Matter Smart Permanent Outdoor Lights
User Manual

Welcome to Smarter Living

Congratulations on becoming an official owner of Nanoleaf Permanent Outdoor Lights! Here's a guide with everything you'll need to get started, steps for troubleshooting, and more.
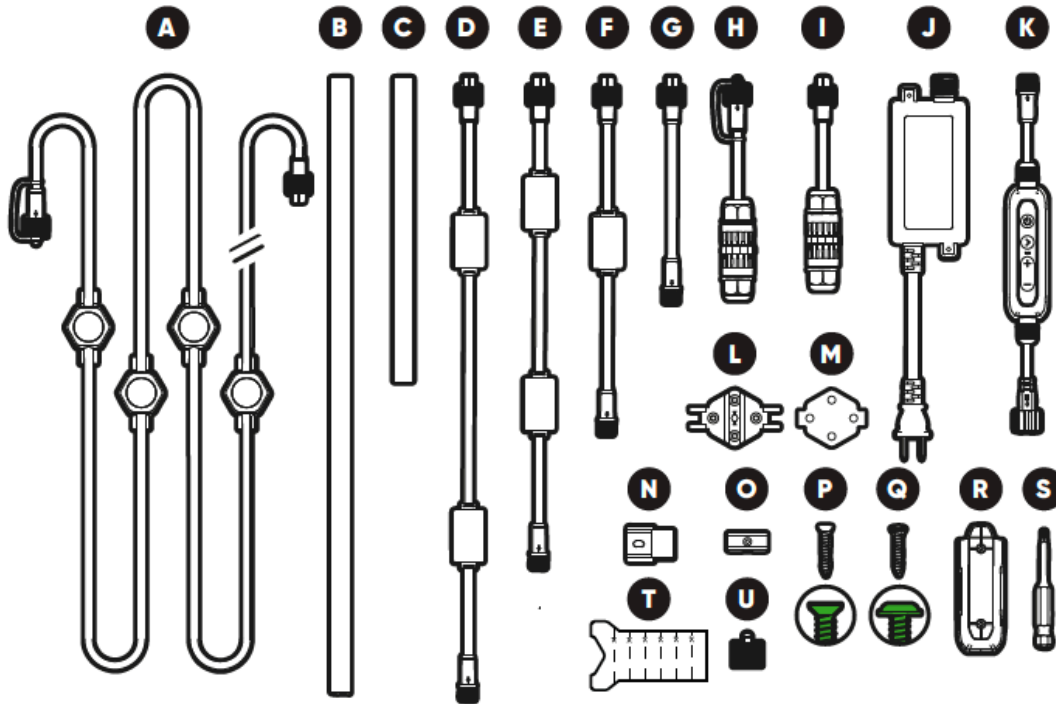
STEP 1	STEP 2	STEP 3
Physical Setup	**Download Nanoleaf App**	**Pair with Nanoleaf App**
Refer to the instructions in this user manual or the ones outlined in the printed Quick Start Guide.	Download the Nanoleaf App on the Apple App Store or on Google Play.	Pair your Permanent Outdoor Lights with the Nanoleaf App for more customization tools.

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Product Setup

What's in the box?

Model: NL73K3K45   **Rated Power:** 72W

|						
A	Light String 5m/16.4ft Chaîne lumineuse 5m/16.4ft	x9	**L**	Spare Puck Mount Support de palet de rechange	x2
B	Cable Cover Long Cache-câble long	x83	**M**	Spare 3m Tape Ruban de rechange de 3 m	x12
C	Cable Cover Short Cache-câble court	x20	**N**	Cable Clip Clip de câble	x30
D	Extension Cable 7.6m/25.0 ft Câble d'extension 7.6m/25.0ft	x1	**O**	Cable Cover Clip Clip de couverture de câble	x110
E	Extension Cable 3m/9.84ft Câble d'extension 3m/9.84ft	x2	**P**	Counter Sunk Screw is à tête fraisée	x315
F	Extension Cable 1.2m/3.94ft Câble d'extension 1.2m/3.94ft	x2	**Q**	Button Head Screw Vis à tête ronde	x36
G	Extension Cable 0.3m/1ft Câble d'extension 0.3m/1ft	x3	**R**	Controller Mount Plaque de montage du contrôleur	x1
H	Female Splicer Épissureuse femelle	x1	**S**	H2 Drill Bit Mèche H2	x1
I	Male Splicer Épisseur mâle	x1	**T**	Installation Tool Outil d'installation	x1
J	Power Supply Alimentation électrique	x1	**U**	Waterproof End Cap Embout étanche	x2
K	Controller Contrôleur	x1			

Pre-Installation

Before you mount your lights, follow these steps to ensure that they work.

Step 1: Test the String Lights
Connect all string light segments together and plug the lights into an outlet* to test that the product lights up. If you are planning to use additional Extension Cables, you can also connect them to test the full layout. If any problems occur, reach out to customer support.

