

# Product Specification

## Flexible LED Strip

### COB Series

10mm FPC COB 528LEDs/M IP20 Flexible LED Strip

WW-FLS102T83XW528X-24(WCP)-UR

&

WW-FLS102T83XW528X-24(WCP)-UR-EP



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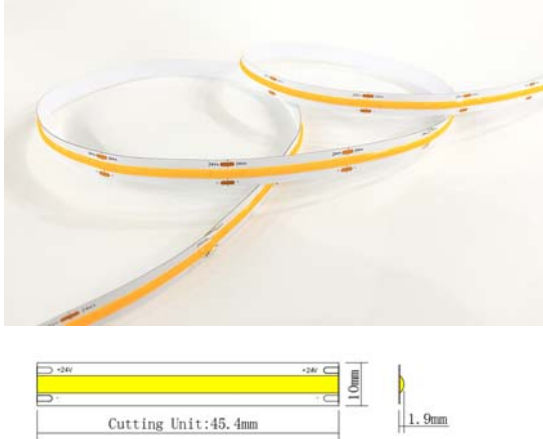
Fax : (852) 3152 3039









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|   |  |
|---|--|
| <p><b>Product Features</b></p> <ul style="list-style-type: none"> <li>● High quality FPC, authentic 3M tape;</li> <li>● 2700/3000/4000/6000K four color temperature are available for selection;</li> <li>● Dot free</li> <li>● Warranty: 5 Years;</li> <li>● Min. Bending Diameter: <math>\Phi 60\text{mm}</math>;</li> <li>● Meet (EU) 2019/2020 ErP regulations</li> <li>● Max.length(M):5M</li> </ul> |    |
| <p><b>Technology info</b></p> <ul style="list-style-type: none"> <li>● Lighting Technology: LED</li> <li>● DLS or NDLS: NDLS</li> <li>● MLS or NMLS: NMLS</li> </ul>  | <p><b>Certification Standards</b></p> <p>EN55015:2019<br/>         EN61547:2009<br/>         EN60598-1:2015<br/>         EN60598-2-20:2015<br/>         EN62493:2015<br/>         EN62471:2008</p> |

|  |  |  |   |
|--|--|--|---|
| <b>Non-ErP<br/>Waterproof<br/>Type</b> | <br><b>B 20</b> | <br><b>F 65</b> | <br><b>R 67</b> |
|  | Naked Strip  | Silicone Tube  | Silicone Extrusion  |
|  | 5 Years<br>Warranty  | 5 Years<br>Warranty  | 5 Years<br>Warranty   |
| <b>ErP<br/>Waterproof<br/>Type</b>     | <br><b>B 20</b> | <br><b>F 55</b> | <br><b>R 67</b> |
|  | Naked Strip  | Silicone Tube  | Silicone Extrusion  |
|  | 5 Years<br>Warranty  | 5 Years<br>Warranty  | 5 Years<br>Warranty   |

**WW-FLS102T83XW528X-24(WCP)-UR**

**Parameters for non-erp**

| IP Grade | Model NO.                     | CRI (Ra) | Rf | Rg  | Typical Power (W/M) | Max. Power (W/M) | Color      | LED Color Temp.(K) Wavelength(nm) * | Typ. Luminous Flux LM/M(39.37in) | Beam Angle (°,1/2 θ) | Rated voltage |
|----------|-------------------------------|----------|----|-----|---------------------|------------------|------------|-------------------------------------|----------------------------------|----------------------|---------------|
| E 20     | WW-FLS102T83WW528B-24(WCP)-UR | 90       | 90 | 100 | 5.2                 | 5.72             | Warm White | 2700K                               | 480                              | 140                  | DC 24V        |
|          | Warm White                    |          |    |     |                     |                  | 3000K      | 510                                 |                                  |                      |               |
|          | Natural White                 |          |    |     |                     |                  | 4000K      | 550                                 |                                  |                      |               |
|          | Standard White                |          |    |     |                     |                  | 6000K      | 590                                 |                                  |                      |               |
| E 65     | WW-FLS102T83WW528F-24(WCP)-UR | 90       | 90 | 100 | 5.2                 | 5.72             | Warm White | 2700K                               | 460                              | 140                  | DC 24V        |
|          | Warm White                    |          |    |     |                     |                  | 3000K      | 490                                 |                                  |                      |               |
|          | Natural White                 |          |    |     |                     |                  | 4000K      | 520                                 |                                  |                      |               |
|          | Standard White                |          |    |     |                     |                  | 6000K      | 560                                 |                                  |                      |               |
| E 67     | WW-FLS102T83WW528R-24(WCP)-UR | 90       | 90 | 100 | 5.2                 | 5.72             | Warm White | 2700K                               | 460                              | 140                  | DC 24V        |
|          | Warm White                    |          |    |     |                     |                  | 3000K      | 490                                 |                                  |                      |               |
|          | Natural White                 |          |    |     |                     |                  | 4000K      | 520                                 |                                  |                      |               |
|          | Standard White                |          |    |     |                     |                  | 6000K      | 560                                 |                                  |                      |               |

