## SMD TAPE LIGHT INSTALL ATION



RAB Lighting is committed to creating high-quality, affordable, well-designed and energy-efficient LED lighting and controls that make it easy for electricians to install and end users to save energy. We'd love to hear your comments. Please call the Marketing Department at 888-RAB-1000 or email: marketing@rablighting.com



## **IMPORTANT**

### READ CAREFULLY BEFORE INSTALLING FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

RAB fixtures must be wired in accordance with the National Electrical Code and all applicable local codes. Proper grounding is required for safety. THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

- 1. The operation instruction does not supersede federal, state, local, or *(inter)* national laws, regulations, rules, ordinances, and codes that may apply to electrical installations.
- 2. The installation and electrical connection process must be operated by a professional electrician using the applicable and appropriate electrical codes.
- 3. Installation, usage and storage must occur in the environment within the temperature range (usually  $-20\sim45^{\circ}$ C for installation & usage and  $-20\sim60^{\circ}$ C for storage) indicated on the product datasheet of the tape light.
- 4. Make sure the operating voltage of the tape light coincides with the voltage of the extra LED power supply certified for the LED lighting industry, do not connect the tape light directly to the AC power such as 120V input.
- 5. Please choose the suitable waterproof rating of the tape light according to the actual application scene.
- 6. Unroll the tape light from reel before illumination, to avoid product damage caused by the heat.
- 7. The tape light can be cut into certain shorter lengths, and also can be spliced into longer lengths. Please refer to the standard length and increment written on the product datasheet of the tape light. Beyond working length will lead to quality issues like overload, uneven brightness, etc.
- 8. Turn off the power supply before wiring, assembly, processing, cleaning, maintenance, etc, and ensure all wiring and polarities are correct before powering on.
- 9. Do not secure the tape light with staples, nails, or similar objects that can damage the insulated housing for waterproofing.
- 10. Be aware of ESD protection, handle with care without colliding or crushing, do not mechanically press down on LED and other components, and do not cover the tape light with heat insulation gasket material.
- 11. Try to use in a well ventilated environment and avoid complete sealing. Avoid installing and using the tape light near heat sources, or other potentially dangerous sources like corrosive solvents.
- 12. To protect your eyes, do not stare at the light for a long time when illuminating the tape light.
- 13. An additional heat sink is helpful for the heat conductivity and LED lifetime, pleasure refer to the heat sink and LED lifespan definition on the product datasheet of the tape light.
- 14. To reduce the voltage drop as much as possible, the wire length between tape light and power supply should be as short as possible.
- 15. Considering the reliability of the LED power supply, it's recommended to use the loading powers not exceed 80% of its rated output
- 16. Make sure that the LED power supply does not generate reverse voltage, it will damage the tape light.
- 17. Dust and dirt accumulated over time should be removed from the light emitting surface to assure optimal functioning of the tape light. Disconnect the power before maintenance and cleaning.
- 18. Paints, solvents and corrosive cleaning chemicals may not contact and thus affect the tape light.
- 19. This product may not be treated as household waste, dispose of the material through the waste recycling of electrical and electronic equipment.
- 20. CAUTION: The mounting means provided with this tape light has not been evaluated for reliability. If installed where failure of the mounting means could cause injury to persons or damage to property below, supplemental means of securement should be considered.

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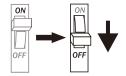
## WARNING



## SHOCK HAZARD! IT MAY RESULT IN SERIOUS INJURY OR DEATH!

Do not connect the tape light directly to the high voltage power. Please turn off the power prior to installation.





## HANDLE PRODUCT WITH CARE!



Do not bend the tape light to a diameter less than 0.79 inches. In addition, the bending position should avoid electronic components to prevent damage.



Do not bend the tape light on a horizontal plane.



Do not cover the tape light with any materials.



Do not fold, crease the tape light.



Do not pull the tape light or driverwire hard during Installation and using.



Do not rub the tape light with other objects.

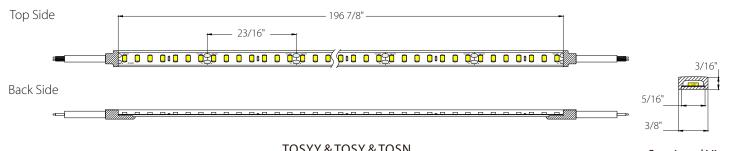


Do not twist the tape light.



Do not put excessive pressure on surface of the tape light (glass/acrylic panes, etc.)

