Muzata

HL12 LED Handrail
User Guide

1. Overview

Muzata LED Handrail is an innovative solution that combines a handrail with an LED channel to provide optimal lighting for decks and stairs, ensuring the safety of your family at night. With its user-friendly handrail connectors, it is easy to install without any welding. Whether it's an interior, exterior, or seaside project, Muzata LED Handrail is suitable for all.

2. Specifications

Name	Model	Material	SPEC	Finish
Muzata aluminum LED handrail	HL12 BPA	Aluminum	6'6" 2 1/2"×1 5/16"	Black powder coated

3. Items related

(1) Package includes

For your convenience, we have provided a list of items included in the handrail packaging below.

HL12- Muzata aluminum LED handrail

HA36- Aluminum extension connector: For straight connections

M4.8x16mm self-drilling screw: Connect handrail and bracket

M4.8x13mm self-drilling screw: Connect handrail and connector

5

LED light cover: Protect the LED strip

6

4mm drill bit:
Drill holes on the handrail

7

End cap: Cover the end of handrail

8

Handrail gap cover:
Cover the seam between two handrails

(2) Accessories related

Please note that accessories listed below may be required but are not included in the package. If needed, they can de purchased separately.

9

HA37 corner connector:
Connect handrails at the corner

10

Fixed-top bracket:
Works with fixed-top post

11

Adjustable-top bracket:
Works with adjustable-top post

12

Corner bracket:
Works with fixed-top post

13

Lighting function

4. Installation Steps

4.1　Straight connection

(1)　Install the handrails

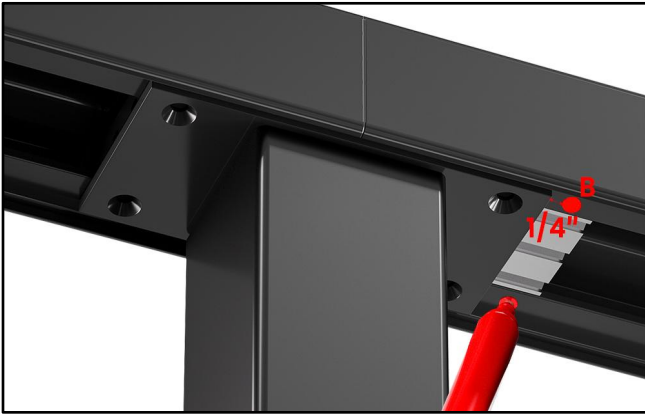**Step 1 –** Insert the aluminum connector ❷ and make sure the connector is in the center of the joint.

①　With fixed-top post

Step 1 – Align the edge of fixed top bracket ❿ with the edge of the connector ❷.

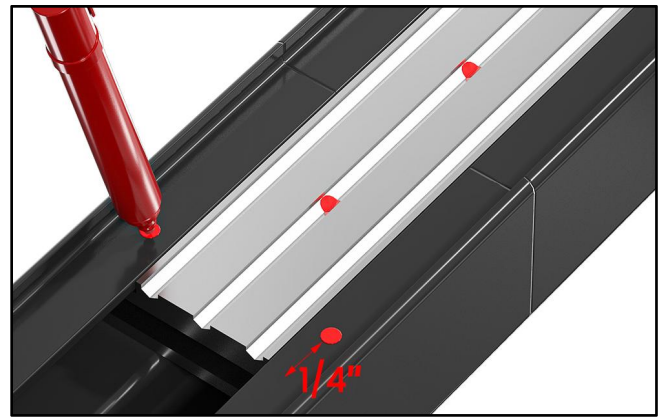**Step 2 –** Mark hole positions of the fixed top bracket ❿ on the handrail ❶.

