

# **Product Specification**

# Neon Flex Horizontal Bending Multi-Color Series (Type TB)

WW-FLS103T50FC060TB-24(WCP)-SE-120-XX















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#### **Product Features**

- High quality FPC
- Dilux self-encapsulated LED
- Light source lifetime:50K hours
- Horizontal bending
- High quality silicone material
- IP67 waterproof
- Min.Bending Diameter:Φ130mm
- Single-ended power supply maximum length: 6m















# **Technology info**

Lighting Technology: LED

DLS or NDLS: NDLS MLS or NMLS: NMLS

Type of light source: SMD RGB 5050

Energy consumption KW/1000h/0.5M:5.76

Beam angle: 120°

Survival factor ( Annex V/EU2019-2020 ) :90%

#### **Harmonised Standards**

**EMC** 

- EN55015:2013+A1
- EN61547:2009
- EN60598-1:2015
- EN60598-2-20:2015
- EN62493:2015
- EN62471:2008



# **Parameters**

#### Test condition:

- Surrounding temperature:  $26^{\circ}$ C.
- Test while turning on.

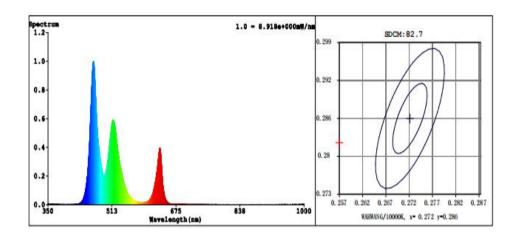
| Neon Flex                             |   |    |    |                        |                     |       |   |   |                  |  |
|---------------------------------------|---|----|----|------------------------|---------------------|-------|---|---|------------------|--|
| Neon Flex Model No.                   |   | Rf | Rg | Typ.<br>Power<br>(W/M) | Max. Power<br>(W/M) | Color | Neon Flex Color<br>Temp.(K)<br>Wavelength(nm) | Typ.<br>Luminous<br>Flux<br>LM/M(39.3<br>7in) | Rated<br>voltage |  |
|                                       |   |    |    |                        |                     | Red   | 620-630nm                                     | 25  | DC24V            |  |
| WW-FLS103T50FC060TB-24(WCP)-SE-120-XX | / | /  | /  | 11.52                  | 12.67               | Green | 515-525nm                                     | 75  | DC24V            |  |
|                                       |   |    |    |                        |                     | Blue  | 465-475nm                                     | 15  | DC24V            |  |

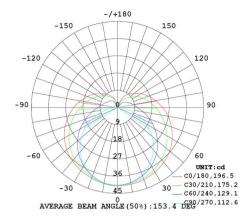
- SDCM for light source:  $\leq 6$  (alternative  $\leq 3$ ).
- $\bullet$  The typ. Luminous flux tolerance range is  $\pm 10\%$  (subject to the manufacturer's instrument test).



# Optical Test Diagram

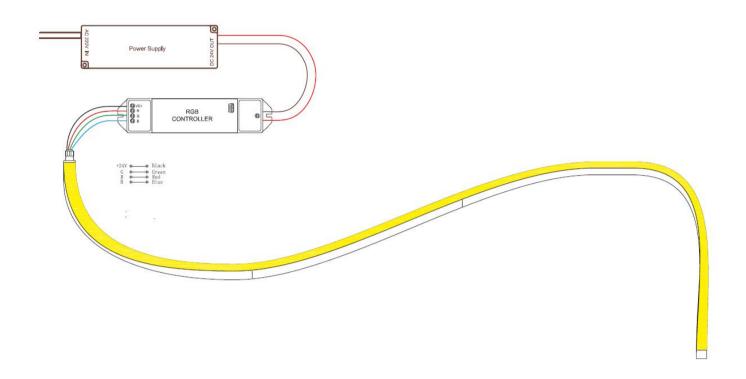
#### **Neon Flex**







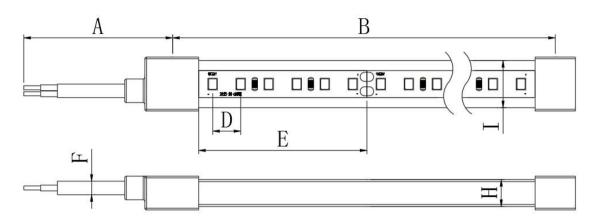
# Circuit Diagram





# Dimension Drawing

#### **Neon Flex**



| A            | B            | <b>D</b> Distance of LEDS | E            | F              | H               | l           |
|--------------|--------------|---------------------------|--------------|----------------|-----------------|-------------|
| Cable Length | Strip length |                           | Cutting unit | Cable diameter | Strip thickness | Strip width |
| 300±10mm     | 5020±50mm    | 11.9±0.5mm                | 71.43±0.5mm  | 6±0.3mm        | 12±0.3mm        | 20±0.3mm    |