* Socket must be a Ground Fault Circuit Interrupter (GFCI)
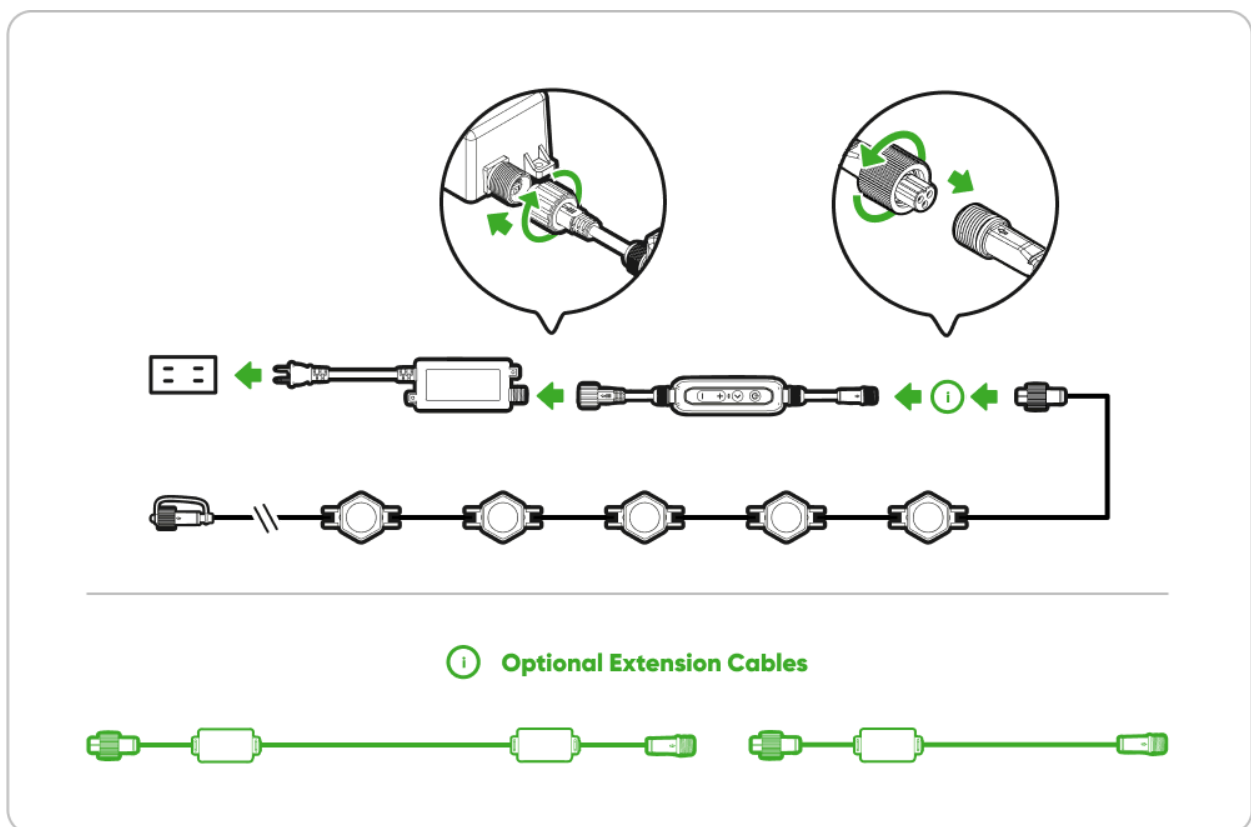
Step 2: Download Nanoleaf App
Pair your Permanent Outdoor Lights with the Nanoleaf App prior to installation. Ensure that your mobile device is within 10m/30ft of the controller during pairing.

Step 3: Test Connection
Make sure you test the connection before setting up your lights. Ensure the controller is within the Wi-Fi range of your home.

Installation

> **NOTE:** We recommend working with a professional for installation. DIY installation is possible for users comfortable with exterior handywork.
>
> The following tools are required for installation:
>
> - Ladder
> - Screw Driver
> - Drill
> - Wire Stripper (if using the splicer)

1: Plan Your Layout

Based on where your outdoor socket is located, (where your lights will be plugged in), plan where your Controller and the rest of your Permanent Outdoor Lights will be mounted.

2: Prepare the Surface

Wipe down the surface you'll be mounting your Permanent Outdoor Lights on.
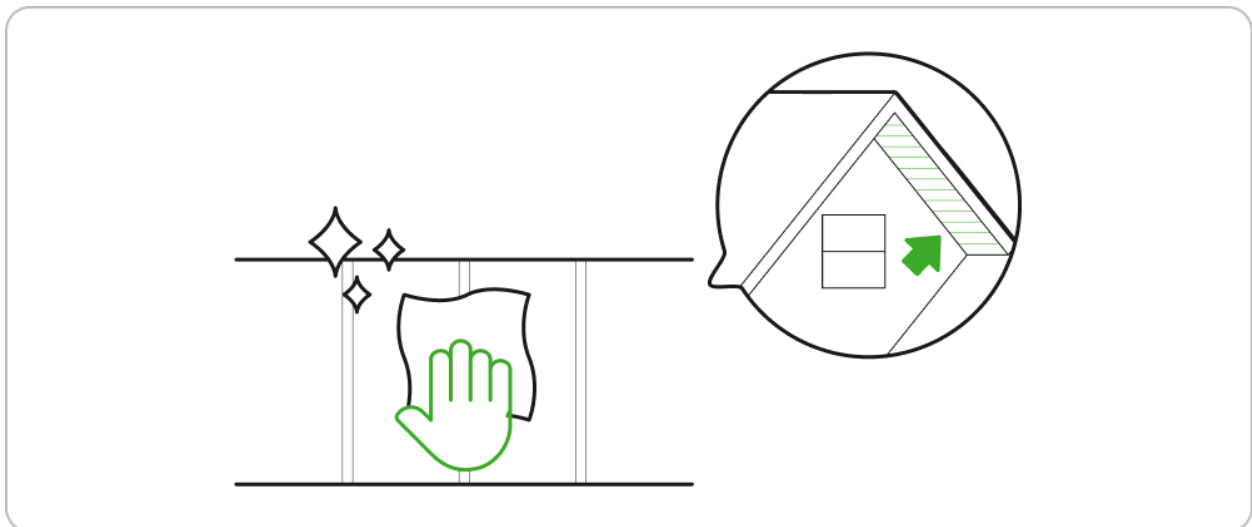
3: Optional: Mount Power Supply & Controller

