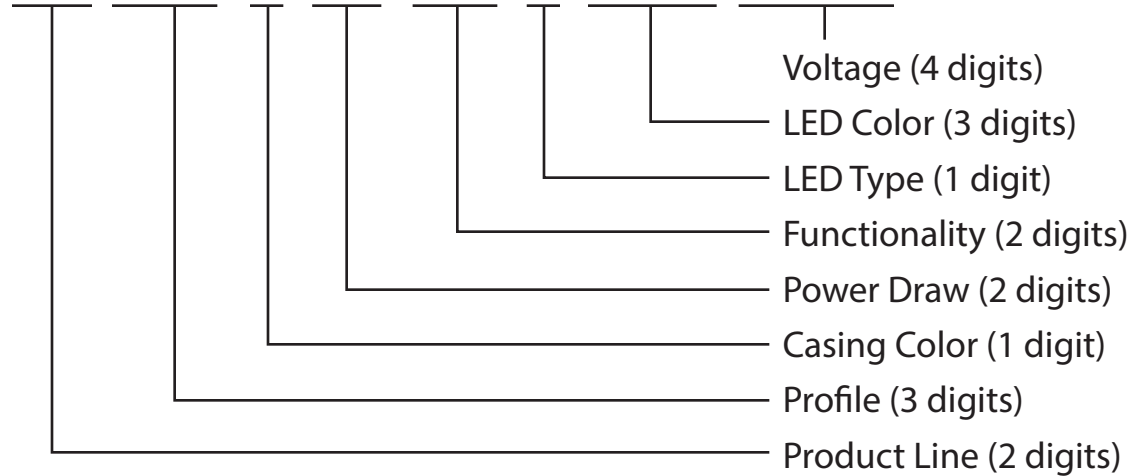


Minimum Bending Diameter



Part Number Naming Convention

LS-15G-C-12-3W-E-XXX-24DC

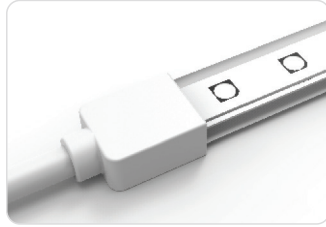


For full part number naming rules, please refer to the document on www.glls.com/support/documentation/

Connectors

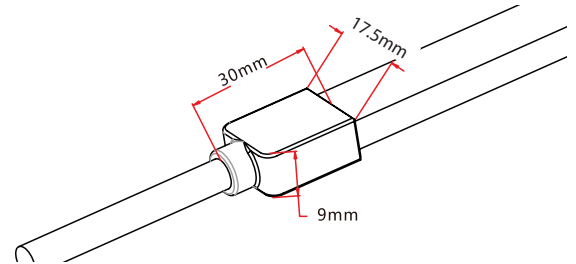
IP67: Rated for wet locations, not submersion.
Factory Assembly only.

Seamless Connectors



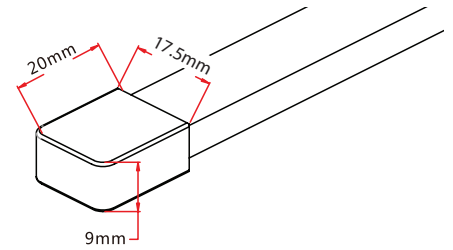
Seamless End Exit

SA-15G-I-00-2W-SE-0-EN-XXX-P



Seamless End Cap

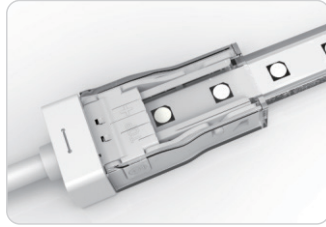
SA-15G-I-00-0W-SE-0-EC



Connectors

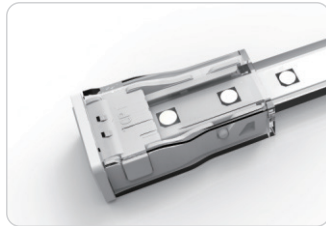
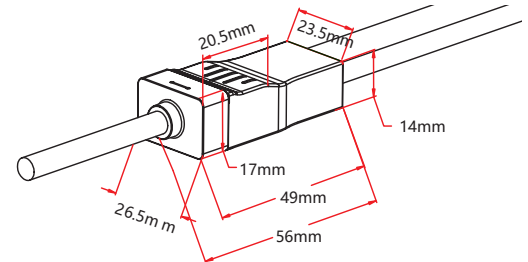
Snap Connectors

IP67: Rated for outdoor use.
Factory Assembly or DIY.



