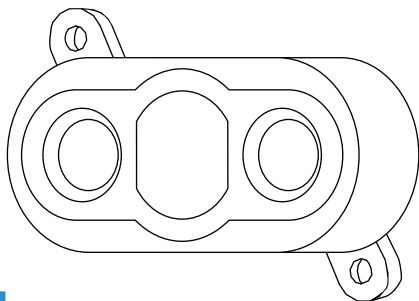




USER MANUAL

Permanent Outdoor Lights CrestPillar S1090 Series



Installation Guide



App User Guide



Knowledge Base



App Download

✉ Support E-mail: support@asahom.com

All accessories are replaceable for easy maintenance and long-term use.

Safety Instructions

READ AND SAVE THESE INSTRUCTIONS

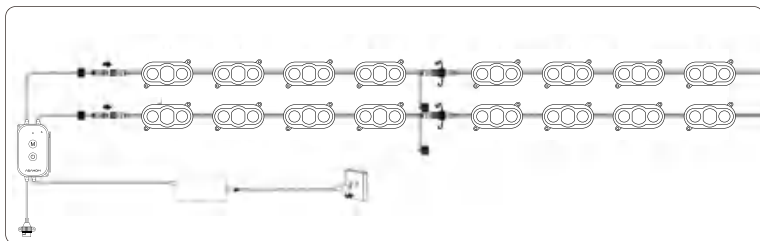
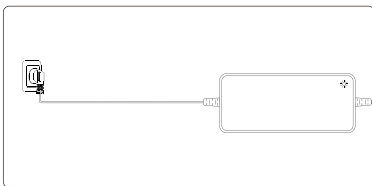
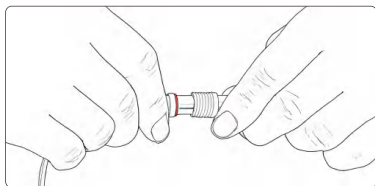
- This product is IP67 waterproof and suitable for outdoor use. Do not immerse it in water.
- Use both adhesive tape and screw clips to securely fix the light strip and prevent it from falling.
- Ensure all waterproof caps are properly tightened before use.
- Keep out of reach of children. Do not allow children to install or assemble the product.
- Do not install near heat sources or in other hazardous environments.
- Only use the included power adapter. Do not use third-party or non-standard adapters.
- Do not use external dimmers.
- Always follow the installation instructions to ensure safety and optimal performance.

Quick Start Guide

Start your installation in just **8** easy steps!

Make sure to test everything before final installation.

STEP1 Test before Installation



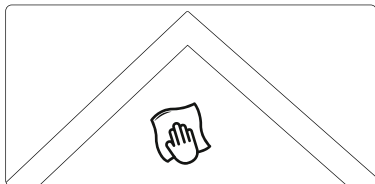
WHAT TO DO:

- Connect all string light sections in sequence.
- Ensure all connectors are aligned correctly and fully inserted. Do not force reverse connections.
- Plug in the power adapter.
- Check that all lights are working properly.

NOTE:

- **Ensure all lights are connected before powering on. Otherwise, the lights may not illuminate.**
- **If some lights do not turn on, please refer to Step 8 to refresh the system layout configuration.**
- **If your setup includes more than 144 LEDs, please refer to the Power-T connector section for proper connection guidelines.**

STEP2 Prepare the Mounting Surface



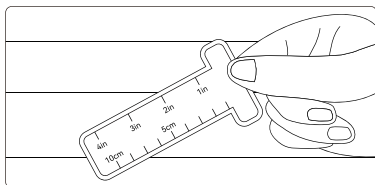
WHAT TO DO:

- Wipe the mounting surface with a dry cloth or alcohol wipe.
- Ensure the surface is clean, flat, and completely dry.
- Remove dust, oil, or loose particles before installation.

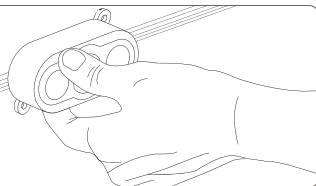
NOTE:

- **Dirty, wet, or rough surfaces may reduce adhesive strength.**
- **For best results, avoid installation on peeling, dusty, or uneven surfaces.**
- **Low temperatures may affect adhesive performance.**

STEP3 Install the lights



Press firmly for
at least 8 seconds

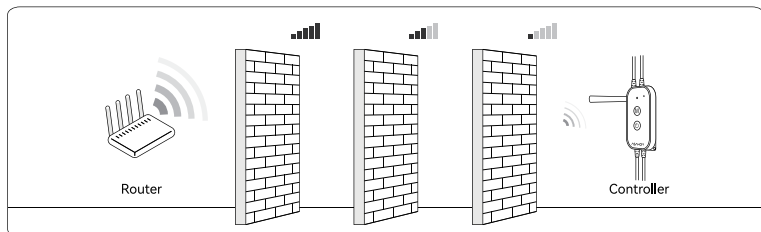
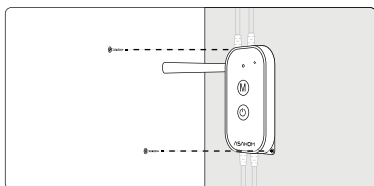
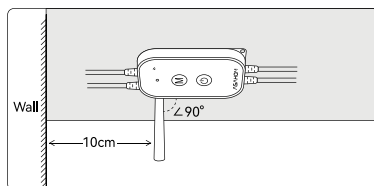


WHAT TO DO:

- Recommended distance from the wall: 5–10 cm.
- Peel off the adhesive backing.
- Press and hold the mounting base firmly for at least 8 seconds.
- Secure the mounting base with screws.