Step 3 – Mark point B which is 1/4" away from the edge of bracket.
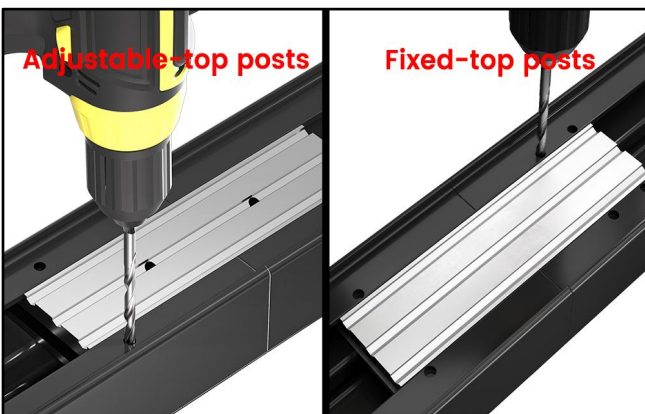
② **With adjustable-top post**

Step 1 – Align the holes of the adjustable top bracket ⑪ with the groove in the middle of the aluminum connector ❷ and mark.
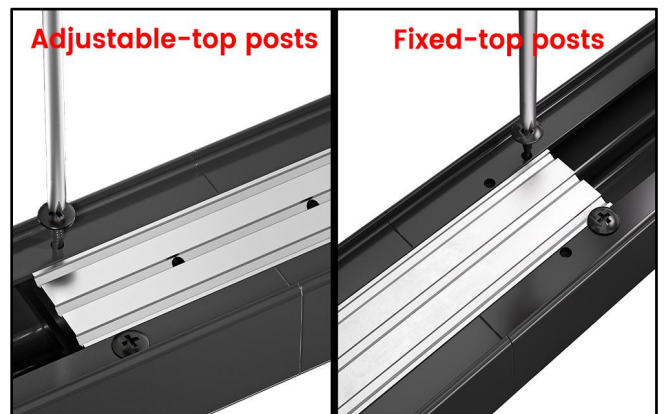

Step 2 – Measure 1/4" from the left end of the aluminum connector ❷ and mark it on the handrail ❶.
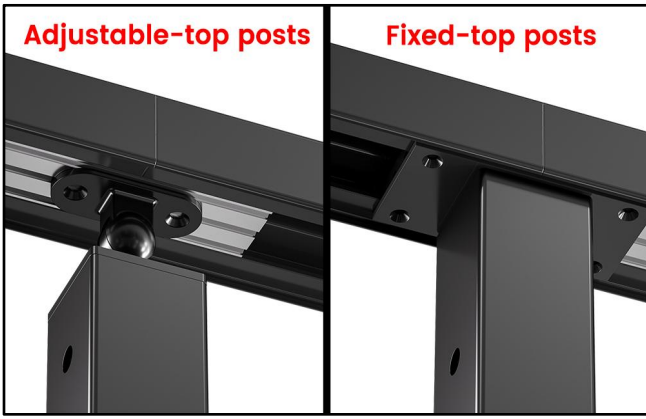
(2) Install the handrails onto the posts

Adjustable-top posts   Fixed-top posts

Step 1 – Drill all marked positions with a 5/32" drill bit ❻.

Adjustable-top posts   Fixed-top posts

Step 2 – Fix the handrail ❶ and aluminum connector ❷ with 4.8x13mm self-drilling screws ❹.

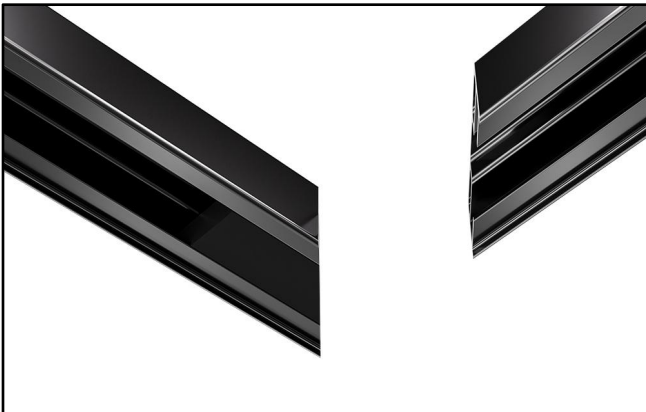**Step 3 –** Place the installed handrails onto the post and align it with the holes.