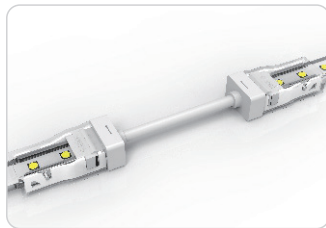
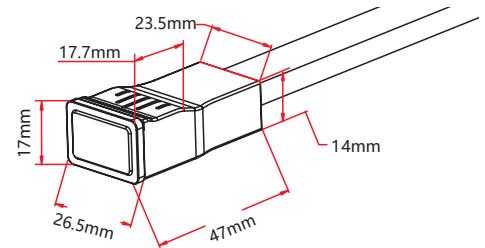
Snap End Exit

SA-15G-I-00-2W-SC-1-EN-XXX-P
SA-15G-I-00-2W-SC-2-EN-XXX-P



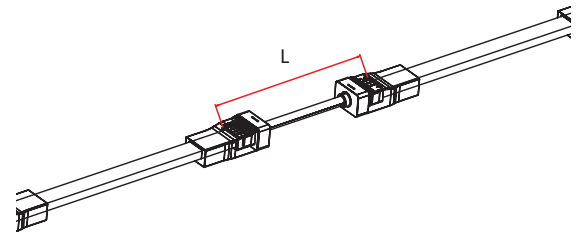
Snap End Cap

SA-15G-I-00-0W-SC-0-EC



Snap Jumper

SA-15G-00-1-2W-SC-0-EJ-XXX-P



Connectors

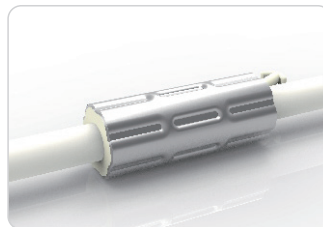
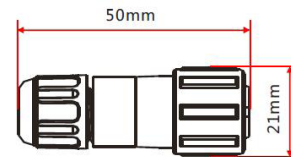
IP20: Rated for indoor use only.
Factory Assembly only.

Barrel Connectors

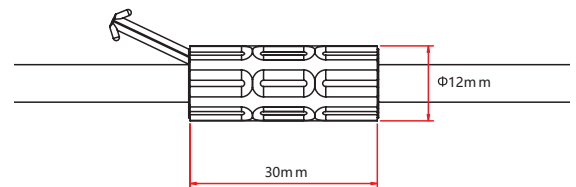


Barrel Connectors

- NA-XX-BC-DC-CXX-F
- NA-XX-BC-DC-CXX-M
- NA-XX-BN-XXA-CXX-F
- NA-XX-BN-XXA-CXX-M
- NA-XX-PL-XXA-CXX-F
- NA-XX-PL-XXA-CXX-M



Anti-Wicking Ferrule



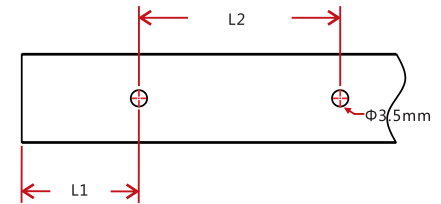
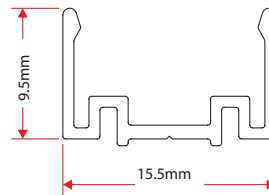
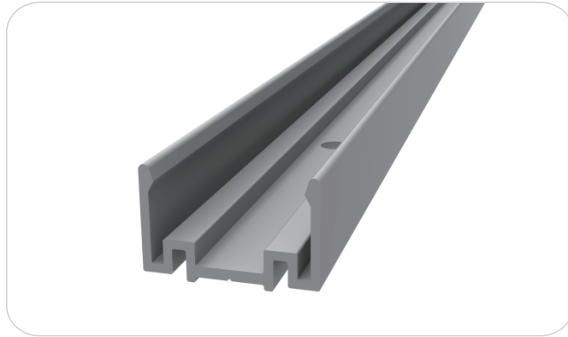
Anvil Cutter

Optional accessory for on-site cutting.