If you'd like to keep things neat and tidy, you can mount your power supply unit and controller onto the wall. But it is also perfectly fine to leave them hanging free too!
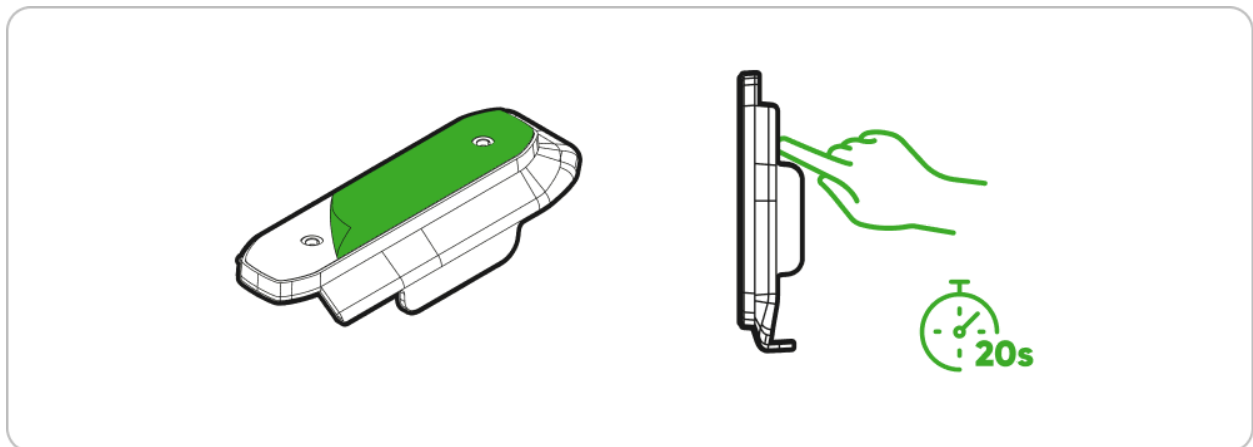
To mount your power supply:
1. Drill pilot holes first if necessary
2. Secure by drilling two button head screws in
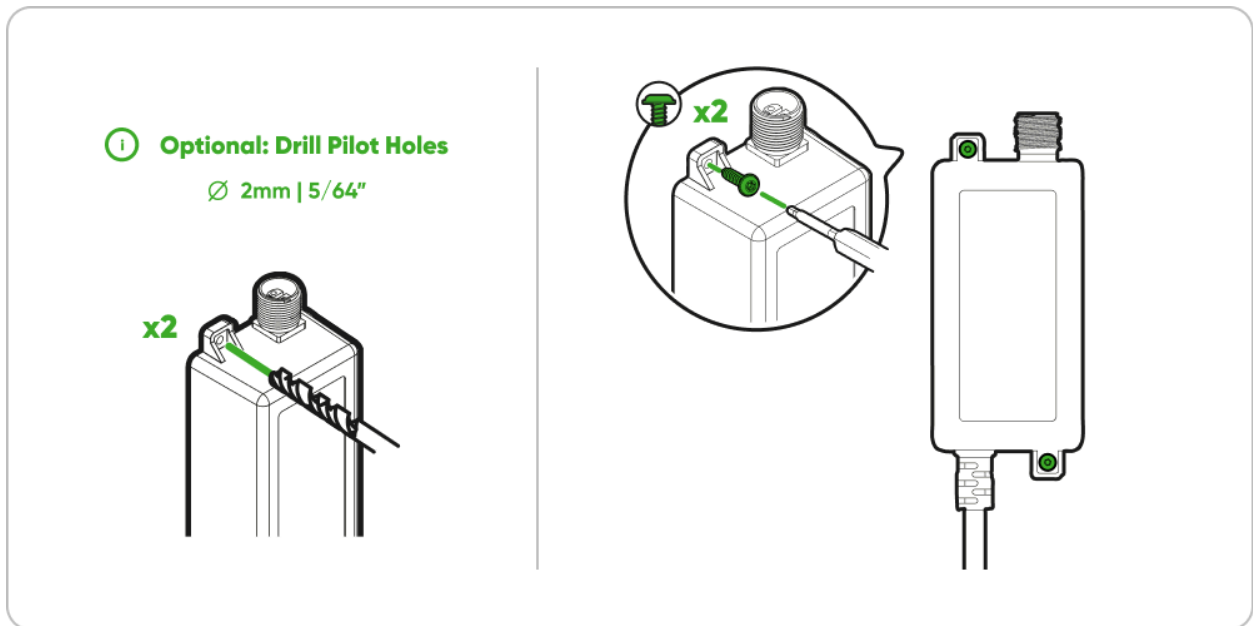
To mount your Controller:
1. Peel the protective liner off the back of your controller mount.
2. Push the controller mount against the wall for 20 seconds to ensure it sticks.

3. Secure your controller mount by drilling in the counter sunk screws provided. Drill pilot holes first if necessary.
4. Slide your controller into the controller mount.

Optional: Drill Pilot Holes
∅ 2mm | 5/64"
x2
x2
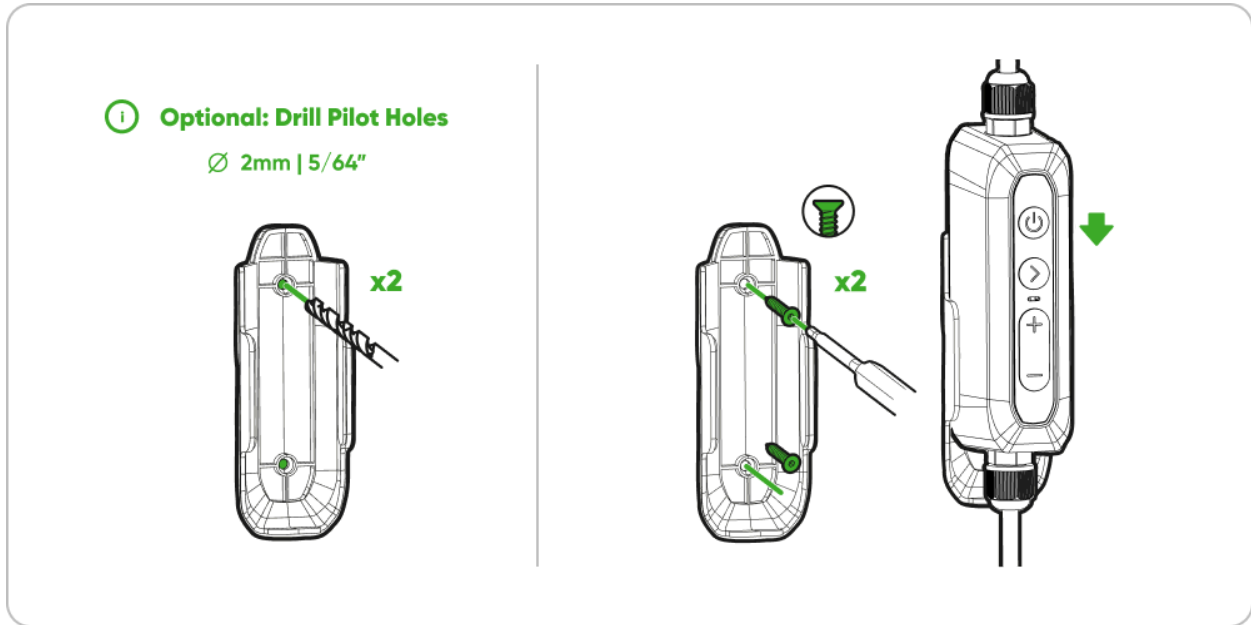
TIP: Use the cable clips provided to keep the cable that connects the controller and the first puck of your set up neat and tidy.