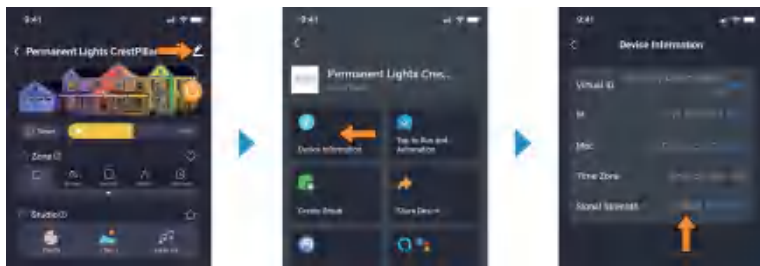
NOTE: *Improper spacing may affect lighting angle and appearance.*

STEP4 Install the Controller



WHAT TO DO:

- Keep as few obstructions as possible between the controller and the router.
- Avoid installing the controller inside metal enclosures or behind large metal objects.
- **To ensure optimal WiFi performance, rotate the antenna by 90° and keep it at least 10 cm away from the wall.**
- Use screws to secure the controller in the desired installation position.
- Before final installation, check the WiFi signal strength in the App at the selected location.
- Before final installation, refer to **Step 7** to connect the device to the App, then follow the steps below to access the WiFi signal strength check page.

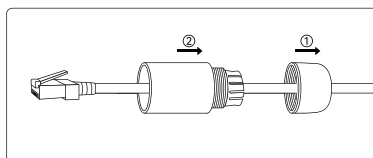


NOTE:

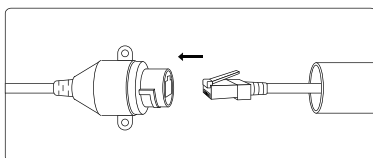
- For best wireless performance, avoid installing the controller near high-power electrical equipment or strong interference sources.

STEP5 (Optional) Connect the Ethernet Cable

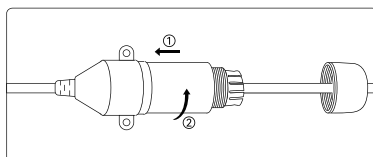
You may skip this step if Ethernet is not needed. After completing WiFi setup and device activation, you can connect the controller to your router using an Ethernet cable for more stable long-term connectivity.



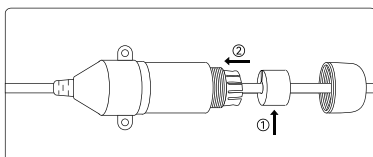
① Slide the locking nut and waterproof sleeve onto the Ethernet cable



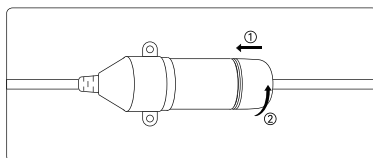
② Insert the Ethernet connector into the controller Ethernet port



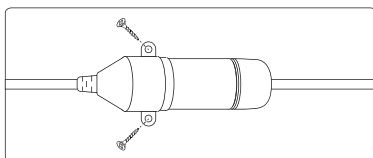
③ Tighten the waterproof sleeve securely



④ Install the sealing ring



⑤ Tighten the locking nut firmly to complete the waterproof seal



⑥ Use screws to secure the Ethernet connector if needed

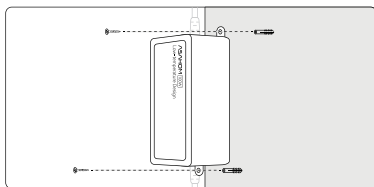
WHAT TO DO:

- Ensure all waterproof parts are installed in the correct order.
- Tighten all parts securely to maintain proper waterproof sealing.
- Make sure the sealing ring is installed correctly before tightening the locking nut.
- Use screws to secure the Ethernet connector if additional stability is needed.

NOTE:

- *Improper installation may affect waterproof performance.*
- *Avoid excessive bending or tension on the Ethernet cable after installation.*

STEP6 Install the Power Supply



WHAT TO DO:

- Use expansion screws to securely mount the power supply.
- Install the power supply in a well-ventilated location.
- Keep the power supply away from heat sources and standing water.
- Ensure the cables face downward whenever possible to help prevent water ingress.
- Do not place heavy pressure or tension on the power cables.

