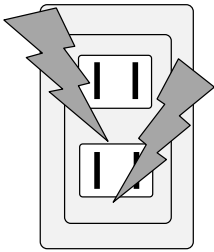# Caution when Installing the Product

Keep the followings to prevent damages, electric shock, fume and fire.
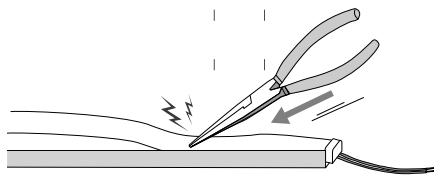
Do not connect to AC power.
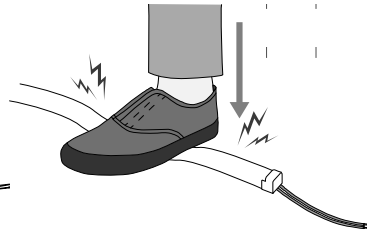
🚫**NG!**

Do not use a tool with sharp point .
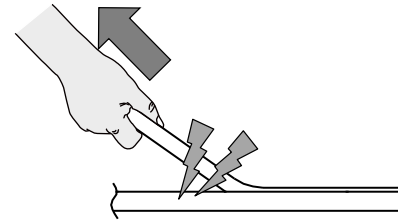
🚫**NG!**

Do not tramp on or strike the product.

🚫**NG!**

Do not pull out the product diagonally from the channel.

🚫**NG!**　　🚫**NG!**
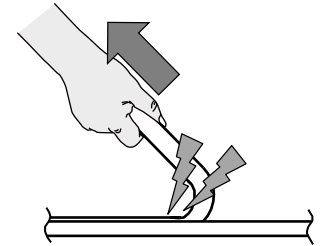
Do not separate the mounting channels at the gap (joint parts) between mounting bases.

🚫**NG!**
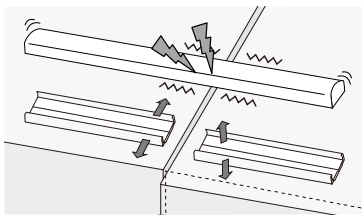
Vibration or misalignment of the base may cause a break of the product !

✔ **OK**
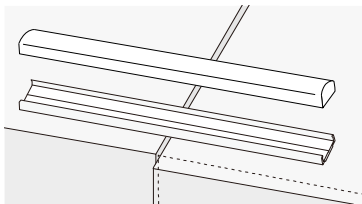
The channel can suppress vibration and misalignment of the base, and prevents the break of the product.

Do not bend the product toward horizontal direction.

◯ Vertical bending is OK

※ See specfication for bending radius.

× 　 × 　 ⊘ Horizontal bending is NG!

Tsubaki Seamless Light Type V (TL10D RGBW / RGB) Installation Manual

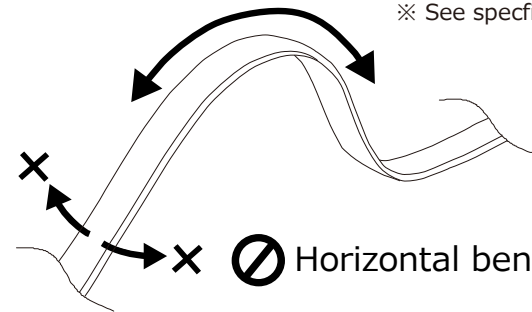**For Keeping**　　**atex**

We will appreciate for your purchasing the product. Please carefully read this manual to install the product correctly and safely.　　※The contents described on this manual are subject to change without prior notice.　　ZTE2TLDRGB(W)　Ver. 20240705

Warning

Read this section carefully to prevent electrical shock, fire and other hazard.