Use the mounting tape behind the cable clips to stick it to the surface. Make sure to secure it with a button head screw if using cable clips directly on your soffit (the underside of your roof).

20s
Optional
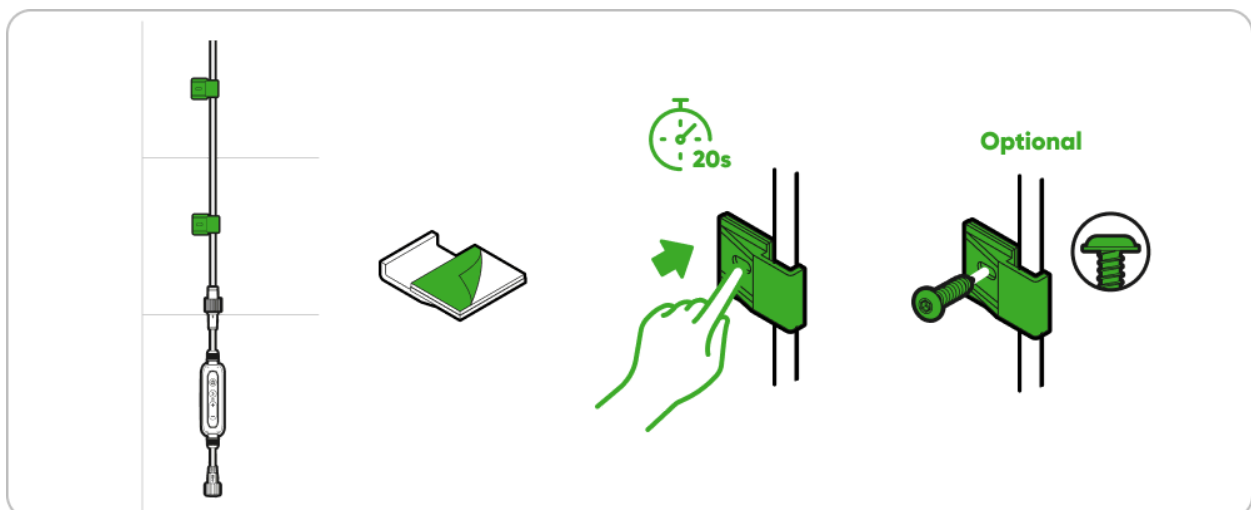
4: Prepare Your Installation Tool

This tool helps to ensure that all pucks in your layout are the same distance from the wall.

For the best lighting effect, pucks should be installed 2-4 inches (5-10 cm) away from the wall surface. Cut the Installation Tool to your desired length, then place it flush against the wall with the groove sticking out to guide where you should be placing each puck.
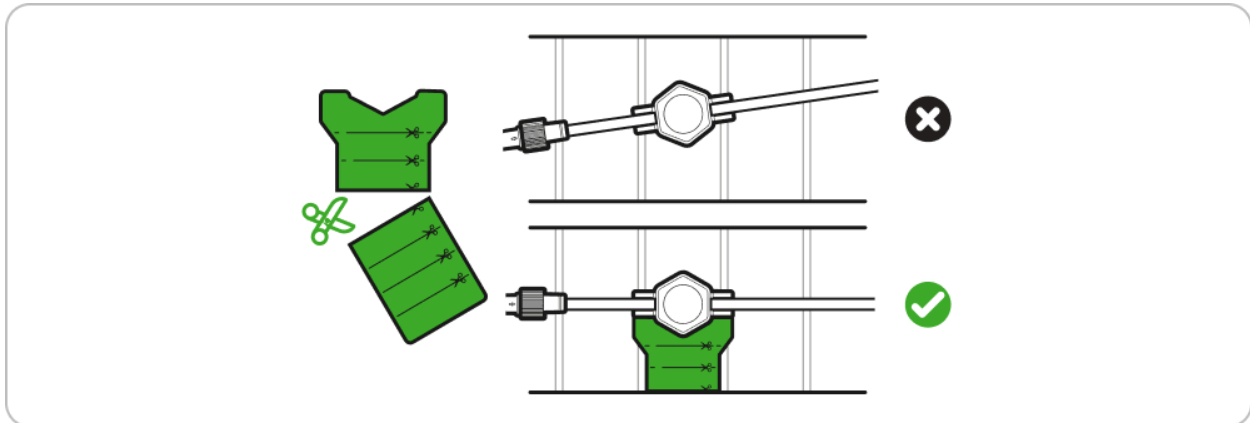

