



The instructions below are guidelines for installation of Allanson's 11mm Back Bendable LED Flexible Border Tubing. Installation requirements may vary depending on the application.



Read the instructions completely and carefully and follow all National Electric Codes and local codes.

WARNING: Only qualified personnel should perform installation.

To avoid electrical shock or component damage, disconnect the power before installation, service, or removal.

Power Supplies Loading

	Power Supply Part number	Output Watts	Input Voltage	Output Volts DC	Max. Capacity
12V	ACV125-120-277V	60W	120-277	12.0	16.4' (5m)
	ACV2125-120-277V	120W (60 + 60)	120-277	12.0	16.4' (5m) + 16.4' (5m)
	ACV3125-120-277V	180W (60 + 60 + 60)	120-277	12.0	16.4' (5m) + 16.4' (5m) + 16.4' (5m)
	CVW125-120-277V	60W	120-277	12.0	16.4' (5m)
	CVW2125-120-277V	120W (60 + 60)	120-277	12.0	16.4' (5m) + 16.4' (5m)
	CVW3125-120-277V	180W (60 + 60 + 60)	120-277	12.0	16.4' (5m) + 16.4' (5m) + 16.4' (5m)
24V	CV244-120-277	96W	120-277	24.0	19.7' (6m)
	CVW244-120-277	96W	120-277	24.0	19.7' (6m)
	CVW2244-120-277	192W (96 + 96)	120-277	24.0	19.7' (6m) + 19.7' (6m)
	CVW3244-120-277	288W (96 + 96 + 96)	120-277	24.0	19.7' (6m) + 19.7' (6m) + 19.7' (6m)

Product Handling

- 1) Do not (top and back) bend past a diameter of 160mm/6.3" to avoid damage to internal components of the product (Fig. 1).
- 2) Do not bend into 90° (Fig. 2)
- 3) Do not (side) bend the product in the direction shown (Fig. 3)
- 4) Do not twist the product (Fig. 4)
- 5) Do not pull excessively on the connection wire. This can damage the connections inside the product
- 6) Ensure Allanson Class 2 power supply is being used. Please reference the power supply loading chart above
- 7) To minimize the voltage drop and maintain light consistency, minimize the length of wires between power supply and the product. Minimum 18GA is required.

Distance to Allanson Power Supply	Standard Copper Wire Gauge	Expected Voltage Drop
13 Feet	16 AWG	5%
20 Feet	14 AWG	5%
30 Feet	12 AWG	5%

Note: All darker shades in images below represent the luminescent surface.

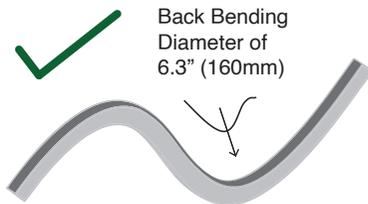


Fig. 1

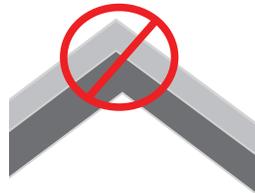


Fig. 2

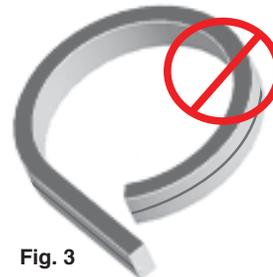


Fig. 3

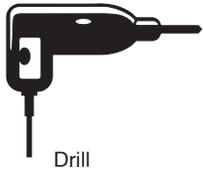


Fig. 4



Tools and Mounting Hardware

Installation tools and mounting hardware required are subject to applications. Tools might include the following:



Drill



Level



Tape Measure



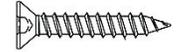
Chalk Line



Pipe Cutter
(only used for field cut applications)



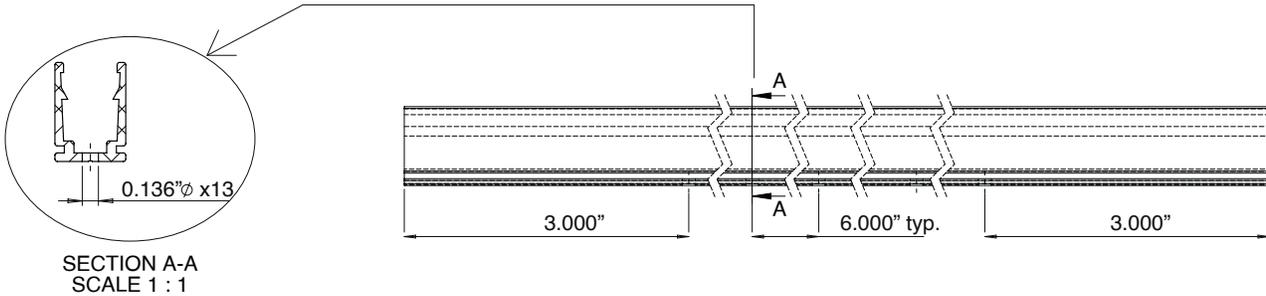
#6 pan head Screw
(for outdoor application)