- ☐ Qualifications are required to do electrical works. Check the laws of your country.
- ☐ Input voltage is 24V DC only. Do not apply other voltage such as AC power.
- ☐ Do not disassemble or alter the product.
- ☐ Turn off the power before installing or handling the product.
- ☐ Do not put screws into the products directly. It will cause damages. Please refer to "Installation Method".
- ☐ Please do not perform the following actions on the product.
  - ・ Excessive bending and twisting of the product.
  - ・ Dropping and strongly striking the product.
- ☐ Do not install or handle the product with wet hands.
- ☐ The temperature rise of the product is influenced with the capacity and the distance from housing. Ambient temperatures must remain the product specification.
- ☐ This product is IP67 rated. This product should not be installed in a location where water is continuously splashed or underwater.
- ☐ The product can not be used in the atmosphere of corrosive gas and flammable gas, like the following.
  - ・Area with synthetic rubbers, cardboards, and other materials containing Sulphur.
  - ・Area with hot springs containing Sulphur.
- ☐ If there is any trouble with the product, please immediately turn off the power and contact the dealer or installer.

Precautions

- ☐ Please be careful that eyes might be hurt when you look straight at light emitting part.
- ☐ Please be careful about static electricity. It will damage LED's.
- ☐ The product is vertical bending type. Please do not bend the product toward horizontal direction. It may cause the

🚫 NG!　Horizontal bending

✓ OK　Vertical bending
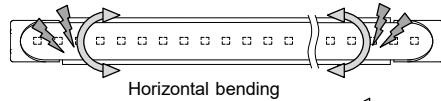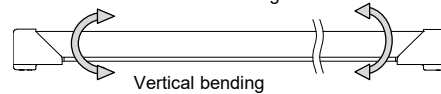
- ☐ Please note that there is some variation in color among LED's.
  - ・The white of RGB LED, and the white of single-color LED's is different in hues.
 - ・The balance of emitted light color may change over time.

Specification

■Product Specification

Product No.	TL10-090DM**K(W)		TL10-090DM(W)
**	28	50	
LED Color	Red, Green, Blue White(2800K)	Red, Green, Blue White(5000K)	Red, Green, Blue
Input Voltage	DC24V		DC24V
Power consumption	15 W/m		10 W/m
Operating Temperature	-10 ~ +55℃ (IP67 rated. Indoor / Outdoor)		
Cutting points	60 mm (6 LEDs) * Customized length order available.		
Dimension	Refer to dimensional drawing.		
Weight	300 g/m		
Bending Radius	R150 mm vertical.		
LED Pitch	10 mm		

■Options

Product Name	Product No.	Remarks
Aluminum Rigid Channel	FAS00-11TD	For straight line installations. Rigid channel (L=1000mm) 1 pcs Fixing Spring 3 pcs
Aluminum Mounting Bracket	FATD-HA	For curvy line installations. Bracket (L=36mm) 5 pcs Fixing Spring 5 pcs

■Outlooking

TL10-090DM**K, TL10-090DM　　FAS00-11D (option)　　FATD-HA (option)

x1　x3　x5　x5
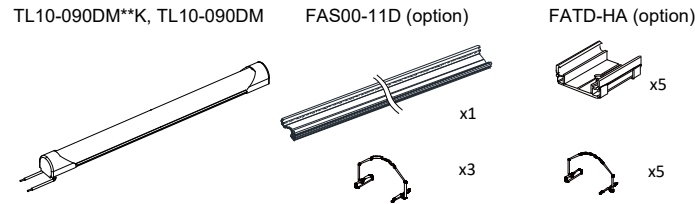
■Recommended total length connectable per power supply

As for the product's connectable length to a power supply, please refer to the following formula.

$$L = R \times 0.7 \div P$$

L: The product's connectable length to a power supply (m)
R: Rated wattage of a power supply (W)
P: Power consumption of a product (W/m)

e.g. TL10-090DM**K(W)　100(W) x 0.7 / 15(W/m) = 4.6(m)
(100W power supply can be used for product's length 4.6m as maximum.)
e.g. TL10-090DM(W)　100(W) x 0.7 / 10(W/m) = 7(m)
(100W power supply can be used for product's length 7m as maximum.)