**Remarks:**

- The typ.Luminous flux tolerance range is ±10%(subject to the manufacturer's instrument test).
- \* Indicates that SDCM3 is optional in the B type strip, and the suffix "-3S" needs to be added at the end of the product model No.

Test condition of above technical data:

- Surrounding temperature: 26 °C.
- Test while turned on.

WW-FLS102T83XW528X-24(WCP)-UR-EP

Parameters for Erp

| IP Grade | Model NO.                        | CRI (Ra) | Rf | Rg  | Typical Power (W/M) | Max. Power (W/M) | Color      | LED Color Temp.(K) Wavelength(nm)* | Typ. Luminous Flux LM/M(39.37in) | Lumen/watt | Energy Efficiency class | Beam Angle (°,1/2 θ) | Chromaticity Coordinate ( X,Y ) | Rated voltage |
|----------|----------------------------------|----------|----|-----|---------------------|------------------|------------|------------------------------------|----------------------------------|------------|-------------------------|----------------------|---------------------------------|---------------|
| B 20     | WW-FLS102T83WW528B-24(WCP)-UR-EP | 90       | 90 | 100 | 5.6                 | 6.16             | Warm White | 2700K                              | 490                              | 87.5       | F                       | 140                  | 0.4578,0.4101                   | DC 24V        |
|          | Warm White                       |          |    |     |                     |                  | 3000K      | 520                                | 82.9                             | F          | 0.4339,0.4033           |                      |                                 |               |
|          | Natural White                    |          |    |     |                     |                  | 4000K      | 560                                | 100                              | F          | 0.3818,0.3797           |                      |                                 |               |
|          | Standard White                   |          |    |     |                     |                  | 6000K      | 600                                | 107.1                            | F          | 0.3214,0.3360           |                      |                                 |               |
| F 65     | WW-FLS102T83WW528F-24(WCP)-UR-EP | 90       | 90 | 100 | 5.6                 | 6.16             | Warm White | 2700K                              | 470                              | 83.9       | G                       | 140                  | 0.4578,0.4101                   | DC 24V        |
|          | Warm White                       |          |    |     |                     |                  | 3000K      | 500                                | 89.3                             | F          | 0.4339,0.4033           |                      |                                 |               |
|          | Natural White                    |          |    |     |                     |                  | 4000K      | 530                                | 94.6                             | F          | 0.3818,0.3797           |                      |                                 |               |
|          | Standard White                   |          |    |     |                     |                  | 6000K      | 570                                | 101.8                            | F          | 0.3214,0.3360           |                      |                                 |               |
| R 67     | WW-FLS102T83WW528R-24(WCP)-UR-EP | 90       | 90 | 100 | 5.6                 | 6.16             | Warm White | 2700K                              | 470                              | 83.9       | G                       | 140                  | 0.4578,0.4101                   | DC 24V        |
|          | Warm White                       |          |    |     |                     |                  | 3000K      | 500                                | 89.3                             | F          | 0.4339,0.4033           |                      |                                 |               |
|          | Natural White                    |          |    |     |                     |                  | 4000K      | 530                                | 94.6                             | F          | 0.3818,0.3797           |                      |                                 |               |
|          | Standard White                   |          |    |     |                     |                  | 6000K      | 570                                | 101.8                            | F          | 0.3214,0.3360           |                      |                                 |               |

Remarks:

- \* Indicates that SDCM3 is optional in the B type strip, and the suffix "-3S" needs to be added at the end of the product model No.