Adjustable-top posts   Fixed-top posts

Step 4 – Fix the bracket ⑩ and aluminum connector ❷ with M4.8x16mm self-drilling screws ❸.

(3) **Complete all installation steps of handrails.**

(4) **Install the LED strip in the handrail according to the 4.3 part below.**

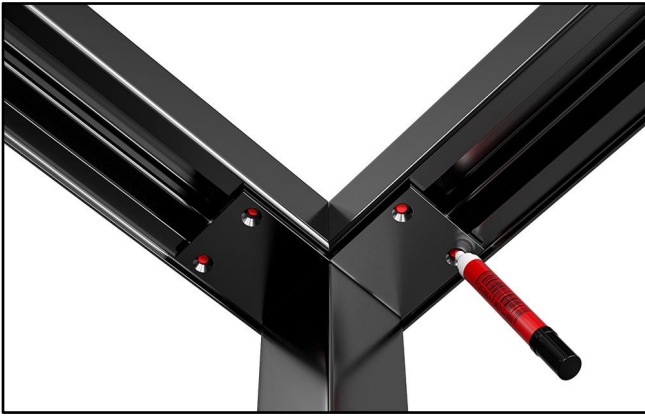## 4.2   Corner connection

(1) **Install the handrail**

Step 1 – Cut the two handrails ❶ at a 45° angle.

Step 2 – Connect two handrails ❶ with corner connector ❾.
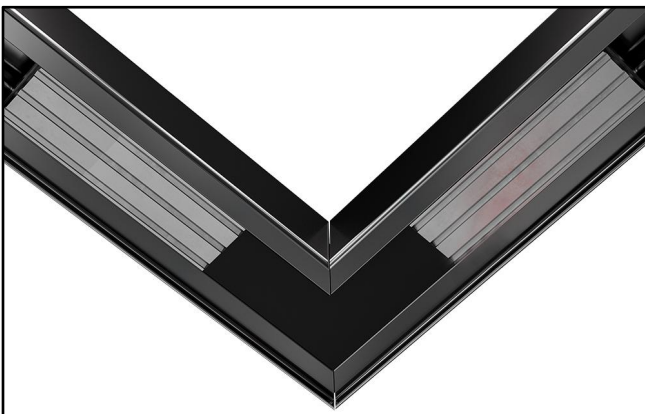
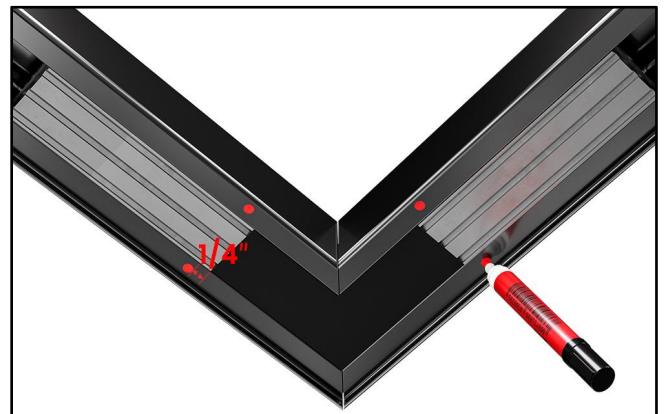## ①   With fixed-top post