■Recommended DMX driver（Option）

Product Name	Product No.	Remarks
4ch DMX Driver (LINEARdrive 180D)	LIN180D3	Please contact our sales representative for suitable DMX controllers.
4ch DMX Driver (LINEARdrive 720D)	LIN720D3	

■Dimension

Cable color meaning:
- ☐ White cable ⇔ ＋24V
- 🟥 Red cable ⇔ 🟥 Red LED
- 🟩 Green cable ⇔ 🟩 Green LED
- 🟦 Blue cable ⇔ 🟦 Blue LED
- 🟨 Yellow cabe ⇔ ☐ White LED（RGBW type only）

240　　60 ~ 5040 + End-caps 10mm　　※"W" type only

Cuttabe pitch is every 60mm.

Cuttable line

Enlarged view of Cuttable line　　Enlarged view of Cuttable line

22　28　22　17　25
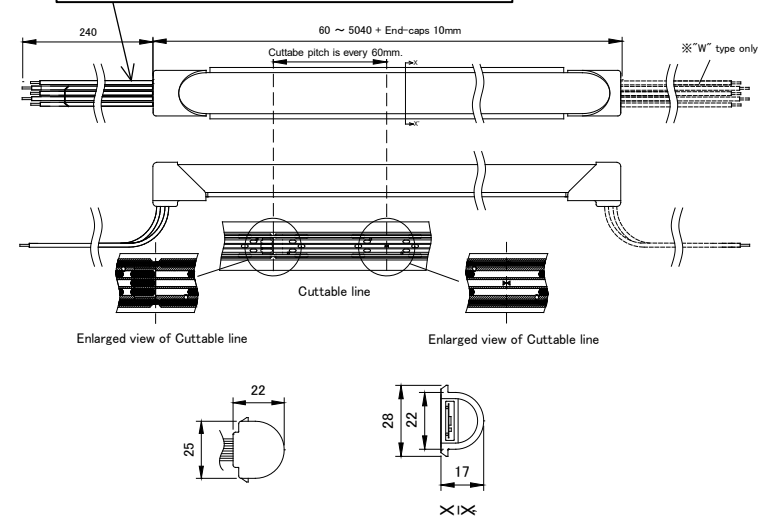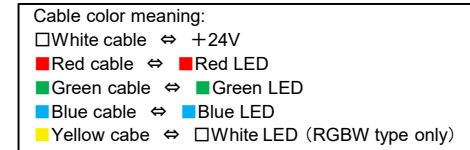
Unit: mm

Wiring Method

☐ Total length of serial connected products should be 10.1m or less. If two or more products are used, connect them in parallel so that the serial length does not exceed 10.1 m.

☐ Cable color means below.
White cable: +24V, Red cable: Red, Green cable: Green, Blue cable: Blue, Yellow cable: White

☐ Choose the power supply and DMX Driver that has eough power.

☐ The folowing is recommended list of total length of the lights that can be connected.

DMX Driver	TL10-090DM**K(W) RGBW type	TL10-090DM(W) RGB type	Remarks
LIN180D3	～ 7500 mm	～ 10080 mm	
LIN720D3	～ 10080 mm	～ 10080 mm	

☐ Wire cable size effects the available length of the wire cable.

TL10-090DM**K(W) (RGBW)

Wire cable		Ampacity *1	Recommended wire length
S-VCTF0.75sq-5C	AWG 18	8.0 A	5.0 m
S-VCTF1.25sq-5C	AWG 16	11.0 A	9.0 m
S-VCTF2.0sq-5C	AWG 14	14.0 A	14.0 m

TL10-090DM(W) (RGB)

Wire cable		Ampacity *1	Recommended wire length
S-VCTF0.75sq-4C	AWG 18	8.0 A	8.0 m
S-VCTF1.25sq-4C	AWG 16	11.0 A	13.0 m
S-VCTF2.0sq-4C	AWG 14	14.0 A	20.0 m

※1 These values of ampacity are examples only. Refer to the specifications of wires you use.
※2 When connecting products and power supplies in parallel in multiple systems, make sure that the types and lengths of the wires in each system are the same to prevent differences in brightness and color between the products.