Factory order only

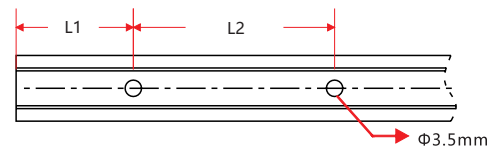
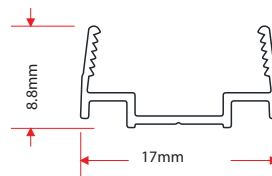
Mounting Hardware

Standard Anodized Aluminum Channel



| W x H | Standard Length | Part Number | L1 | L2 | Screw Hole Φ | Hole # |
|--------------------------------|------------------|-------------------|-----------------|----------------|-----------------------|--------|
| 0.54 x 0.87in (13.8 x 22mm) | 1.38in (35mm) | CL-15-R-AL-3C5-SD | 0.69in (17.5mm) | / | Φ 0.14in (3.5mm) | 1 |
| | 19.69in (500mm) | CH-15-R-AL-0M5-SD | 1.97in (50mm) | 7.87in (200mm) | Φ 0.14in (3.5mm) | 3 |
| | 39.37in (1000mm) | CH-15-R-AL-01M-SD | 3.94in (100mm) | 7.87in (200mm) | Φ 0.14in (3.5mm) | 5 |
| | 78.74in (2000mm) | CH-15-R-AL-02M-SD | 3.94in (100mm) | 7.87in (200mm) | Φ 0.14in (3.5mm) | 10 |

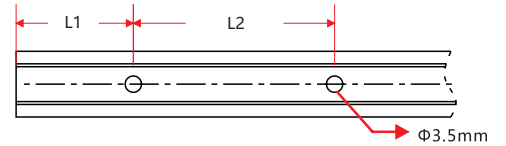
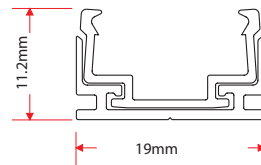
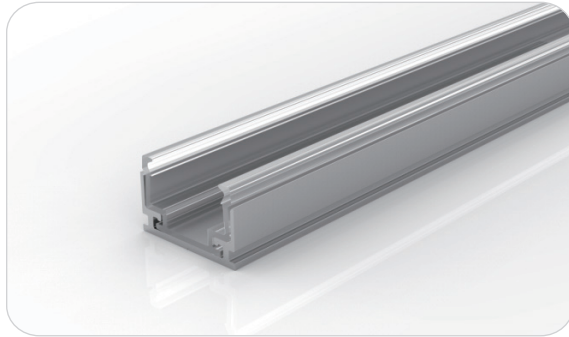
Plastic Channel



| W x H | Standard Length | Part Number | L1 | L2 | Screw Hole Φ | Hole # |
|------------------------------|------------------|-------------------|----------------|----------------|-----------------------|--------|
| 0.55 x 0.94in (14 x 24mm) | 19.69in (500mm) | CH-15-R-PL-0M5-SD | 1.97in (50mm) | 7.87in (200mm) | Φ 0.14in (3.5mm) | 3 |
| | 39.37in (1000mm) | CH-15-R-PL-01M-SD | 3.94in (100mm) | 7.87in (200mm) | Φ 0.14in (3.5mm) | 5 |
| | 78.74in (2000mm) | CH-15-R-PL-02M-SD | 3.94in (100mm) | 7.87in (200mm) | Φ 0.14in (3.5mm) | 10 |