# Front & end caps

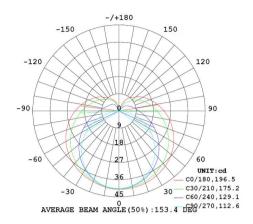
| Cable Types | Model No.  | lmage  | Dimension                               | IP Rating |
|-------------|------------|--|---|-----------|
| Double      | TB12x20-TS | The state of the s | 3.5mm (3.5mm ) 1.2.0m   1.2.0m   1.1.0m | IP67      |
| Injection   | IBI2A20-10 |  | 3.5mm - 19. 0an -                       | - 11 07   |



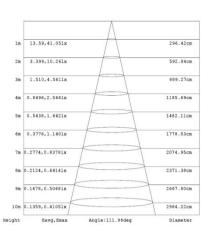


## Optical Parameters

#### **Distribution Curve Flux**

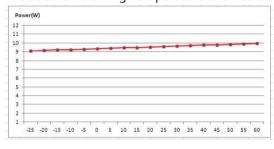


#### Illuminance

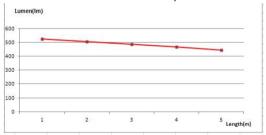


# Figures of typical characteristics

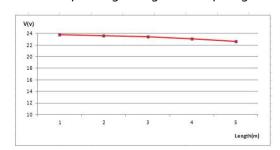
#### Relation of Working Temperature and Power



#### Relation of luminous flux and strip length (Only suitable for white series)



#### Relation of operating voltage and strip length





# Standard Accessories

| lmage | Part No.       | Description  |  |  |
|-------|----------------|--|--|--|
|       | WW-PC1613-0025 | Installation accessories set (PC mounting clips, screws) |  |  |

# Optional Accessories

| lmage | Part No.          | Description   |
|-------|-------------------|---|
|       | WW-AP1512-200     | Aluminum Profile:<br>L2000*W12*H15.2mm                      |
|       | WW-FLS102TB-CW-TF | Cutting accessories set<br>(Front & end cap, power<br>cord) |



# Packaging

#### Solution 1:

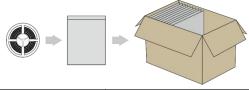
# For Product Length≤5M



| Ingress           | B | Inner carton |          | Outer carton            |          | NI W           | 0.11/         | Outer carton          |
|-------------------|---|--------------|----------|-------------------------|----------|----------------|---------------|-----------------------|
| protection rating |   | Size         | Reel/ctn | Size                    | Reel/ctn | N.W            | G.W           | volume                |
|                   | 1 | 1            | 1        | 440*400 *260mm          | 12       | 13.44 KG ±10%  | 14.36KG ±10%  | 0.04576M <sup>3</sup> |
| IP65/67           | 1 | 1            | 1        | 17.32*15.748 *10.236 in | 12       | 29.62 Lbs ±10% | 31.66Lbs ±10% | 1.616ft <sup>3</sup>  |

#### Solution 2:

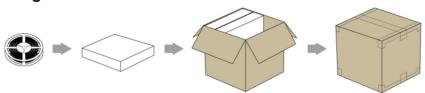
# For Product Length=5M



| Ingress           |                      | Inner carton |          | Outer carton          | Outer carton |                | 0.11/          | Outer carton         |
|-------------------|----------------------|--------------|----------|-----------------------|--------------|----------------|----------------|----------------------|
| protection rating | Bag size             | Size         | Reel/ctn |                       | Reel/ctn     | N.W            | G.W            | volume               |
|                   | 470*420*0.14mm       | 1            | 1        | 440*400*260mm         | 7            | 7.84KG ±10%    | 9.31KG ±10%    | 0.05772m³            |
| IP65/67           | 18.50*16.54*0.006 in | 1            | /        | 17.32*15.75 *10.24 in | 7            | 15.48 Lbs ±10% | 25.18 Lbs ±10% | 1.616ft <sup>3</sup> |

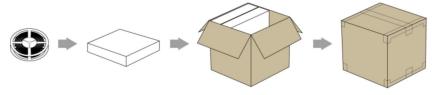
#### Solution 3:

# For Product Length=10M



| Ingress           |              |                    | Outer carton |                      |          |               | Outer carton  |                      |
|-------------------|--------------|--------------------|--------------|----------------------|----------|---------------|---------------|----------------------|
| protection rating | Bag size     | Size               | Reel/ctn     | Size                 | Reel/ctn | N.W           | G.W           | volume               |
|                   | 330*50mm     | 345*330*61mm       | 1            | 362*265*350mm        | 4        | 8.96KG ±10%   | 11.70KG ±10%  | 0.05366m³            |
| IP65/67           | 12.99*1.96in | 13.58*12.99*2.4 in | 1            | 14.25*10.43*13.78 in | 4        | 19.75Lbs ±10% | 25.8 Lbs ±10% | 1.185ft <sup>3</sup> |