☐ Please contact our sales representative for more information of wiring.

(A)Dimming Contoroller

Please use the controller which can control DMX driver.

Please select the power supply unit according to the length of the product.

(B)Power Supply 24VDC AC LINE

When you wire the signal lines, Please follow the manual of DMX Driver.

(C)DMX Driver

Please select the Cable size and length according to the table below.

(D)The lights

Please regulate the length of the product depending on current tolerance of DMX Driver.

Please wire the lead wires with same color.

When the length of the product connected to one DMX driver exceeds 10m, please set other DMX driver, and connect it and the product to power supply unit in parallel.

Cable color meaning:
☐White cable ⇔ ＋24V
■Red cable ⇔ ■Red LED
■Green cable ⇔ ■Green LED
■Blue cable ⇔ ■Blue LED
■Yellow cabe ⇔ ☐White LED（RGBW type only）

How to Cut the product at site

☐ When you have to shorten a length of the product, it can be cut at every 60.0 mm.

☐ Purchase optional End Cap separately. After cutting, cover the cutting point with End Cap. Using without End Cap may cause electrical fault, fuming or fire.

☐ Once the product is cut out, it can not be repaired. Before cutting the product, ensure the cutting position. This product has 2 types of cuttable position (A or B).

☐ Diagonally cut may cause a failure of the product or prevent an attachment of end cap.

☐ Damages and failures which caused by your cutting are not covered under the warranty.

Length pitch is every 60mm

A   B

Notches

Cuttable line (A or B)
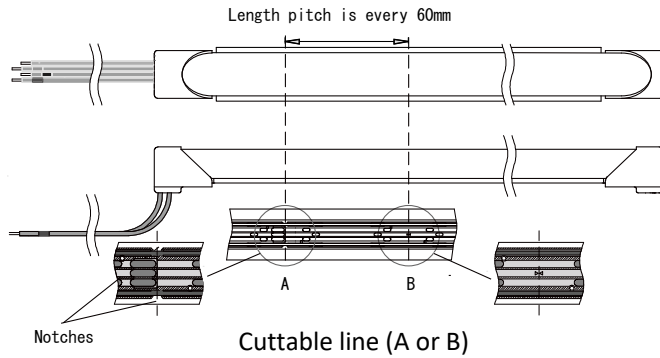
Installation Method

■Straight line installations

Use Aluminum Rigid Channel, FAS00-11TD.

1. Please cut the channel as needed.

2. Remove the burr after cutting the channel, because the burr may cause damages, electric shock and smoke.

3. Securely mount the channel on the wall using screws and screw holes.

   ・ Please use the appropriate screws according to the wall.

4. Put and push the product into the channel securely.

   ・ Insert the product ribs securely below the channel Ribs.

5. Attach the Fixing Spring over the product into the groove of the channel, and between the leaf springs of the holder attached backside the channel.

   ・ After attaching the fixed springs, pull them to make sure thery are completely fixed in the channel grooves. Otherwise, the product may be dropped off from the the channel.

Fixing Spring

Wall

Insert the product ribs below the channnel ribs.