NOTE: *The power supply may become warm during operation. This is normal. Ensure sufficient ventilation around the unit.*

STEP7 Power On & Pair with ASAHOM App



App Icon



QR Code

WHAT TO DO:

- Plug in the power adapter
- Download and open the ASAHOM App
- Ensure your phone is connected to **2.4GHz WiFi** and Bluetooth is on
- Keep your phone within 5 meters of the control box
- Follow the in-app instructions to pair

NOTE:

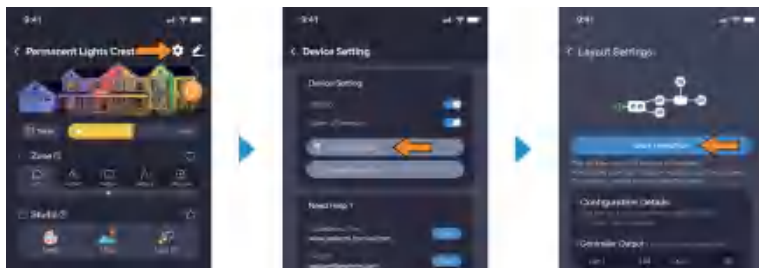
- **The control box's blue light flashing indicates pairing mode.**
- **If the device cannot be found during pairing, press and hold the ON/OFF button on the controller for more than 5 seconds to reset the device, then try again.**

STEP8 Refresh System Layout Configuration

When first setting up the system, or when adding or removing components (including light strings, T-splitters, or Power- T Connectors), you need to refresh the system layout to detect and configure connected devices.

You can do this by:

Using the Layout Setting option in the App



After the layout refresh is completed, if the detected information does not match your actual installation, you can tap the corresponding light string and manually enter the correct number of lights. You can also reconfigure the splitter if needed.

Detection time depends on the complexity of your system. More accessories and lights may result in a longer detection process. Please wait patiently.

NOTE:

- **Do not disconnect any devices or turn off the power during the detection process.**
- **Other operations on the light strings are not available during detection.**

Product Specifications

Model	S109A	S109B	S109C	S109D	S109E	S109F
Number of Adapters	1	1	1	1	2	2
Power Input (Adapter)	120V AC 50/60Hz					
Power Input (Light string)	DC29.5V 3.39A (per adapter)					
Color	RGBWW (2700K-6500K)					
Length	50ft	100ft	150ft	200ft	300ft	400ft
Number of Lights	36	72	108	144	216	288
Waterproof	IP67					
Operating Temperature	-30°C~45°C					

Package Contents by Model

Model	S109A	S109B	S109C	S109D	S109E	S109F
Power Adapter	1	1	1	1	2	2
6ft Power extension cord	1	1	1	1	2	2
Controller	1	1	1	1	1	1
3m Ethernet Cable	1	1	1	1	1	1
5m (12 LEDs) string section	3	4	7	9	14	17
2.5m (6 LEDs) string section	x	3	3	3	5	9
1.25m (3 LEDs) string section	x	1	1	5	5	8
0.42m (1 LED) string section	x	3	3	3	3	6
Mounting base	39	78	117	156	234	312
12ft Light string extension cord	x	x	1	1	2	2
6ft Light string extension cord	2	1	1	2	2	2
3ft Light string extension cord	x	2	2	3	3	3
1ft Light string extension cord	x	x	x	3	3	3
T-splitter	x	x	x	1	2	2
Power-T connector	x	x	x	x	1	1
Wire Clip	15	30	30	30	60	60
Expansion Screw Kit	1	1	1	2	5	5
Screw Pack	5	9	12	15	24	30
Spare Sealing Ring	3	6	9	12	18	24
End Cap	2	2	4	6	6	6
Waterproof junction box	1	2	3	4	6	8
Mounting Ruler	1	1	1	1	1	1

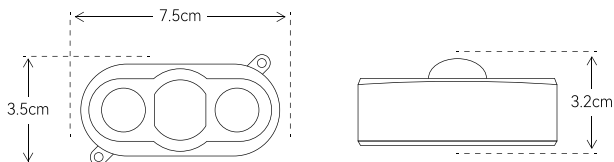
Component Descriptions

Component Name	Illustration	Description
Power Adapter		Supplies power to the lighting system. For safety and optimal performance, use only the original adapter.
Controller		Used to control lighting modes, adjust brightness, and connect to the ASAHOM App.
Power Extension Cord		Used to connect the power adapter to the controller or a Power-T connector. It extends the distance between components for easier installation.
String Sections		These modular LED string sections come in 12, 6, 3, or 1 LED configurations. Each section connects using waterproof connectors.
Light String Extension Cord		Connects light sections across different roof lines or corners. Available in 1 ft, 3 ft, 6 ft, and 12 ft lengths for flexible installation.
Power-T connector		Supplies additional power in the middle of long light strings to prevent voltage drop and brightness reduction.
T-Splitter		Splits the signal into two branches for light strings. It can connect directly to the controller or be placed between string sections for flexible installation.
Wire Clip / Screw Pack		Used to securely fasten each light to the surface using screws through pre-molded holes in the fixture.
Waterproof Junction Box		Used to protect and seal wiring connections after cutting the string lights. Helps maintain waterproof performance for exposed outdoor joints.
End Cap		Used to seal the end of the final string section after cutting, preventing water from entering.
Mounting Ruler		Used to keep a consistent 5–10 cm distance from the wall during vertical installation of the light string.