5: Mount Your First Puck

1. Connect your controller to the first light string segment of your layout.
2. Peel the protective liner off from the mounting tape on the puck mount and press it firmly against the surface (use the installation tool to guide your placement).
3. Slide the puck out so that the puck mount is exposed.
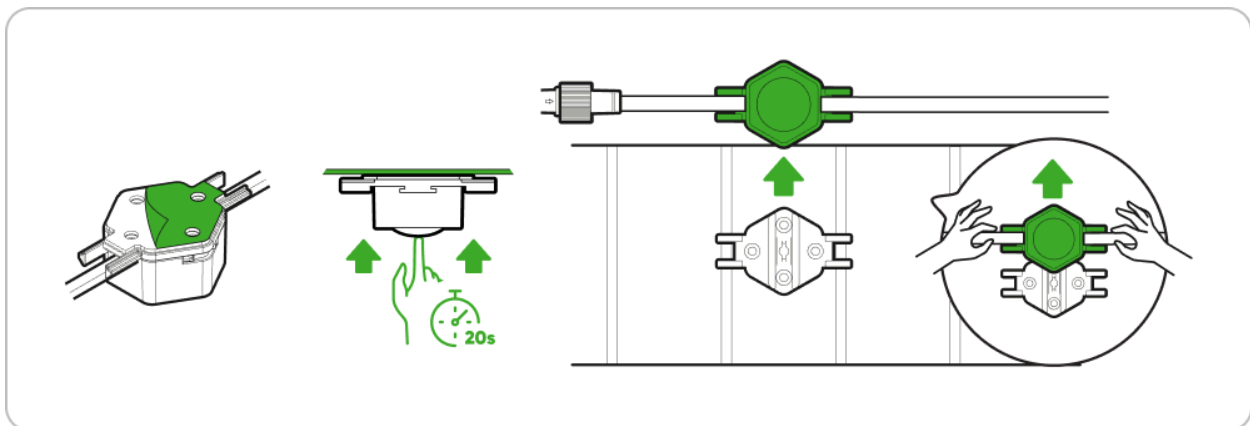
4. Secure each Puck Mount with 2 counter sunk screws (provided). Use Method A or B shown below, depending on how the grooves of your surface line up with the screw holes. Drill pilot holes first if necessary.
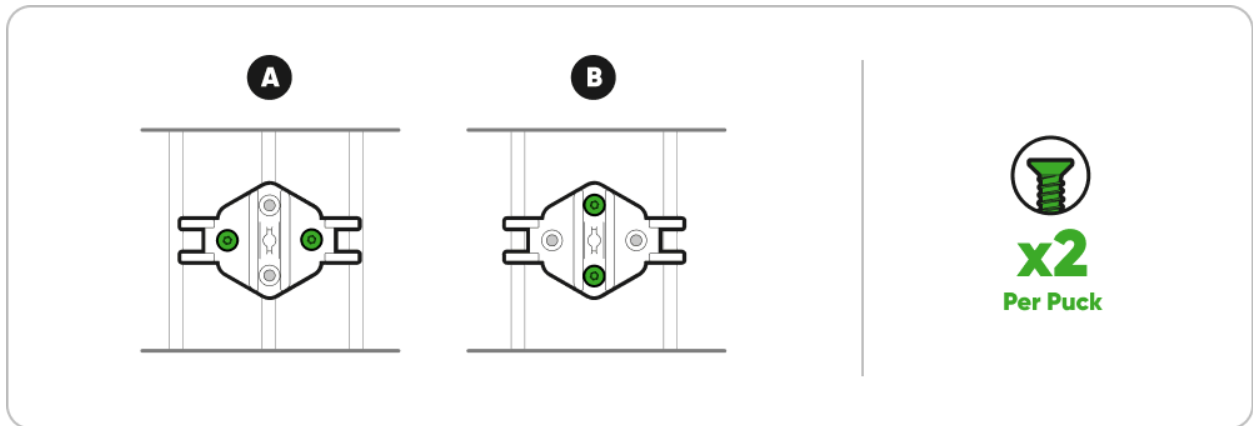
5. Slide the puck back into the puck mount before continuing on to the next step.

6: Mount The Rest of The Pucks

1. Continue setting up the subsequent pucks the same way, making sure the cables in-between are straight and tight.
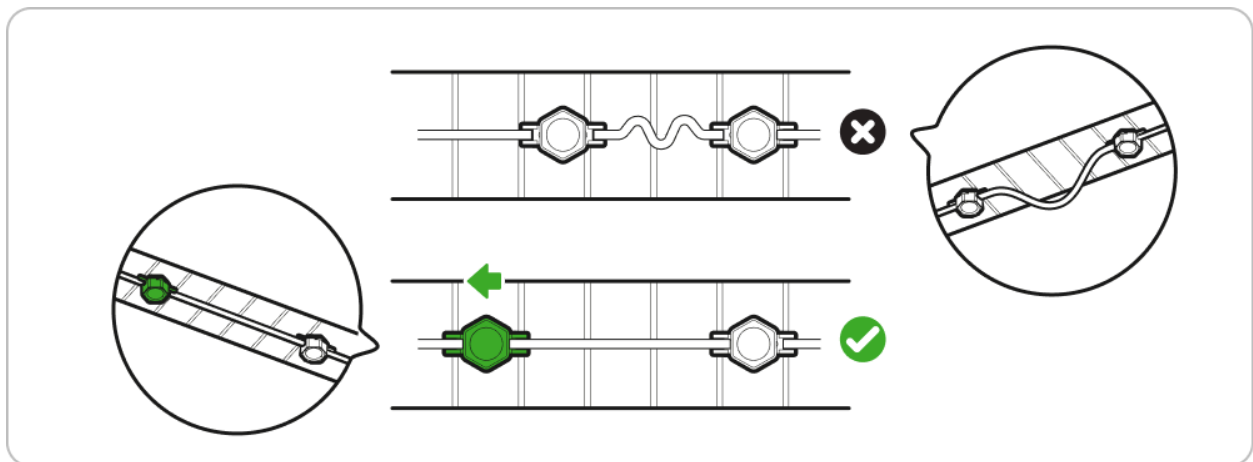
2. Place the long cable covers between each puck to hide the cables.
3. OPTIONAL: Use the cable cover clips provided to keep the cover flushed against the soffit.