Attach the Fixing springs into the groove of the channel, and between the leaf springs.
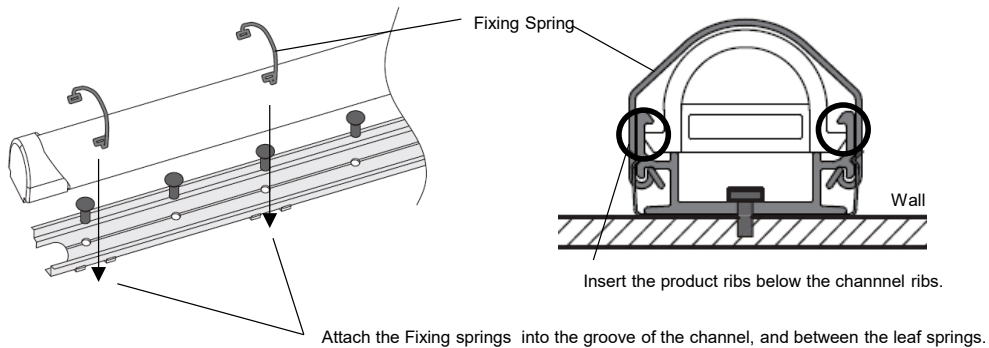
## ■ Curvy line installations

Use Aluminum Mounting Bracket, FATD-HA.

1. Securely mount the bracket on the wall using screws and the screw holes.

   ・ Please use the appropriate screws according to the wall.

2. Put and push the products into the bracket securely.

   ・ Insert the product ribs securely below the bracket ribs.

3. Attach the Fixing Springs over the product into the grooves of the brackets, and between the leaf springs of the holder attached backside of the bracket.

   * After attaching the fixed springs, pull them to make sure thery are completely fixed in the bracket grooves. Otherwise, the product may be dropped off from the the bracket.

Fixing Spring

Wall

Insert the product ribs below the channnel ribs.

Attach the Fixing springs into the groove of the bracket, and between the leaf springs.
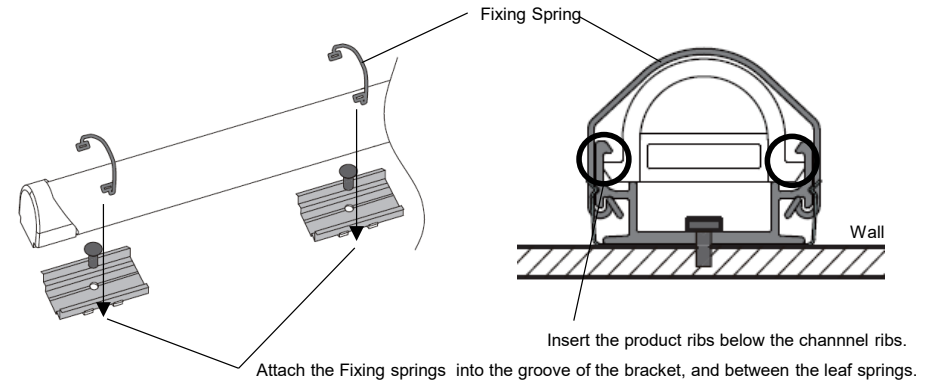
CAUTION

■ Use Atex Accessories to install the product.

■ Do not put the screws on the product directly. It may cause damages.

■ Do not use double sided tape and glue to install the products.

■ Do not perform the excessive bending or twisting of the lead wires and End Caps. It may cause the failure and the decline in water resistant performance.

■ In case of installing the product vertically, it may be slided down. As the right figure, set the L-shape metal corner brace beneath the product. Do not pinch the leads by the brace to prevevnt fire.

L Shape Metal Corner Brace
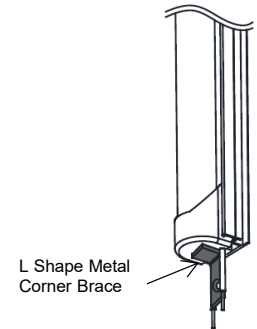
WARNING

This product should not be installed in the following places.
・Places where water is continuously splashed or underwater. (This product is IP67 rated)
・Places where moisture tends to remain.
・Places with poor heat dissipation.
・Places with high temperature and humidity, such as bathrooms and saunas.
・Places with large vibrations and shocks.

Clean and inspect the product on a regular basis. Leaving the product for a long period of time may cause smoke, fire, or electric shock.
・Voluntary inspection and cleaning (once a year).
・Inspection and cleaning by specialists such as an electrician (once every three years).