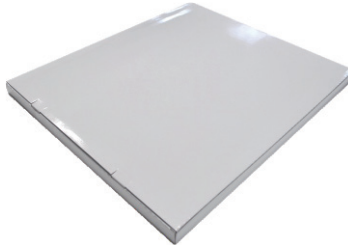
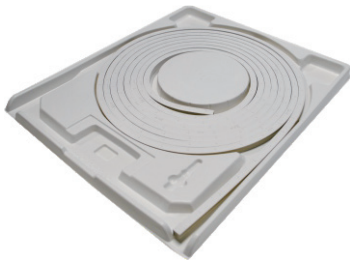
Mounting Hardware

Plastic & Aluminum Channel



| W x H | Standard Length | Part Number | L1 | L2 | Screw Hole Φ | Hole # |
|--------------------------------|------------------|-------------------|-----------------|----------------|-----------------------|--------|
| 0.55 x 0.59in (14 x 14.7mm) | 1.38in (35mm) | CL-15-R-AP-3C5-SD | 0.69in (17.5mm) | / | Φ 0.14in (3.5mm) | 1 |
| | 19.69in (500mm) | CH-15-R-AP-0M5-SD | 1.97in (50mm) | 7.87in (200mm) | Φ 0.14in (3.5mm) | 3 |
| | 39.37in (1000mm) | CH-15-R-AP-01M-SD | 3.94in (100mm) | 7.87in (200mm) | Φ 0.14in (3.5mm) | 5 |
| | 78.74in (2000mm) | CH-15-R-AP-02M-SD | 3.94in (100mm) | 7.87in (200mm) | Φ 0.14in (3.5mm) | 10 |

Packaging



White Box

Packing Box

| Fixture Length | White Box Dimensions | Packing Box Dimensions | # Of White Boxes | Package Weight |
|----------------|----------------------------------|----------------------------------|------------------|-----------------|
| 393.7in (10m) | 13.78x1.65x18.11in (35x4.2x46cm) | 18.9x14.57x9.54in (48x37x24cm) | 5 | 15.43lbs (7kg) |
| 787.4in (20m) | 20.08x1.65x22.05in (45x4.2x56cm) | 22.83x18.5x9.45in (58x47x24cm) | 5 | 26.45lbs (12kg) |
| 1181.1in (30m) | 26.77x1.65x28.34in (61x4.2x72cm) | 29.13x25x4.13in (74x63.5x10.5cm) | 2 | 17.64lbs (8kg) |

Testing

RGB/RGBW

Photometric Data

RGB / RGBW

| LED Type | SMD | | | | |
|------------|------------|---------|-------|-----------|---------|
| Beam Angle | 160° | | | | |
| Color | Wavelength | Lumen/m | Color | CCT | Lumen/m |
| Red | 620-630nm | >75lm | 2700K | 2725±145K | >250lm |
| Green | 520-530nm | >185lm | 4500K | 4503±243K | >250lm |
| Blue | 465-475nm | >40lm | 3500K | 3465±245K | >250lm |
| R + G + B | N/A | >300lm | | | |

Single Color

Photometric Data

Red/Amber/Green/Blue/White

| LED Type | SMD | | | | |
|------------|------------|---------|-------|-----------|---------|
| Beam Angle | 160° | | | | |
| Color | Wavelength | Lumen/m | Color | CCT | Lumen/m |
| Red | 620-630nm | >200lm | 2700K | 2725±145K | >650lm |
| Green | 520-530nm | >500lm | 3000K | 3045±175K | >650lm |
| Blue | 465-475nm | >100lm | 3500K | 3465±245K | >650lm |
| Amber | 585-595nm | >200lm | 4000K | 3985±275K | >650lm |
| | | | 4500K | 4503±243K | >650lm |
| | | | 5000K | 5029±283K | >650lm |
| | | | 5700K | 5669±355K | >650lm |
| | | | 6500K | 6530±510K | >650lm |

Testing

Certifications

| | Testing Organization | Certificate Serial N° | Report Reference |
|---------|----------------------|-----------------------|------------------|
| UL 2108 | UL | 20160726-E360029 | E360029-2013 |
| CE-EMC | SGS | SZEM1702001259LMV | SZEM160600421302 |

Fixture Testing

Optical Testing

| | |
|------------------------------|--|
| Spectrum Analysis | IES LM 79 (Lumen, CCT, CRI, XY, SDCM, wavelength) |
| Photometric Distribution | IES LM 73 (Lumen intensity distribution & Lux diagram) |
| Lumen Maintenance & Lifetime | IES LM 84 & IES TM28 |