# For Product Length=25M



| Ingress           |              | Inner carton       |          | Outer carton         |          | N1 10/         | 2.11/          | Outer carton         |
|-------------------|--------------|--------------------|----------|----------------------|----------|----------------|----------------|----------------------|
| protection rating | Bag size     | Size               | Reel/ctn | Size                 | Reel/ctn | N.W            | G.W            | volume               |
|                   | 330*110mm    | 345*330*122mm      | 1        | 362*265*350mm        | 2        | 11KG ±10%      | 13.18KG ±10%   | 0.05366m³            |
| IP65/67           | 12.99*4.33in | 13.58*12.99*4.8 in | 1        | 14.25*10.43*13.78 in | 2        | 24.25 Lbs ±10% | 29.06 Lbs ±10% | 1.185ft <sup>3</sup> |

#### Remarks:

• Please contact our sales manager for customized package (color box, blister etc.)

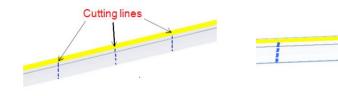


### **Cutting Instruction**

- The cutting line logo on the Neon strip marked by calculated dimension, it has a little bit deviation between internal cutting line marked on the PCB surface;
- Please follow the cutting guidance as below:

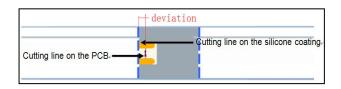
Step 1: Fine the cutting line on the silicone coating, slice the silicone coating vertically by knife along the cutting line, but do not hurt the PCB

inside.



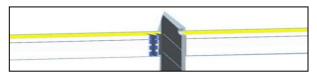
Step 2: Split the broken silicone coating and observe the deviation between "Cutting line on the PCB" and "Cutting line on the silicone coating side"





Step 3: Find the cutting line on the PCB, adjust to the exact cutting location and slice the silicone coating again.





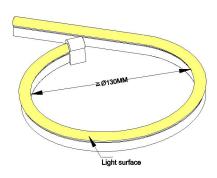
Step 4: Finally, use scissor to separate the Neon Flex along the cutting line on the PCB.



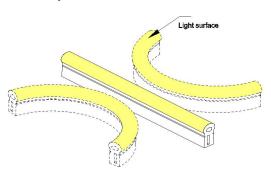


# Installation Guidance

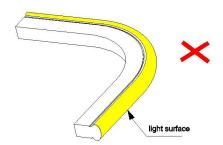
1.Do not bend smaller than allowed minimum bending diameter



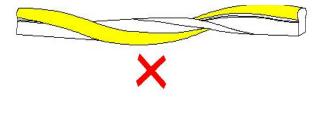
2. The neon strip can only be bent laterally (Along the FPC inside).



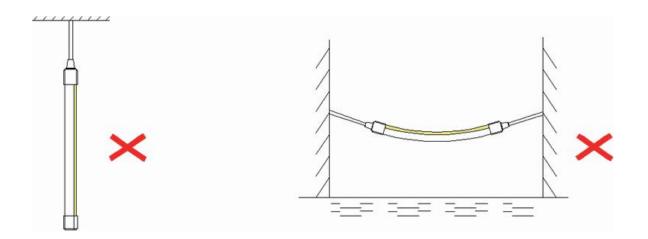
Don't bend the LED strip vertically, it will damage the circuit inside and cause product function failure.



Don't twist the LED strip, it will damage the circuit inside and cause product function failure.



5. Do not hang or suspend the Neon strip in the air.





6. Press the neon flex into mounted aluminum profile in one direction (Angle between strip and aluminum<15 degrees).



7. Incorrect installation like below pictures could lead to product function failure.

















Do not tie a knot



Do not winding



Do not twist



it is working



Do not cut when Recommended the continuous working time do not exceed 12 hours daily



-40°~+65° (-40°F~+149°F)



0°C~+60°C (32°F~+140°F)



Operated by professionals



Pay attention to the application environment



IP Level will change after cutting



Do not pull



Connected to power supply every 5 meters



Power supply must be connected to ground(GND)



The minumum bending diameter > 60mm





Note the positive and negative poles



For cutting LED strip operation, it is necessary to use the standard accessories provided by Dilux (e.g. DC wire, end-cap, front-cap, adhesive, etc.), and according to the correct cutting and connecting method for the installation.



For avoiding LED get vulcanized, LED strip should be installed in the environment where does not has oil and corrosive substances. Such as these substances which contain Sulphur, Bromine, Iodine and Chlorine. Some other chemical elements which will cause Aromatic hydrocarbons releasing(such as: methylbenzene, xylene, methyl acetoacetate Ethyl acetate etc.). The environment in which includes strong acid and strong base.



During the warranty period, only defective products are acceptable to be replaced by the factory. Factory is not responsible for other expenses because of replacement, such as transportation fee, installation fee, etc..

<sup>\*\*</sup> If you do not follow the above "Cautions" to operate and result in damaging the product, the factory will not accept maintenance and return.

<sup>\*\*</sup>The right of final interpretation is owned by Dilux.

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