Test condition of above technical data:

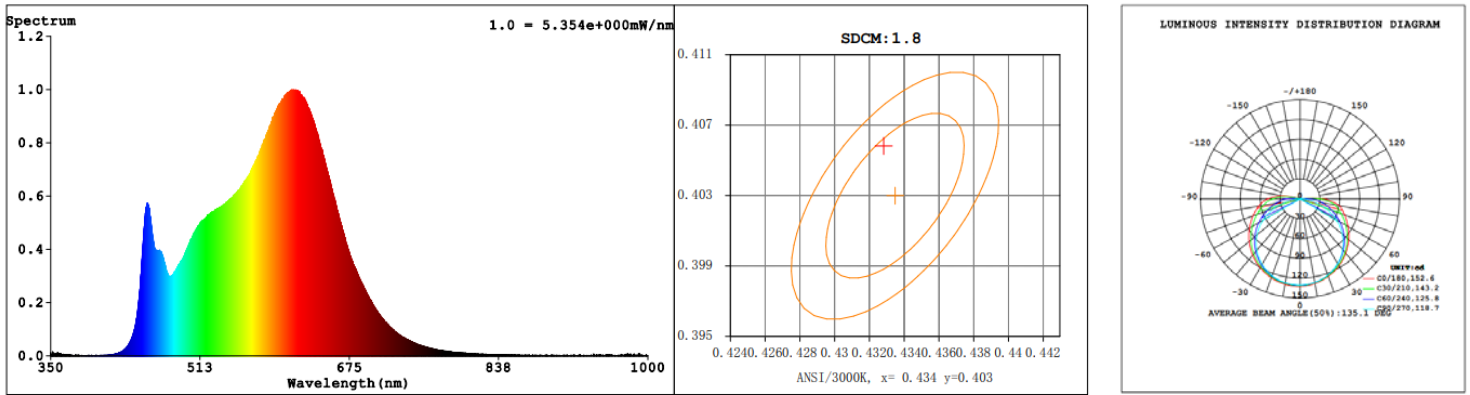
- Surrounding temperature: 26 °C.
- Test after 10 mins turned on.

Note:

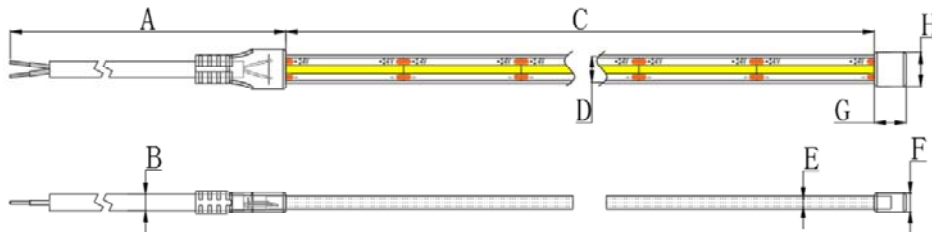
- According to the new ErP 2019/2020 regulation for each 0.5m or nearest 0.5m strip, the following requirements must be met:
  - Measured power ≤ P<sub>on</sub> + 5%;
  - Measured lumen ≥ Useful luminous flux - 10%;
  - Measured CRI ≥ Declared CRI-2
- The above technical data, including typical power are based on the test of 0.5m.