Optional
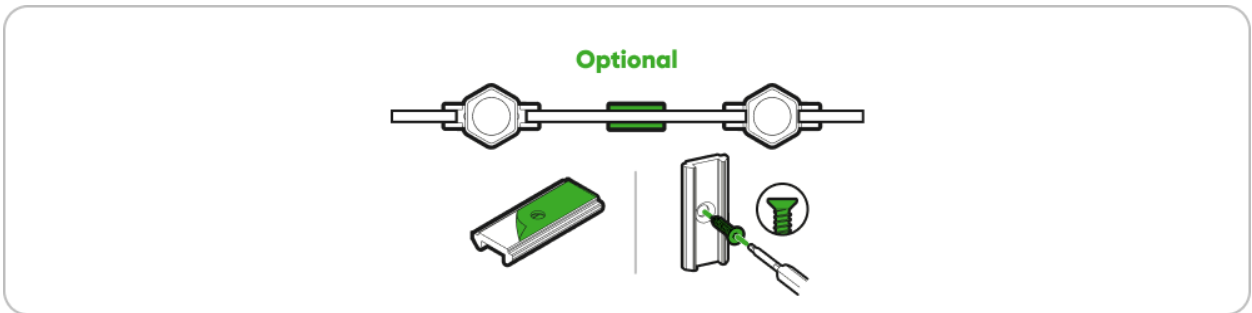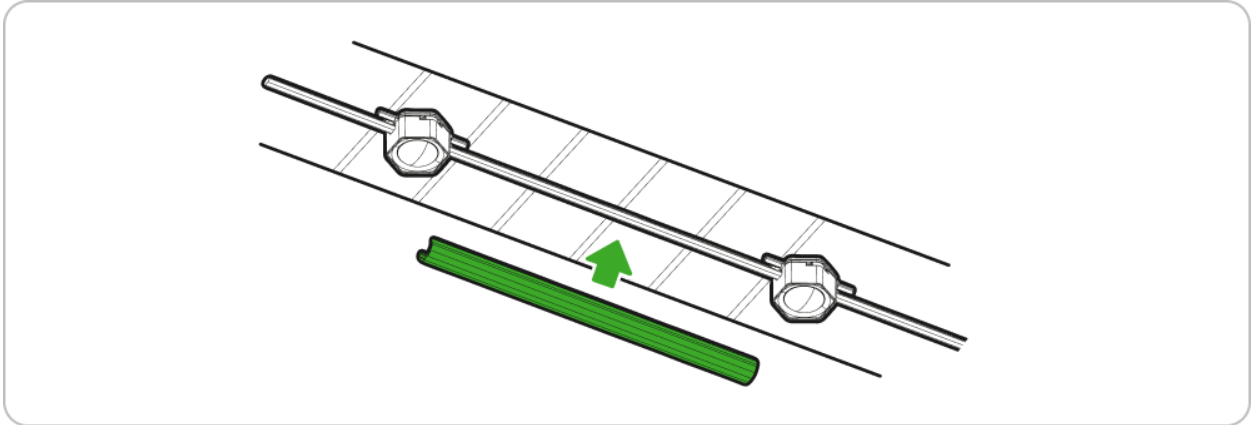
NOTE: Every 5m light string segment has a shorter cable on each end. Cover these shorter sides with the Short Cable Covers.

You **must** use Cable Cover Clips (screw mount with counter sunk screws) on these shorter ends. Place them next to the connection port (the end where one light string segment connects to another) before snapping on the short cable cover.
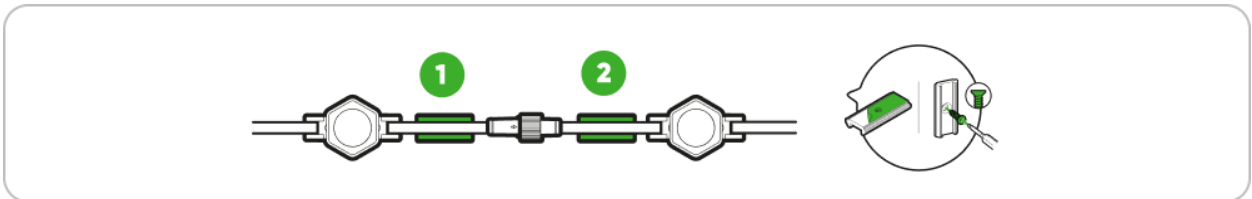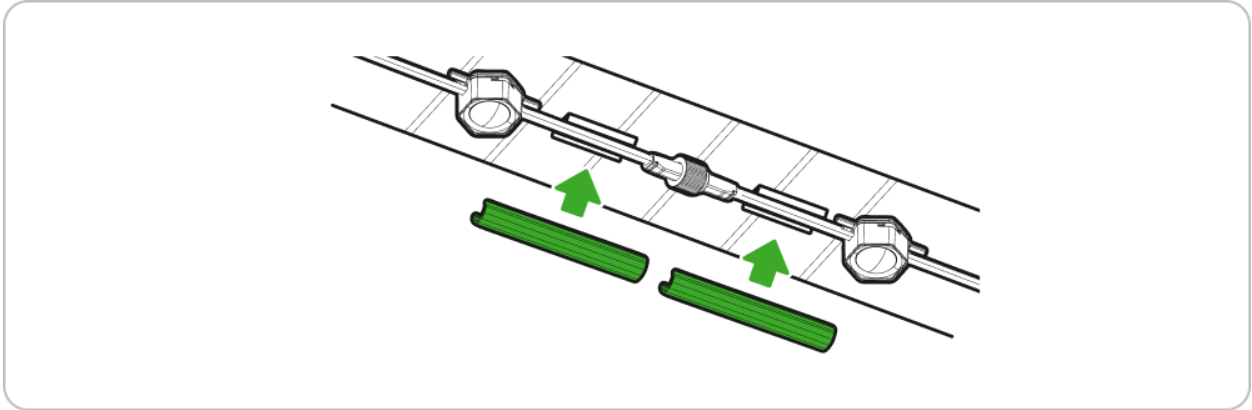
7: Screw on Waterproof End Cap

Ensure the last string of your setup has a waterproof cap installed and screwed on tight.

Optional: Trimming Your Permanent Outdoor Lights

You can trim your light string using a wire stripper (not included). for a more perfect fit along your house. If you have to trim the last 5m segment of your layout, we suggest doing it from the side connected to the previous light string segment.

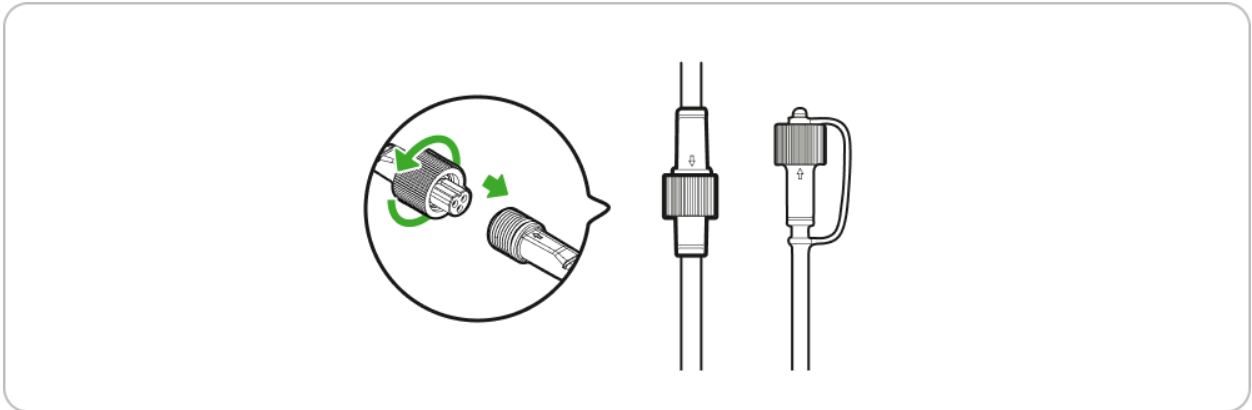> **WARNING:** Cutting and joining of the wires should only be done by a qualified professional. Do NOT attempt to use a wire stripper on the cabling for the Power Supply Unit or Controller. This will render your system inoperable and voids the warranty.