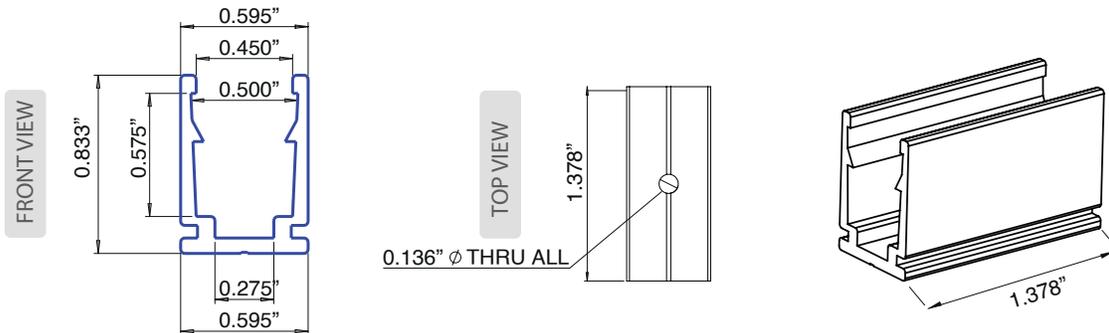
#6 countersink Screw
(for indoor application)

Mounting Accessory Options

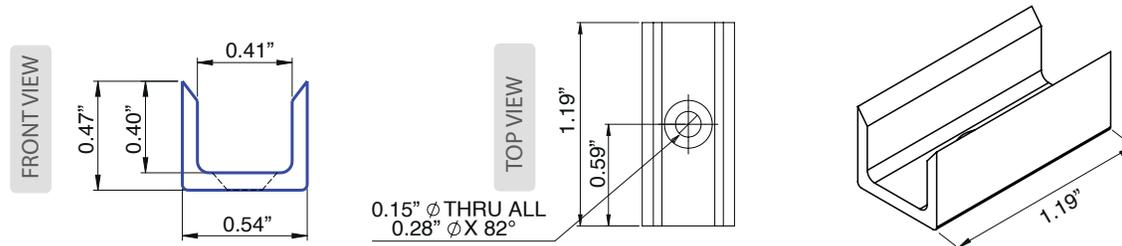
Self-locking aluminum extrusion (6' 6" length):



Self-locking aluminum mounting clip for outdoor application:



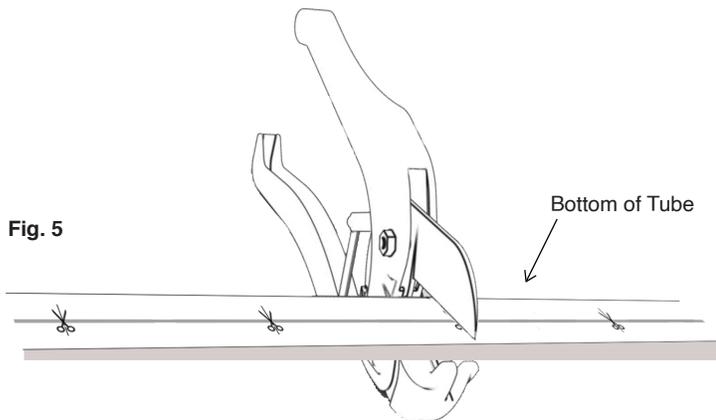
Plastic mounting clip for indoor application:



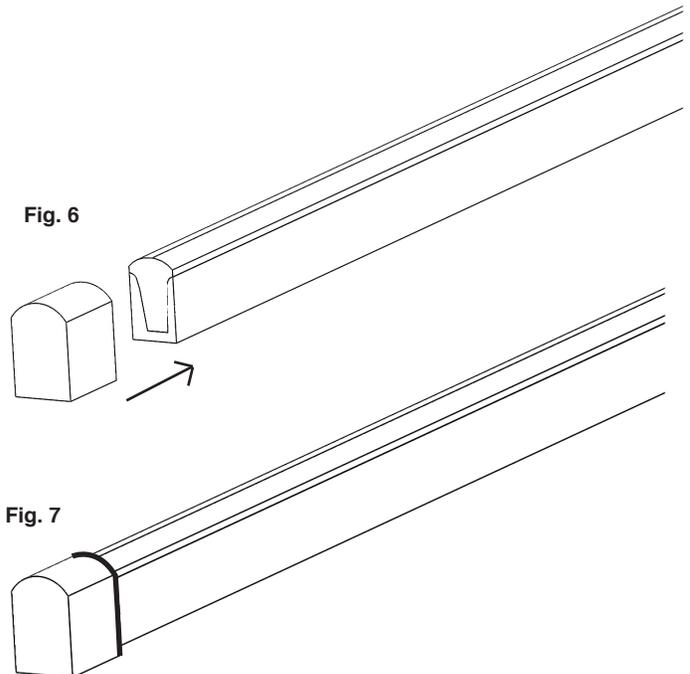


Field Cut Instructions (Dead-End Only)