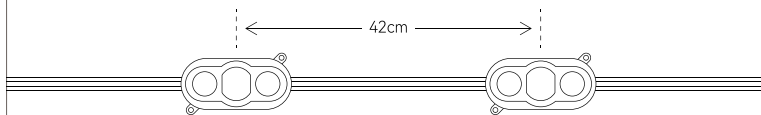
Dimensions

Refer to the dimension diagram below for product size and installation spacing details.

Light Dimensions

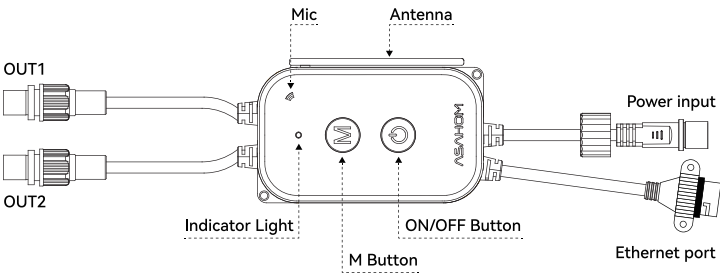


Light Spacing



Main Components

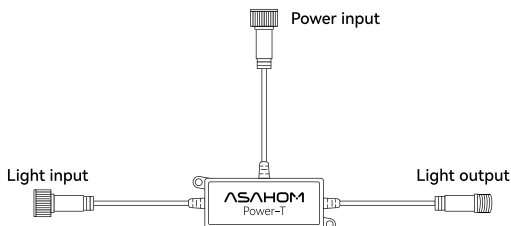
Controller



Component	Description
Antenna	To ensure optimal WiFi performance, rotate the antenna by 90° and keep it at least 10 cm away from the wall
Ethernet port	Connect an Ethernet cable after WiFi setup for more stable long-term connectivity
Indicator Light	· Blinking blue: Pairing mode · Solid blue: Successfully paired
ON/OFF Button	Single press: Power on/off Press and hold (5s+): Reset device
M Button	Single press: Switch modes

Power-T connector

Adds power from an additional power adapter to the middle or end of long light string runs. Helps prevent voltage drop and brightness loss in extended installations.



Tips:

- *Use a Power-T Connector when the total number of LEDs exceeds 144, or when noticeable brightness drop occurs at the far end of the string.*
- *After adding a Power-T Connector or extending the light string, refresh the system layout configuration.*

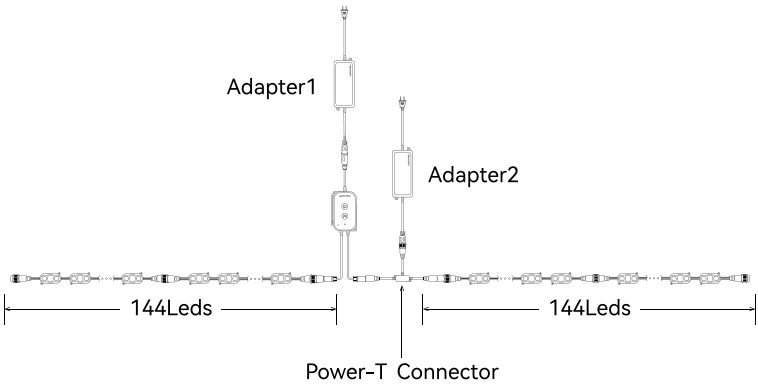
Power and Controller Limits

To ensure safe and stable operation:

- It is recommended that each power adapter supports up to 144 LEDs for optimal performance.
- When more than 144 LEDs are connected, use an additional power adapter with a Power-T Connector for power injection.
- Each controller output channel supports up to 288 LEDs in total.
- The system features adaptive power management and will automatically adjust output power when the load exceeds the recommended range.
- For best lighting performance, do not exceed the recommended limits.