# DIMENSIONAL DRAWINGS



TOSYY & TOSY & TOSN

Sectional View

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## INSTALLATION

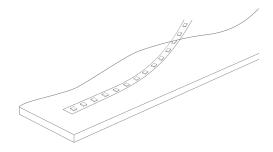
#### Option 1: Fixed by adhesive tape.

1. Clean the mounting surface by removing any dirt, debris, or moisture.



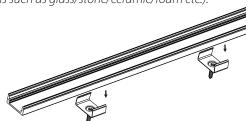
### Option 2: Fixed by clip in TSC2.

1. Place the LED tape light to the mounting surface.

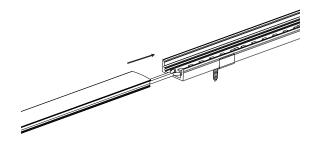


#### Option 3: Fixed by aluminum profile in TAP12.

1. Fixed the aluminum profile by clip and screw to the mounting surface, with materials such as wood, metal, plastic etc. (Not recommended to fix to relatively brittle, hard and soft materials such as glass/stone/ceramic/foam etc.).



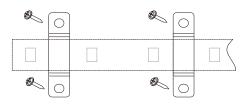
3. Slide the cover into the profile.



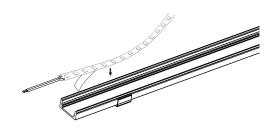
2. Peel off the release paper of the adhesive tape, and then stick the LED tape light to the mounting surface, with materials such as glass, aluminum, iron, stainless steel, PC etc. (Not recommended to stick to low surface energy materials with oil/dust/wax/powder/paint, such as cement, gravel, silicon rubber, rough board etc.)



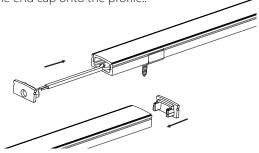
2. Fixed the LED tape light by clip and screw.



2. Clean the profile and then stick the tape light into it.



4. Fix the end cap onto the profile..



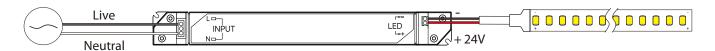
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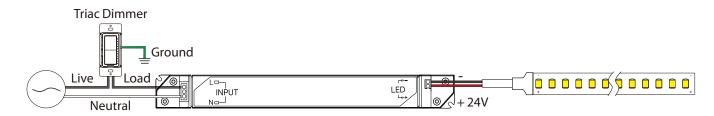
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## WIRING

Option 1: use TID-60 or TID-96 driver with non-dimming.



Option 2: use TID-60 or TID-96 driver with TRIAC dimming (Use the compatible phase dimmer in XDIM, or Lightcloud Blue phase dimmer in XDIM/LCBS.)



| Wire Specification |       | Value     |
|--------------------|-------|-----------|
| Input Wire         | Gauge | 16-20AWG  |
| Output Wire        | Gauge | 18-22 AWG |

## Notes:

- This driver is compatible with both leading edge and trailing edge triac dimmer.
- •This driver should be installed by qualified and professional person.
- Please make sure the driver is installed in ventilation environment for good heat dissipation.
- For avoiding driver damage, please make sure the electric wiring is correct before testing.

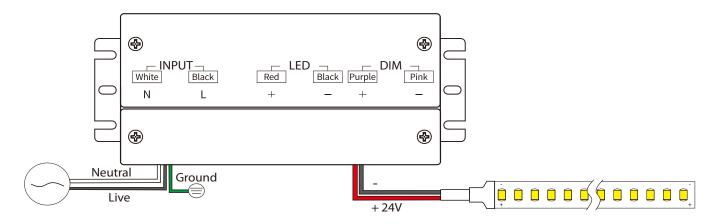
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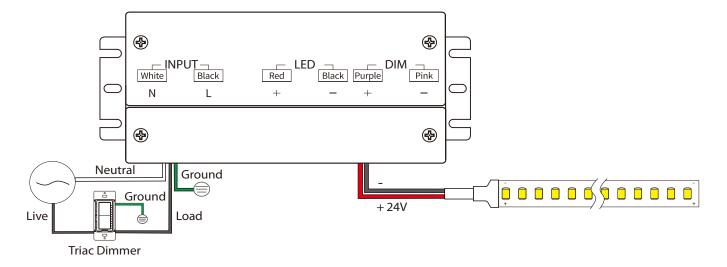
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## WIRING (cont'd)

Option 3: use TOD-96 driver with non-dimming.



Option 4: use TOD-96 driver with TRIAC dimming (Use the compatible phase dimmer in XDIM, or Lightcloud Blue phase dimmer in XDIM/LCBs.)