Temperature Testing

| | |
|-------------------------|--|
| Normal Temperature Test | UL1598 & UL2388 & IEC60598-1 & IEC60598-2-21 |
| Abnormal Operation Test | UL1598 & UL2388 & IEC60598-1 & IEC60598-2-21 |

Durability Testing

| | |
|--------------|---|
| Bending Test | Manufacturer-defined, 500 cycles |
| Swing Test | UL2388, >750 cycles |
| Tensile Test | Manufacturer-defined, > the weight of light in max. connection length double feed |
| Twist Test | Max connection length double feed Manufacturer-defined, >200 cycles |
| Ball Impact | UL1598 & UL2388 & IEC60598-1 & IEC60598-2-21 |
| IK07 IK08 | IEC62262 |

Environmental Testing

| | |
|-----------------------------|--|
| Chlorinated Water Immersion | BG9667, PH6.8-7.6, free chlorine 0.3-0.6mg/L |
| Salt Water Immersion | IEC60598-1, Salinity 4% |
| Salt Spray Test | IEC68-2-11 |
| Outdoor Exposure | Manufacturer-defined |
| Flame Resistance | UL94 |
| UV Exposure | ASTMG 154, ISO 4892-3, UVA @ 340nm |
| IPX5, IPX6, IPX7, IPX8 | IEC60529 |
| Temperature Shock | Manufacturer-defined, -40°C - 60°C (typical temperature range) |
| Constant Temperature | Manufacturer-defined |

Testing

Charts

ANSI STANDARD

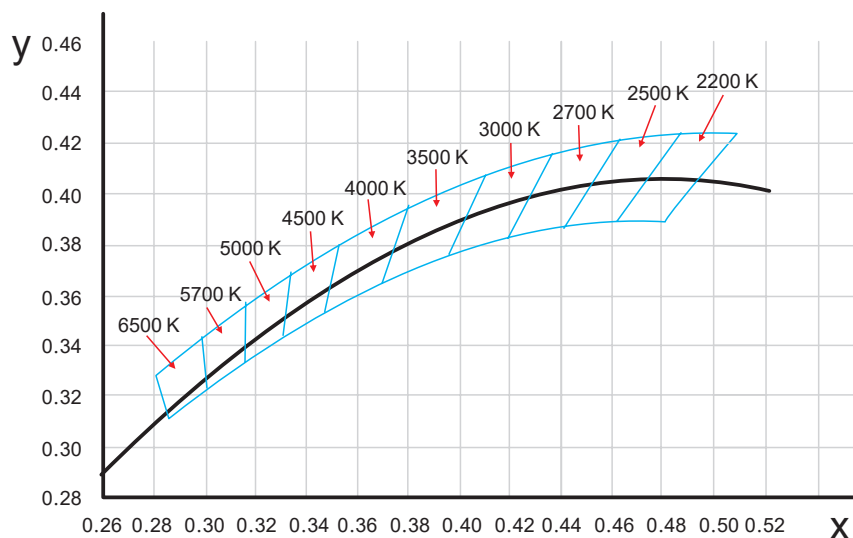
Nominal CCT Categories

| Nominal CCT | Target CCT and tolerance(K) | Target D_{uv} | D_{uv} Tolerance Range |
|------------------------------|-----------------------------|-------------------|------------------------------------|
| 2200K | 2238 ±102 | 0.0000 | Tx:CCT of the source |
| 2500K | 2460±120 | 0.0000 | For Tx<2870K |
| 2700K | 2725 ±145 | 0.0000 | 0.000±0.0060 |
| 3000K | 3045±175 | 0.0001 | For Tx≥2870K |
| 3500K | 3465±245 | 0.0005 | $D_{uv}(Tx)±0.0060$ |
| 4000K | 3985±275 | 0.0010 | where |
| 4500K | 4503±243 | 0.0015 | $D_{uv}(Tx)=57700 \times (1/Tx)^2$ |
| 5000K | 5029±283 | 0.0020 | -44.6 × (1/Tx) |
| 5700K | 5667±355 | 0.0025 | +0.00854 |
| 6500K | 6532±510 | 0.0031 | |
| Flexible CCT (2200-6500K) | $T_f^{1)} ± \Delta T^{2)}$ | $D_{uv} T_f^{3)}$ | |