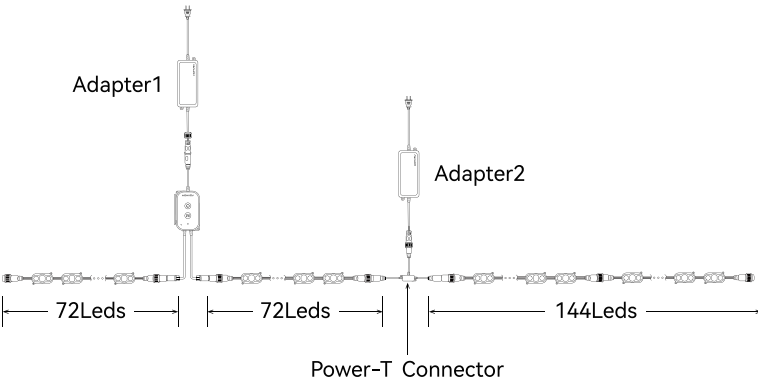
Power-T Connector Wiring Examples

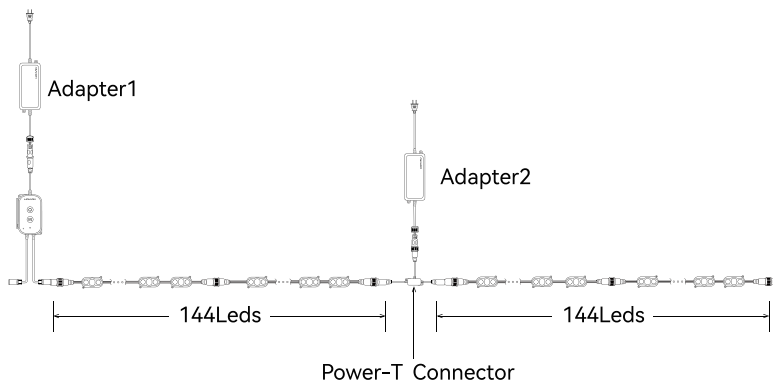
Example1 Power-T at the Controller Output



- Two power adapters are connected at the beginning of the light string using a Power-T connector.
- Each power adapter powers 144 LEDs. This setup is suitable when the full string layout starts from a central controller location.

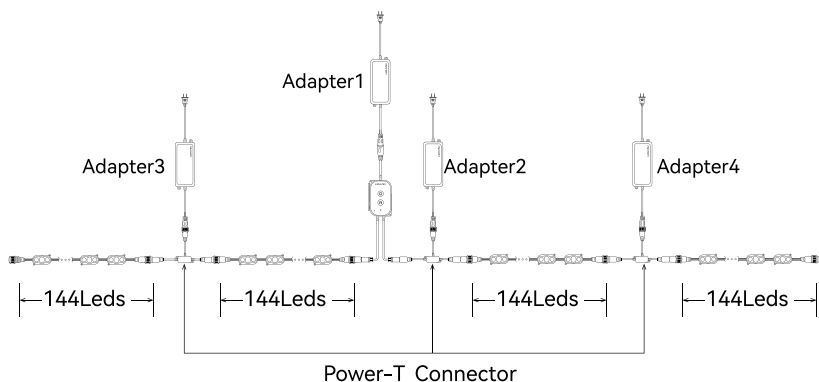
Example2 Power-T at the Middle of the String





- A second power adapter is added in the middle of the light string using a Power-T connector.
- The first 144 LEDs are powered by the controller-side adapter, and the remaining 144 LEDs are powered by the second adapter. This configuration is ideal for long straight runs of 288 LEDs.

Example3 How to Connect to 576 LEDs



To safely power 576 LEDs, you must use multiple Power-T Connectors and 4 power adapters.

Important Note:

- ***Do not connect both power adapters directly into the same controller port without using a Power-T connector.***
- ***It is recommended that each power adapter powers no more than 144 LEDs.***
- ***Ensure all connectors are properly sealed for outdoor use.***

Smart Power Management

- For optimal performance, we recommend connecting no more than 144 LEDs to a single power supply.
- When more than 144 LEDs are connected, the system will automatically reduce the brightness of each light to prevent power overload and allow more lights to operate safely.

Note:

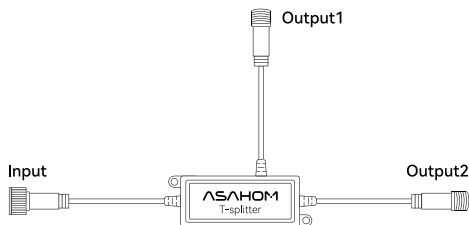
- ***Brightness reduction is normal and part of the system's automatic power protection.***
- ***If you notice brightness inconsistency or slight color differences when using more than 144 LEDs, additional power injection is recommended.***

T-splitter

Distributes the signal from one output into two separate branches of light strings. Allows for Y-shaped installations or symmetrical layouts using a single controller.

Use Case:

- When you want to run two light strings in opposite directions from the same controller
- Ideal for "center-out" layouts on eaves, fences, or rooftops.



How to use:

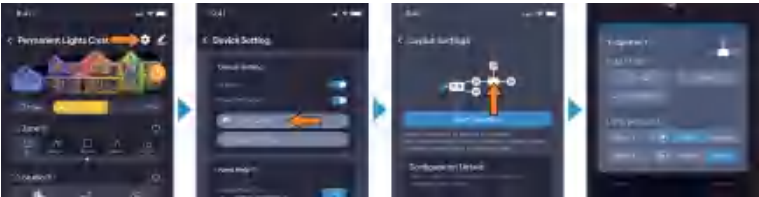
Connect each light string to the corresponding output ports on the splitter.