Optical Test Diagram

Spectrum



Dimension Drawing

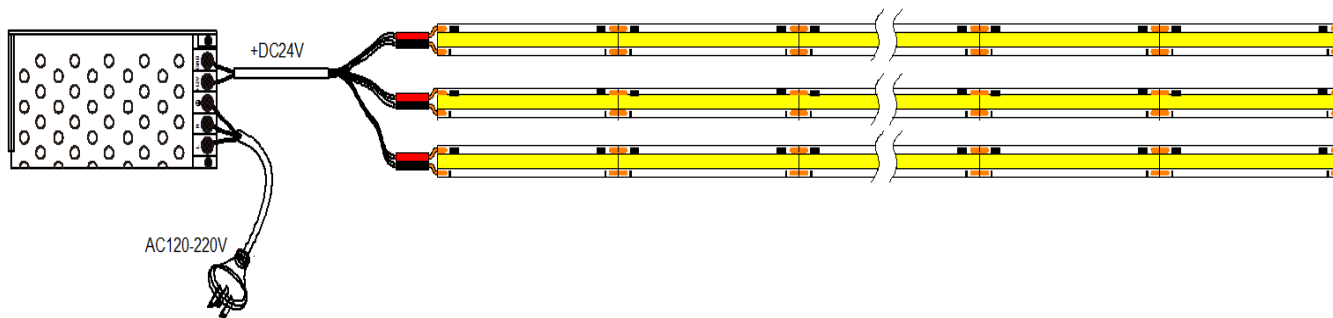


| IP Grade | A.<br>cable length | B.<br>cable diameter | C.<br>Strip length | D.<br>Strip width | E.<br>Strip thickness | E.<br>Strip thickness | G.<br>End cap length | H.<br>End cap width |
|----------|--------------------|----------------------|--------------------|-------------------|-----------------------|-----------------------|----------------------|---------------------|
| E 20     | 300±10mm           | 1.8±0.2mm            | 5000±50mm          | 10±0.5mm          | 1.9±0.5mm             | /                     | /                    | /                   |
|          | 11.81±0.39in       | 0.07±0.008in         | 196.85±1.97in      | 0.394±0.02in      | 0.075±0.02in          | /                     | /                    | /                   |
| F 65     | 300±10mm           | φ4 ± 0.2mm           | 5020 ± 50mm        | 12 ± 0.5mm        | 4 ± 0.5mm             | 6 ± 0.5mm             | 12 ± 0.5mm           | 14 ± 0.5mm          |
|          | 11.81±0.39in       | φ0.157±0.008in       | 197.6±1.97in       | 0.47±0.02in       | 0.157±0.02in          | 0.236±0.02in          | 0.472±0.02in         | 0.55±0.02in         |
| R 67     | 315±10mm           | φ6 ± 0.2mm           | 5020 ± 50mm        | 12 ± 0.5mm        | 4.5 ± 0.5mm           | 6.5 ± 0.5mm           | 12 ± 0.5mm           | 14 ± 0.5mm          |
|          | 12.4±0.39in        | φ0.236±0.008in       | 197.6±1.97in       | 0.47±0.02in       | 0.177±0.02in          | 0.256±0.02in          | 0.472±0.02in         | 0.55±0.02in         |

Remarks :

- If you need further information, please contact our sales account manager..

## Circuit Diagram



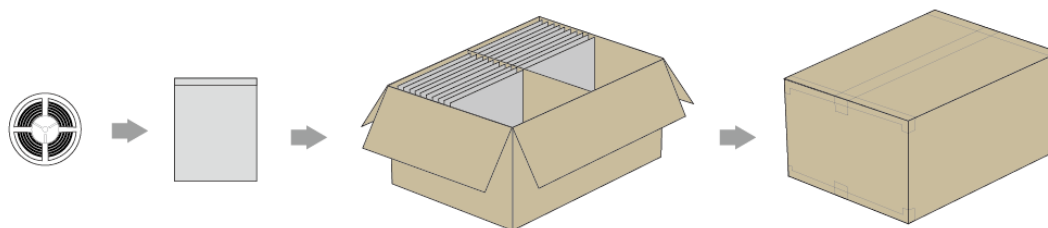
## Standard Accessories

| IP Grade | Category                 | Description                | Picture | Part No.             | Application                  |
|----------|--------------------------|----------------------------|---------|----------------------|------------------------------|
| B 20     | /                        | /                          | /       | /                    | /                            |
|          | /                        | /                          | /       | /                    | /                            |
| F 65     | Connection Accessories   | Front cap+End cap+Cable    |         | WW-FLS102F-CW (10mm) | 10mm Type F Waterproof strip |
|          | Installation Accessories | Installation Buckle+Screws |         | WW-FLS102JJA-MC      |                              |
| R 67     | Connection Accessories   | Front cap+End cap+Cable    |         | WW-FLS102F-CW (10mm) | 10mm Type F Waterproof strip |
|          | Installation Accessories | Installation Buckle+Screws |         | WW-FLS102JJA-MC      |                              |

## Optional Accessories

| IP Grade | Category                 | Description                   | Picture | Part No.             | Density |
|----------|--------------------------|-------------------------------|---------|----------------------|---------|
| B 20     | Quick Connector          | 2PIN Quick Connector          |         | WW-F2B-P0P2T-10(COB) | /       |
|          | Strip to wire Connector  | 2PIN Strip to wire Connector  |         | WW-F2B-0WP2T-10(COB) | /       |
|          | Strip to strip Connector | 2PIN Strip to strip Connector |         | WW-F2B-PWP2T-10(COB) | /       |