Remark:

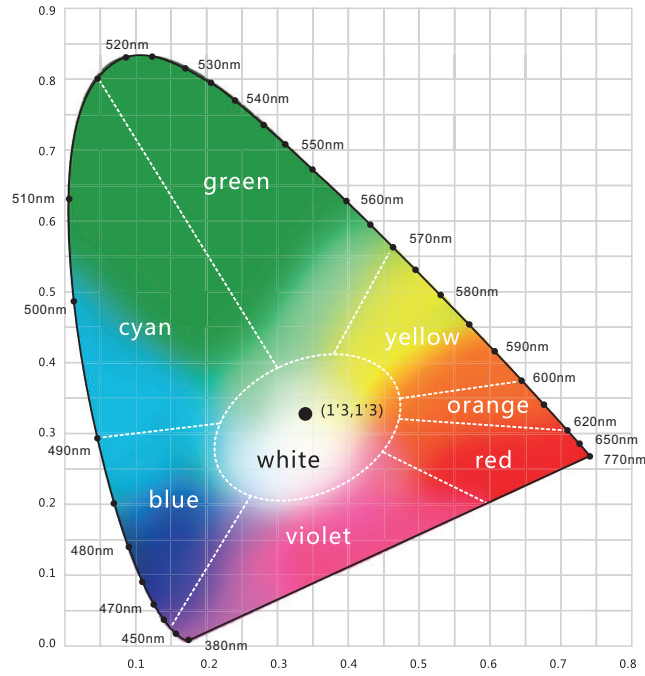
- 1) T_f is chosen to be at 100K steps (2300,2400,.....,6400K),excluding the ten nominal CCTs listed in Table 1.
- 2) $\Delta T = 1.1900 \times 10^8 \times T^3 - 1.5434 \times 10^6 \times T^2 + 0.7168 \times T - 902.55$
- 3) Same as in the D_{uv} Tolerance Range.

(X,Y) Chromaticity Diagram

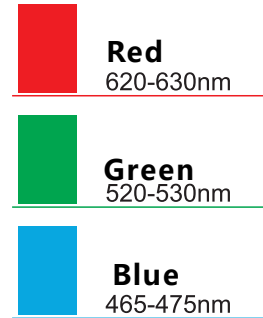


Testing


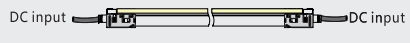
Charts



Light Color



Loading Chart

| Rated Power | Power Supply | | | | | | | | | | | |
|------------------|---|--------------|--------------|--------------|----------------|--------------|---------------|---|--------------|---------------|---------------|---------------|
| | 35W | 60W | 75W | 80W | 100W | 120W | 150W | 120W | 150W | 185W | 240W | 320 |
| 3.03W/ft (10W/m) | 6.56ft (2m) | 13.12ft (4m) | 16.40ft (5m) | 16.40ft (5m) | 21.33ft (6.5m) | 26.25ft (8m) | 32.81ft (10m) | / | / | 39.37ft (12m) | 52.49ft (16m) | 65.62ft (20m) |
| 3.66W/ft (12W/m) | | | | | | | | | | | | |
| 4.57W/ft (15W/m) | 4.92ft (1.5m) | 9.84ft (3m) | 13.12ft (4m) | 13.12ft (4m) | 16.04ft (5m) | / | / | 19.69ft (6m) | 22.97ft (7m) | 32.81ft (10m) | / | / |
| Lead Type | Single Feed | Double Feed | | | | | | | | | | |
| |  | | | | | | |  | | | | |
| | 01/02 | | | | | | | 01 02 | | | | |

Note: These are the max recommended run lengths based on power supply

For example: It is recommended to use one 80W power supply for a single-fed run of 16.40ft (5m) at 3.66W/ft (12W/m), or for a single-fed run of 13.12ft (4m) at 4.57W/ft (15W/m).