After all connections are completed, you should:

- Use the App settings page to re-run layout detection and configure the splitter

Splitter Configuration

You can configure the splitter in the App.



Output order	①→②	Effects run from Output ① to ②
	②→①	Effects run from Output ② to ①
	Mirror output	Outputs ① and ② are mirrored
Lights per Output	Positive	Lighting effects start from the splitter output start point
	Negative	Lighting effects end at the splitter output start point

Important Note:

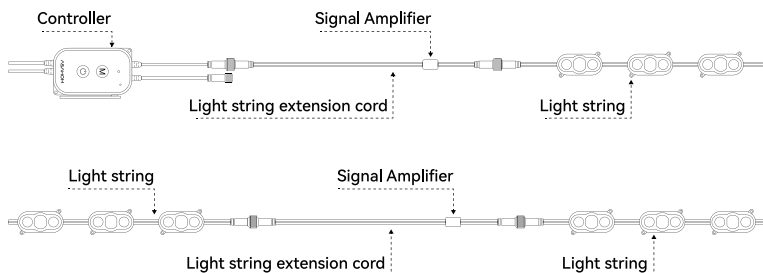
- *In Pixel mode, Mirror output is not supported.*
- *This component splits signal only, not power. Neither the main output nor any branch output of the T-splitter may exceed 288 LEDs.*
- *If the indicator light is distracting, you can disable it via the app.*

Power-T Connector vs. T-Splitter

Component	Image	Function
Power-T Connector		Provides additional power to prevent brightness drop or failure in long light runs. If your total number of connected LEDs exceeds 144, use the T-connector to inject power beyond this point. Must be used with a power adapter. Each power adapter supports up to 144 LEDs.
T-Splitter		Distributes the signal from one controller output into two branches. Installed at branch points such as the center of eaves or wall corners. Each branch output should not exceed 288 LEDs.

Light String Extension Cord

The Light String Extension Cord is designed to extend the connection distance between your light strings and the controller or other light strings, making installation more flexible.



To ensure stable signal transmission, avoid connecting too many 1 ft Light String Extension Cords in series.

3 ft Light String Extension Cord

- Before the 3 ft extension cord: Do not connect more than 3 consecutive 1 ft extension cords
- After the 3 ft extension cord: Do not connect more than 7 consecutive 1 ft extension cords

6 ft Light String Extension Cord

- Before the 6 ft extension cord: 1 ft extension cords are not recommended
- After the 6 ft extension cord: Do not connect more than 7 consecutive 1 ft extension cords

12 ft Light String Extension Cord

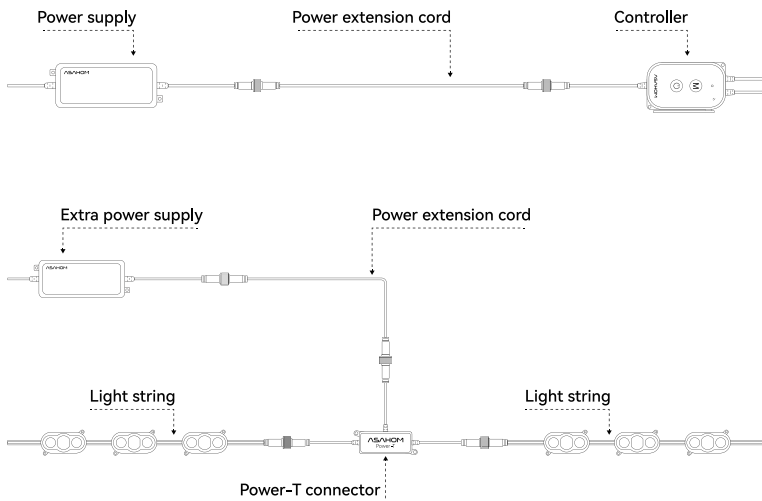
- Before the 12 ft extension cord: Do not connect more than 3 consecutive 1 ft extension cords
- After the 12 ft extension cord: Do not connect more than 7 consecutive 1 ft extension cords

Important Note:

- *If the extension cable is too long, voltage drop may occur at the end of the run, which can cause flickering or color distortion. You can resolve this issue by adding a power injection supply.*
- *If you need to cut the extension cord, make sure to retain the signal amplifier within the installed wiring. This ensures stable signal transmission and proper lighting performance.*

Power Extension Cord

A Power Extension Cord is designed to extend the connection distance between the power adapter and the controller, or between the power adapter and a Power-T Connector. It provides greater flexibility for installation, especially in large outdoor setups.



Note:

- *It cannot be used between the controller and the light strings.*
- *Please avoid using excessively long power extension cords, as this may cause voltage drop in the system, which can result in abnormal performance of lights at the end of the run.*

Waterproof Junction Box

Protects and seals wiring connections after cutting or extending the string lights.

Provides waterproof protection for outdoor environments.