## Packaging Diagram



## Packaging Information

| IP Grade | Bag size              | Inner carton |          | Outer carton          |          | N.W            | G.W           | Outer carton volume    |
|----------|-----------------------|--------------|----------|-----------------------|----------|----------------|---------------|------------------------|
|          |                       | Size         | Reel/ctn | Size                  | Reel/ctn |                |               |                        |
| E 20     | 250*270*0.14mm        | /            | /        | 440*400*260mm         | 50       | 4.05 KG ±10%   | 7.95 KG ±10%  | 0.04576 m <sup>3</sup> |
|          | 9.84*10.63*0.0055in   | /            | /        | 17.32*15.75 *10.24in  | 50       | 8.93 Lbs ±10%  | 17.53Lbs ±10% | 1.616 ft <sup>3</sup>  |
| F 65     | 250*270*0.14mm        | /            | /        | 440*400*260mm         | 40       | 8.44KG ±10%    | 13.75KG ±10%  | 0.04576 m <sup>3</sup> |
|          | 9.84*10.63*0.0055in   | /            | /        | 17.32*15.75 *10.24in  | 40       | 18.61 Lbs ±10% | 30.31Lbs ±10% | 1.616 ft <sup>3</sup>  |
| R 67     | 270*300*0.14mm        | /            | /        | 520*370 *300mm        | 36       | 10.08KG ±10%   | 15.87KG ±10%  | 0.05772m <sup>3</sup>  |
|          | 10.63*11.81*0.0056 in | /            | /        | 20.47*14.57 *11.81 in | 36       | 22.22KG ±10%   | 35.0KG ±10%   | 2.038ft <sup>3</sup>   |

**Remarks :**

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



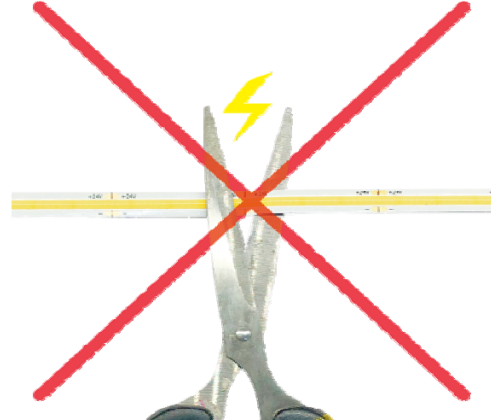
In the process of product installation and use, it is forbidden to knot



In the process of product installation and use, it is forbidden to wind



In the process of product installation and use, it is forbidden to twist





























In the process of product installation and use, it is forbidden to cut


1. In the process of product installation and use, it is forbidden to reinstall and use.
2. It is forbidden to put the product back into the reel after removed from it.





 **Cautions**

| IP20  | IP54  | IP65  | IP67  | IP68  |
|---|---|---|---|---|
|  |  |  |  |  |
| Do not press the surface of LED   | Pay attention to high temperature environment                                     | Do not use in strong water waves environment                                      | Resist strong water waves impact  | Can apply to underwater do not deeper than 1m                                       |
|  |  |  |  |  |
| Pay attention to damp proof and dustproof   | Do not apply to rainy environment   | Can be applied to rainy environment   | Do not apply to underwater environment for a long time                              | No direct sunlight  |

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |   |
| Do not tie a knot   | Do not winding  | Do not twist  | Do not cut when it is working   | Recommended the continuous working time do not exceed 12 hours daily                | -20°C ~ +45°C<br>(4°F ~ +113°F)   | 0°C ~ +60°C<br>(32°F ~ +140°F)  | Operated by professionals   |
|  |  |  |  |  |  |  |  |
| Pay attention to the application environment  | IP Level will change after cutting  | Do not pull and crash   | Connected to power supply every 5 meters  | Power supply must be connected to ground(GND)                                       | The minimum bending diameter > 60mm   | Power supply retain > 20%   | 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..

\*\* If you do not follow the above "Cautions" to operate and result in damaging the product, the factory will not accept maintenance and return.  
\*\*The right of final interpretation is owned by Dilux.