1. Allanson Flexible Border Tubes can be cut to shorter lengths in the field
2. Conditions must be dry and clean before cutting sections
3. Securely hold the flexible border tube product
4. Cut all sections directly aligned on the cut mark indicated at the bottom of the product using a PVC pipe cutter (Fig. 5) (do not cut between cut mark lines as this will result in damage to the circuiting of the product)
5. Use dry cloth to wipe clean the cut end of the flexible border tube
6. Ensure cut end is clean and dry before moving onto the next step
7. Apply clear RTV (silicone) to the cut end of the flexible border tube and to the inside of the translucent end cap (fill end cap 1/3 with silicone). Avoid air pockets inside the end cap.
8. Push the end cap over the flexible border tube, forcing any air bubbles out (Fig. 6)
9. Make sure that the edge of the cap is sealed all around (Fig. 7)
10. Allow to set prior to installation
11. Using a damp cloth clean the flexible border tube before final installation



Note: align PVC pipe cutter vertically to the cut mark before cutting to allow a precise cut.



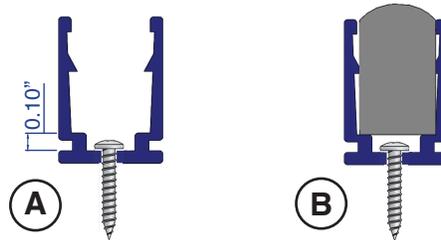


1. Straight run mounting installation

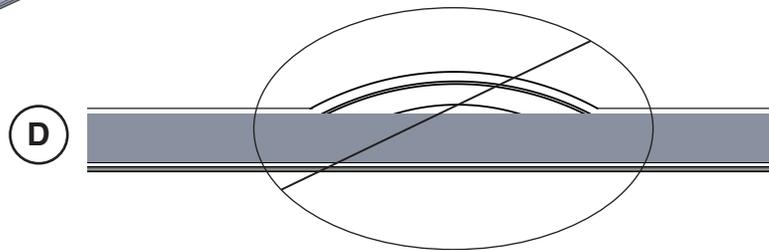
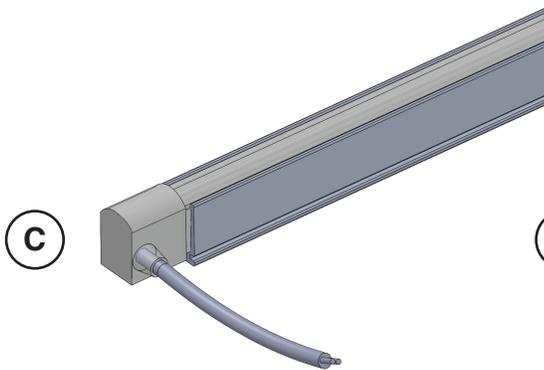
- A. The standard self-locking aluminum extrusion is 78 inches (6.5 ft) long. For a long straight run, multiple extrusions are being installed consecutively. Maintain a 1-inch clearance between each extrusion to avoid contact, friction or any abnormal conditions resulting from thermal expansion and contraction or building vibration.



- B. Cut the aluminum extrusion to your desired length if required. Smooth the inside of the extrusion at the sharp edge before use to avoid damaging the tube.
- C. Securely mount the self-locking aluminum extrusion with appropriate fasteners (Fig. A).
- D. Ensure the fastener head is flush with the lower base of the aluminum extrusion (Fig. B). Any oversized screws or fastener heads taller than the lower base of the extrusion would press the bottom of the tube and may cause damage.