Step 1 – Put the corner section onto the corner bracket ⓬ and mark the hole positions.
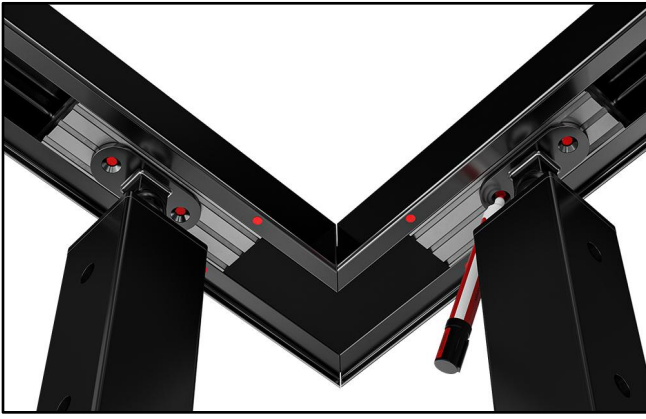
②   With adjustable-top post

Tips: If using adjustable top posts at a corner, dual posts are required.

Step 1 – Put the aluminum connectors into handrails and align with the POM corner connector.
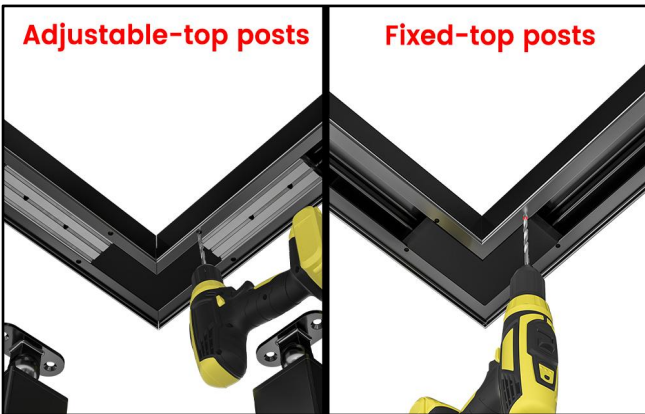

1/4"

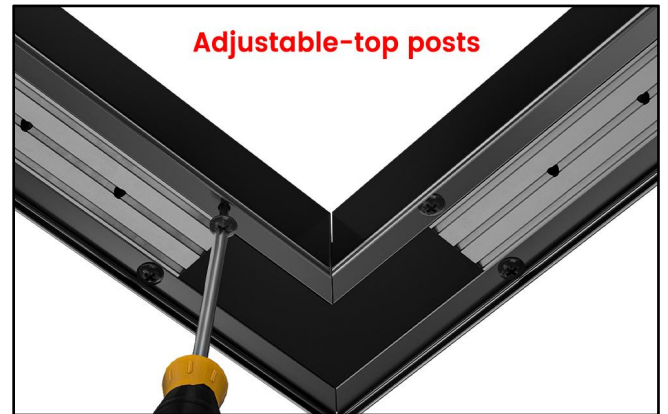**Step 2 –** Measure 1/4" from the corner connector and mark on the handrails.

Step 3 – Align the holes of the adjustable top bracket with the groove in the middle of the aluminum connector and mark.

(2) Install the handrails onto the posts

Adjustable-top posts | Fixed-top posts
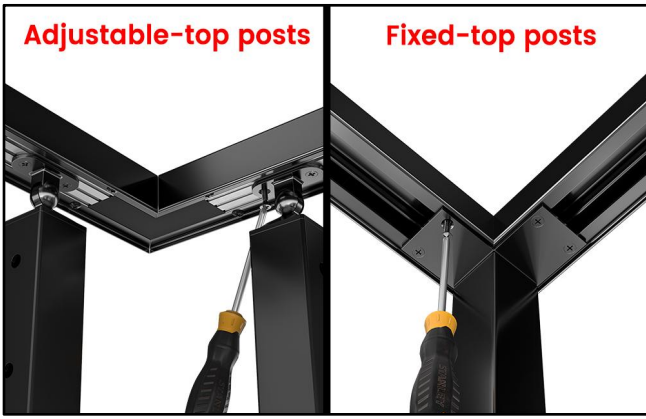

Adjustable-top posts

Step 1 – Drill all marked positions with a 5/32 " drill bit ❻.

Step 2 – Secure the aluminum connector ❷ with 4.8x13mm self drilling screws ❹.