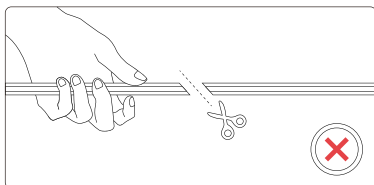
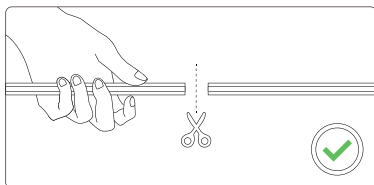
Before Installation



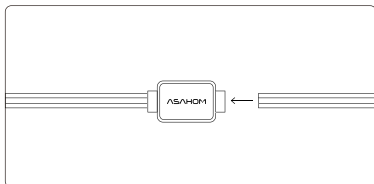
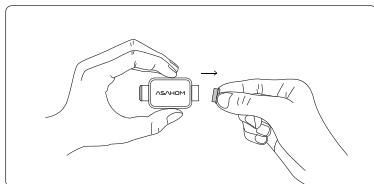
Ensure the power is completely disconnected before cutting or wiring.

How to use:

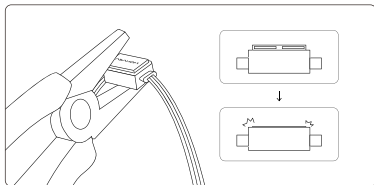
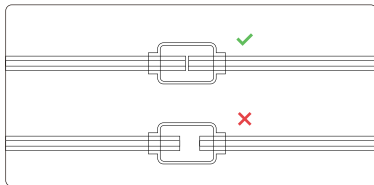
① Cut the light string to the desired position. Ensure the cut is as even and flush as possible.



② Remove the end cap of the waterproof junction box, then insert the light string cable to be joined into the box.



③ Check the back to see if the cable is fully inserted. Use pliers to firmly press and secure the upper and lower covers of the waterproof junction box.

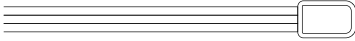


Important Warning:

- The waterproof junction box is designed for one-time use only.
- Reuse may compromise waterproof sealing and cause failure in outdoor use.

End Cap

After installing the lights along the eaves, if there are extra unused LEDs, you may trim them off and insert the end cap. The cap contains waterproof gel and can be directly pushed onto the wire to prevent water ingress and electrical faults.



Replacement Parts Availability

All ASAHOM permanent outdoor lights accessories are available for separate purchase. You can buy them through the ASAHOM Amazon store.



Using the ASAHOM App

Download the ASAHOM App

Download the ASAHOM App from the App Store (iOS) or Google Play (Android).

- Free to use — no charges required.
- If any charges appear, you may have downloaded the wrong app.
- Scan the QR code below to download the correct version.



App Icon



QR Code

Pairing Your Light with the ASAHOM App

WHAT YOU NEED:

- A Wi-Fi router supporting 2.4GHz (802.11 b/g/n) (5GHz is not supported)
- A smartphone or tablet running iOS 8.0+ or Android 4.3+
- Before pairing, connect all light sections and power them on to ensure they work properly

HOW TO PAIR:

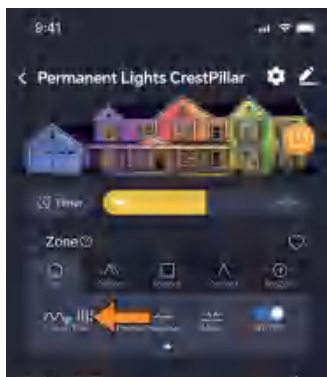
- ① Turn on Bluetooth and connect your phone to a 2.4GHz Wi-Fi network
- ② Keep your phone within 5 meters (16.4 ft) of the control box
- ③ Open the ASAHOM App and tap the “+” icon in the top right corner
- ④ The device will appear automatically in the device list
- ⑤ If no device appears within 2 minutes:
 - Press and hold the ON/OFF button on the control box for 5+ seconds
 - The blue indicator light will start flashing
 - Return to the app and try again
- ⑥ Tap the device and follow the on-screen instructions to complete pairing

Important Note:

- **Flashing blue light on the control box means it's in pairing mode.**
- **If the light is not flashing, hold the ON/OFF button again for 5seconds.**

How to Switch Beam Styles

You can switch between **Crest Beam** and **Pillar Beam** in the **Zone Parameters** section of the App.



App Features

You can scan the QR code to watch tutorial videos, or visit the official website knowledge base for more information.



App User Guide



Knowledge Base

Troubleshooting

The following section addresses frequently asked questions and common issues related to this product.