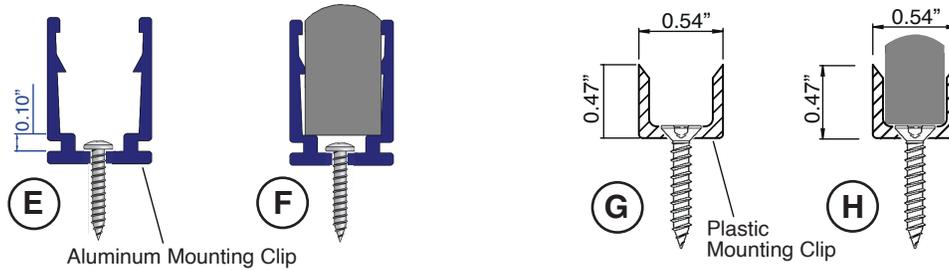
- E. Confirm measurements before inserting the tubing into the self-locking aluminum extrusion. Removing the tubing after insertion may result in damage to the tubing. Avoid excessive bending or twisting when removing the tube.
- F. Extend a minimum 1 inch (25.4 mm) of tubing on both ends from the self-locking aluminum extrusion (Fig. C). Do not force the end caps into the extrusion.
- G. Insert the tubing starting from one end and continue to the other to avoid buckling in the middle (Fig. D). Keep the roll of tubing in your hand firmly and gently press the tubing into the extrusion. Do not leave the product hanging to avoid twisting. Apply soapy solution along the inside of the extrusion to ease the insertion process.



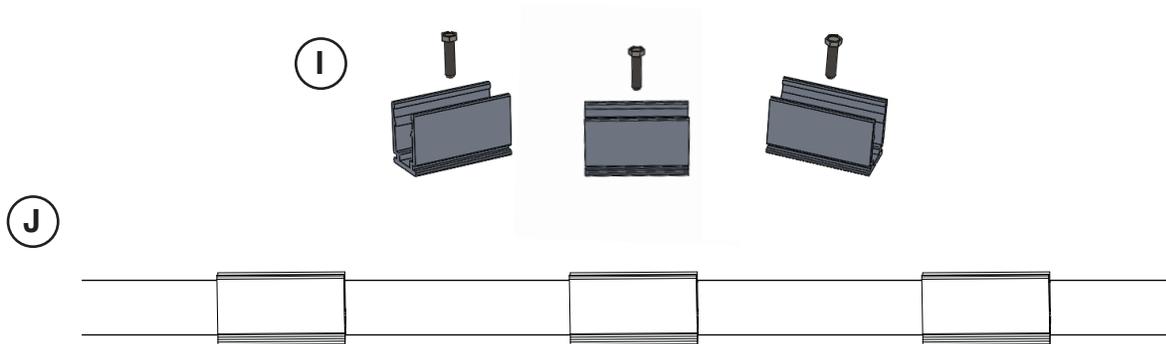


2. Free form shapes and letters mounting installation:

- A. Use self-locking aluminum mounting clips for outdoor applications (Fig. E).
- B. Use plastic mounting clips for indoor applications (Fig. G).
- C. Secure mounting clips using appropriate fasteners (Fig. I).
- D. Ensure the fastener head is flush with the lower base of the mounting clips (Fig. F & H). Any oversized screws or fastener heads taller than the lower base of the mounting clip would press the bottom of the tube and may cause damage.



- E. Confirm measurements before inserting the tubing into the self-locking aluminum mounting clips. Removing the tubing after insertion may result in damage to the tubing. Avoid excessive bending or twisting when removing the tube.
- F. Insert the flexible border tubing into the mounting clips (Fig. J). The number of clips and distance between them will be determined by each specific application. Keep the roll of tubing in your hand firmly and gently press the tubing into the clips. Do not leave the product hanging to avoid twisting.



Installation Tips

1. It is helpful to light up each section before you install it into the mounting extrusion to insure proper lighting. Once the flex is in the track it is a tight fit and very difficult to remove without damaging the tube.
2. A little spray of application fluid or water with a touch of dish soap into the aluminum extrusion will help facilitate placing the flex into the track.
3. When working with full rolls or long sections you will need two people to properly install the tubing into the track. One person to hold the extra flex and one person to place the flex into the extrusion. If the tubing is allowed to hang down the angle and the weight of the tube can damage the LED board in the flex.
4. Keep in mind when mounting the 6.5' extrusion to the building to leave room for the end caps, they do not fit into the extrusion.
5. If you should need to remove the tubing from the mounting extrusion, use a flat head screw driver and gently pry the tubing up as move down the extrusion. Too much "pulling pressure" can damage the LED board.



Troubleshooting

1. Entire flexible border tubing does not light up
 - a. Ensure power switch is turned on
 - b. Confirm that Allanson Class 2 power supply is being used
 - c. Check polarity and all wiring connections (positive to positive and negative to negative)
2. Sections of flexible border tubing does not light up
 - a. Ensure product has not been bent incorrectly
 - b. Ensure product has not been cut between the cut mark lines
3. Product seems to be too hot and too bright
 - a. Make sure the proper voltage of power supply is being used (24VDC for standard color and 12VDC for RGB color changing options)
4. Product seems to be too dim
 - a. Make sure the proper voltage of power supply is being used (24VDC for standard color and 12VDC for RGB color changing options)
 - b. Make sure loading does not exceed max. capacity (refer to power supply loading chart on p.1)
 - c. Increase wire guage for long distance