Tips: This step only applies to the dual-post corner situation.

Step 3 – Fix the handrail connector with the bracket ❿ / ⓫ using M4.8x16mm self-drilling screws.

(3) **Complete all installation steps of handrails.**
(4) **Install the LED strip lights in the handrail according to the 4.3 part below.**
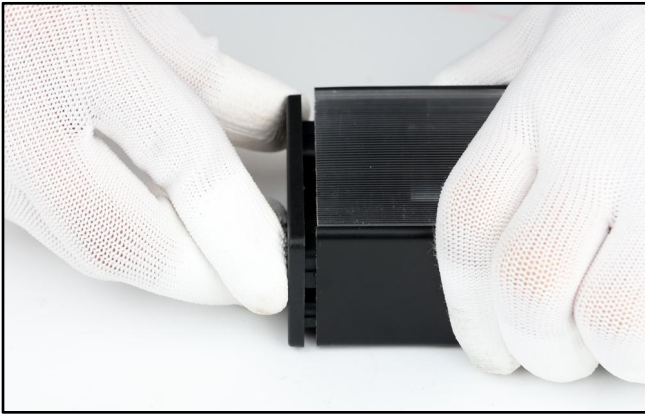
(5) **Install the LED strips**

Note: Please use waterproof LED strips for outdoor projects since the handrail could not protect LED strips from water.

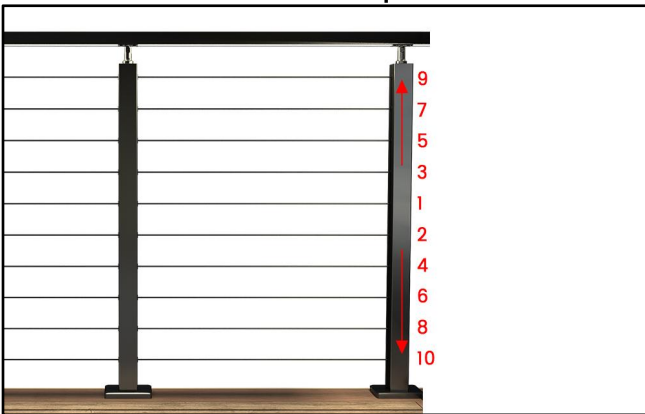**Step 1 –** Attach the LED strip to the handrail.

Step 2 – Cut the LED cover ❺ and snap inside the handrail.

Step 3 - Insert the end caps into handrails.

(6) Install the cable railing kits

Please follow the sequence to install all cable runs.

Please note that installation videos are available on our product pages for further details if needed.

5. Tips

(1) To ensure that the installation is easy and perfect, please strictly follow the steps and data.

(2) Please complete all the installation steps for handrails before installing the LED strips.

(3) The handrail gap cover is recommended to be used when the handrail seams are rough and ugly.

(4) This LED handrail only fits led strip with a width<16mm.

(5) Waterproof light strips are required for outdoor projects.

(6) Ensure that your posts and handrail are properly installed before you start cable installation.You might have to buy a few more materials than expected in case some materials might not be reusable after operation mistakes.

(7) The recommended post spacing between two posts is 3ft-4ft, no more than 4ft. For our 6'6" handrails, it would be best to adopt 3'3" post spacing.

(8) The overall height of the railing (includes handrail) should be equal or higher than 36" to meet residential building codes of most states. Please consult your local building offices for building codes and make sure the system complies with the codes.

(9) 3" cable spacing and 200 lbs tension on each cable line are recommended in order to pass the 4" sphere test (required by some states). You can buy a tension gauge online or from local stores.

6. Free design service

We offer custom cable railing design service for free. If you are a beginner or not sure about how to do it, please reach us. Our experts can do all the planning, designing and budget work for you without extra charging.

7. About Muzata

MUZATA has helped millions of families with their cable railing projects during the past years. We believe that home renovation should be easy and affordable. So we work with every effort to provide quality products and professional service, to make Muzata a reliable brand.