Tips:

- **For step-by-step guides and detailed technical support, please visit our online Knowledge Base.**
- **All ASAHOM accessories are replaceable.**
- **For after-sales support, please contact us via email: support@asahom.com**

Issue	Possible Cause	Solution
Can't connect to APP	1. Did not turn on bluetooth. 2. Have connected to 5GHz WiFi. 3. Input the incorrect WiFi password. 4. WiFi signal is weak. 5. Controller did not go into pairing mode. 6. Defective controller.	1. Make sure your phone has turned on the bluetooth and have connected to 2.4GHz WiFi. 2. Make sure your phone is close to control box, and control box is close to router at the first-time connection. 3. Long press the ON/OFF button of controller about 5s until the blue indicator light of controller keep flashing to go into pairing mode. 4. If unavailable, please contact support@asahom.com for assistance.
Lights stopped working	1. Defective controller/power supply. 2. The first strand/extension cord is defective. 3. All strands are defective. 4. Loose the connector	1. Please check whether the green indicator light of power supply is ON. If OFF, the power supply is defective. 2. Put a voltage tester to the wire it is receiving power. 3. Please check whether the blue indicator light of controller is ON. If OFF, the power supply or controller is defective. 4. Exchange the working strand/extension cord to replace the first strand/extension cord to check whether it can light up. 5. Disconnect the power, unplug and plug the connector,tighten the waterproof connector cap, then replug in the power. 5. If unavailable, please contact support@asahom.com for assistance.

Issue	Possible Cause	Solution
Device show offline	1. Defective controller 2. WiFi signal is weak	1. Put the power supply and controller close to the router until connected to the app, then reinstall them at the original location. 2. Try adjusting the antenna angle to improve Wi-Fi signal reception. 3. Reset the device, click "Clear Cache", and reconnect to the app. 4. If the issue persists, please contact support@asahom.com for assistance.
Half of lights did not turn on	1. The first non-working strand/the last working strand is defective. 2. Loose connector 3. The LED count was not re-detected in the app after changing the installation. 4. Half of lights both defective.	1. Exchange the working strand to replace the first non-working strand/the last working strand to check whether they will light up. 2. Disconnect the power, unplug and plug the connector, tighten the waterproof connector cap, then replug in the power to check whether they are working. 3. Re-run the LED count detection in the app. 4. If unavailable, please contact support@asahom.com for assistance.
One strand isn't working or only some leds of this strand can work	1. Defective strand. 2. The LED count was not re-detected in the app after changing the installation.	1. Re-run the LED count detection in the app. 2. If the issue persists, please contact support@asahom.com for assistance.
One led or some leds keep flickers with abnormal color	Defective led beads.	Please contact support@asahom.com for assistance.
The lights on the output 2 of controller did not turn on	1. The output 2 port is defective. 2. The first strand/extension cord of output 2 is not working.	1. Swap the output port of controller to check whether the lights are working. 2. Exchange the working strand/extension cord to replace the first strand/extension cord to check whether they can light up. 3. If unavailable, please contact support@asahom.com for assistance.
Some strands keep abnormal flickering	1. Improper cut and splice the wire. 2. Defective extension cords/non-official extension cable before the abnormal flickering strand. 3. Connect defective t-splitter before the abnormal flickering strand.	1. Cut and splice the wire according to proper operation. 2. When cut the wire, the signal amplifier should keep in the system. 3. Exchange the working extension cords to replace the defective/non-official extension cords. 4. Exchange the working t-splitter. 5. If unavailable, please contact support@asahom.com for assistance.
Lights are dim at the far end	Voltage drop due to long distance.	Add a ASAHOM Power-T Connector with a second power supply.
The power supply blew up while using after only a few months	Defective power supply	Please contact support@asahom.com for assistance.
Water entered connection point	Improper sealing of connector or reused waterproof box	Always fully tighten waterproof caps and never reuse waterproof junction box.

FCC and ISED Canada Statement

This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

FCC and IC Radiation Exposure Statement

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

la distance entre l'utilisation et l'appareil ne doit pas être inférieure à 20 cm.
This Class B digital apparatus complies with Canadian ICES-005.

Cet appareil numérique de la classe B est conforme à la norme NMB-005 du Canada.

Open Source Notice

This product's software is developed based on the WLED v0.14.4 open-source project, which is licensed under the MIT License.

The WLED project is created and maintained by Christian Schwinne and the WLED contributor community.

You can learn more about WLED and access its source code at:

<https://github.com/Aircoookie/WLED>

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Customer Support & Warranty

We're here to help! If you experience any issues or need assistance with this product, please don't hesitate to contact us.

Contact Channels:

 Email: support@asahom.com

 Amazon Messenger: Search "ASAHOM" in your order history to message us directly

 Website & Knowledge Base: www.asahom.com

Warranty Policy

This product comes with a 3-year limited warranty from the date of purchase. The warranty covers defects in materials and workmanship under normal use.

Not Covered:

- Damage caused by improper installation, misuse, or modifications
- Water damage due to improper sealing or unauthorized disassembly
- Normal wear and tear or cosmetic damage

To claim a warranty:

- Provide your order number and product details
- Send photos or videos of the issue if possible
- Contact us via the support channels listed above

We aim to respond within 24 hours on business days.



ASAHOM

www.asahom.com



Visit our official website for FAQs
and product information!



@asahom5950



support@asahom.com