#### Notes:

- This driver is compatible with both leading edge and trailing edge triac dimmer.
- This driver should be installed by qualified and professional person.
- Please make sure the driver is installed in ventilation environment for good heat dissipation.
- $\cdot \hbox{For avoiding driver damage, please make sure the electric wiring is correct before testing. } \\$
- Although the waterproof level of the LED driver can reach the wet location in IP65, considering the safety of wiring, it is required that the LED driver should not be directly exposed to outdoor environments that are soaked in rain or water, and should be shielded, such as being placed in a power box.

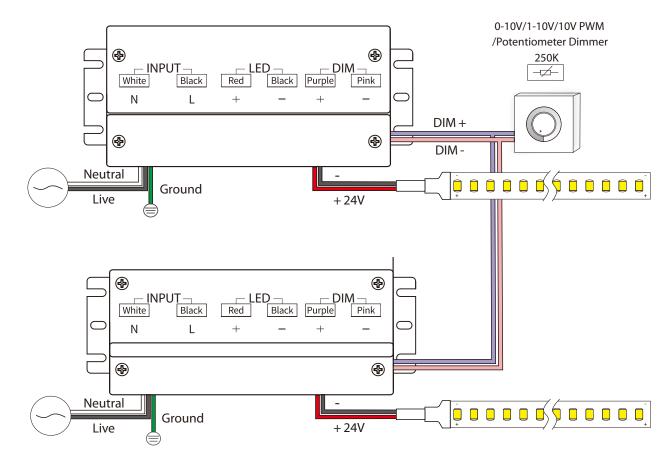
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## WIRING (cont'd)

Option 5: use TOD-96 driver with 0-10V/1-10V/10V PWM/Potentiometer dimming.



#### Notes:

- Dimming interface characteristics: 0.9V and below are closed, 1V is the darkest, 10V is the brightest, 1-10V is the dimming range.
- The dimming interface distinguishes between positive and negative, DIM+ is positive, DIM- is negative, please do not reverse.
- Dimming interface does not support voltage access higher than 20V, otherwise it will cause damage to the internal components.
- $\cdot \text{When the dimming interface is open, the driver outputs the maximum current.} When the interface is short-circuited, the current output is closed. \\$
- When multiple synchronous dimming is required, the positive poles of the dimming interface of each driver are connected together, and the negative poles are connected together.
- · Support passive dimmer or isolated active dimmer dimming, does not support non-isolated active dimmer dimming.
- In general, it is recommended that the number of drivers connected in parallel under the same dimmer does not exceed 30 pcs, and the Max. wiring length of dimming wires do not exceed 328ft.
- It is recommended that the dimming wires should not be lower than the 22AWG wire.
- Do not put the dimming wires with high voltage or interference sources. If it is unavoidable, please use the shielded wires.
- Although the waterproof level of the LED driver can reach the wet location in IP65, considering the safety of wiring, it is required that the LED driver should not be directly exposed to outdoor environments that are soaked in rain or water, and should be shielded, such as being placed in a power box.

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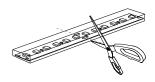


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## **ASSEMBLY**

### Option 1: Using the soldering-free connector in TOJ2 (IP65 [Wet] after the processing of connector splicing and sealant applying).

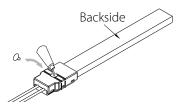
- 1. Cut the tape light along the cuting line to be the desired length.
- 2. Peel off the release paper of the adhesive tape.
- 3. Insert the LED tape light and cable into the connector in right way as diagram.



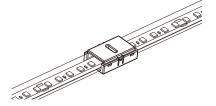




- 4. Use pliers to firmly close the connector, and ensure that the metal pins can pierce the PCB.
- 5. Apply sealant into the connector through the hole, and then block the hole with the small cover.

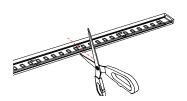


6. Same operation as step 1-5 for the connector types of tape light-to-tape light and tape light-to-wire-to-tape light.



### Option 2: Apply the wire soldering in TPF2.

1. Cut the tape light along the cuting line to be the desired length.



2. Cut off some parts of upper silicone jacket in 3mm long carefully, until these upper solder pads on PCB are exposed

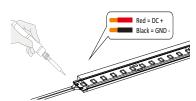


3. Clean the solder pads thoroughly. Be careful not to damage the PCB.

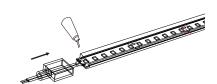


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4. Solder the wire cable to the upper solder pads on PCB.



5. Fill the inner part of front cap by silicone glue and then seal it to the LED tape light.



6. Fill the inner part of end cap by silicone glue and then seal it to the LED tape light.





**Easy Answers**