Using the Wire Splicer

Female Wire Connector

Male Wire Connector
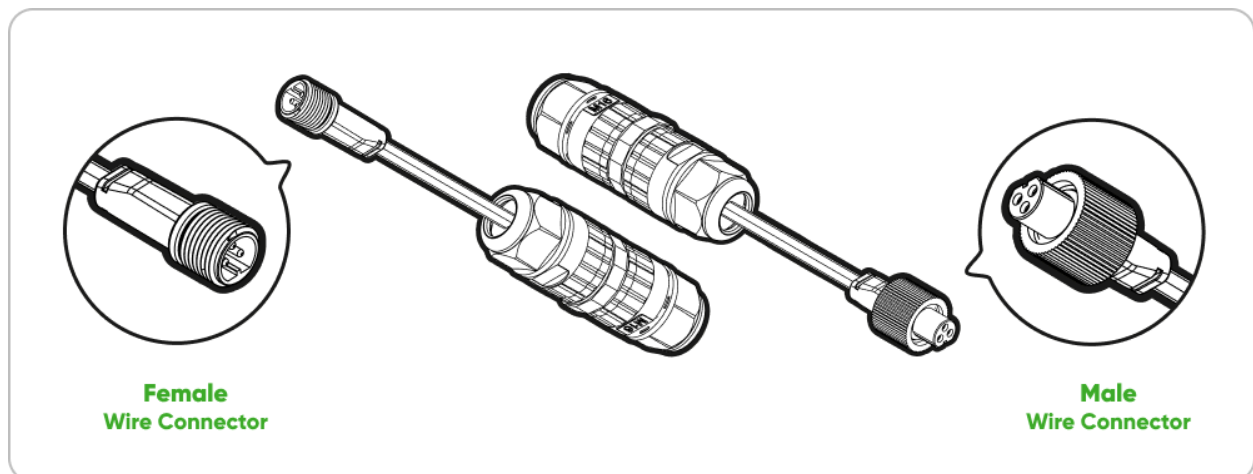
There are two wire splicers provided – one with a female wire connector end, and one with a male wire connector end.

The wire splicer you use is dependent on whether you'll be reconnecting your cut light string to a female or male connector end (each light string has a male and female connector end too).

If reconnecting to a female end, use the Male Wire Splicer. If reconnecting to a male end of a light string, use the Female Wire Splicer.

1: Prep Your Wire Splicer
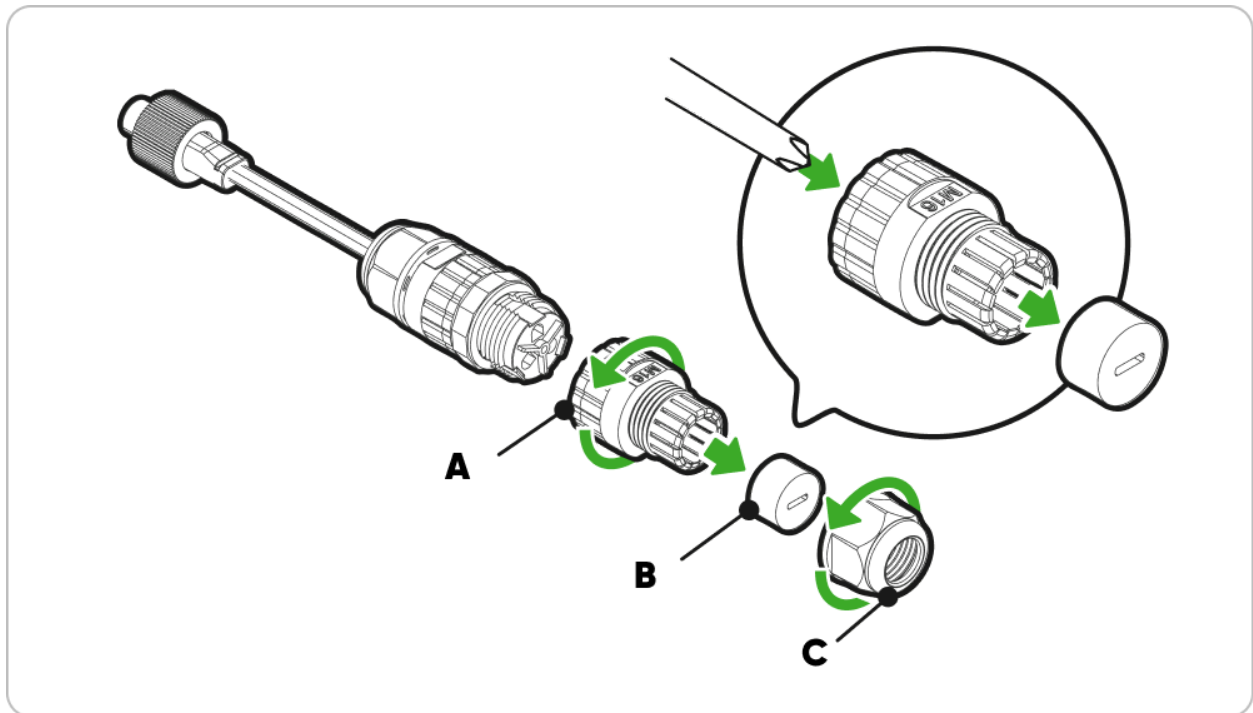
1. Unscrew the **Shell (A)** and **Locking Nut (C)** from the Wire Splicer.
2. Remove the **Silicone Plug (B)**. You can use a screwdriver to help push out the silicone plug.

2: Cut Your Light String
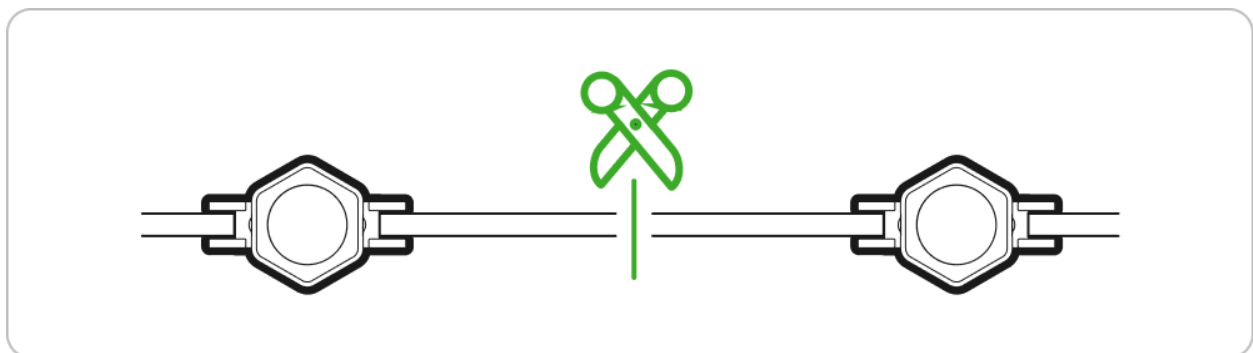
1. Cut the light string between two pucks using a wire stripper (not included).
   WARNING: Disconnect power supply before cutting.

3: Feed Cut Light String Through Wire Splicer
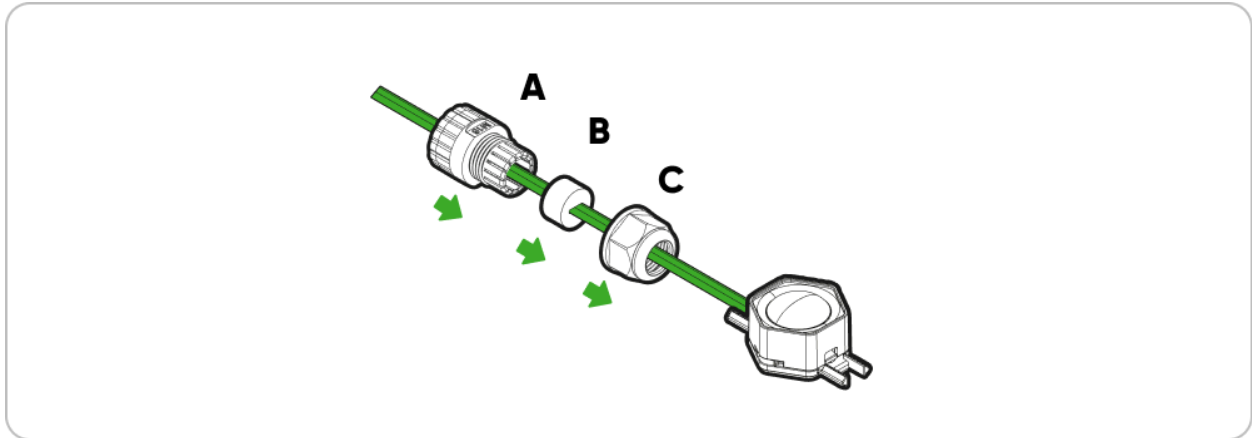
1. Slot the **Locking Nut (C)**, **Silicone Plug (B)**, and **Shell (A)** through the light string you just cut. The Locking Nut should be placed closest to the puck.

4: Reveal Insulated Wires
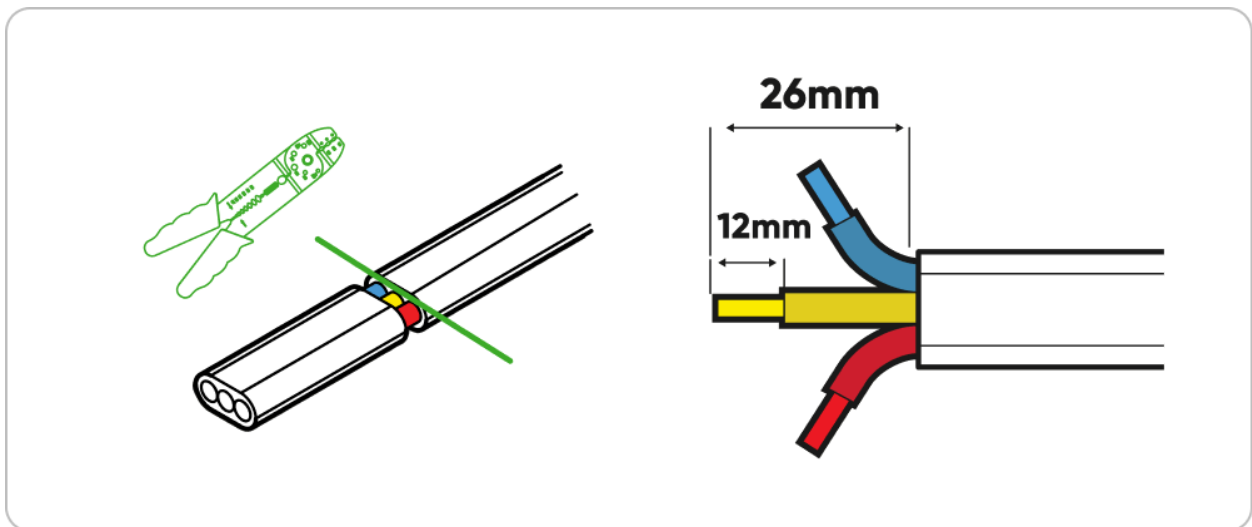
1. Use the wire stripper to carefully remove the white outer sheath of the cable. This will reveal 3 colored insulated wires (red, yellow and blue).
2. Make sure that there are at least 26mm of insulated wires revealed.
3. Use the wire stripper to cut the insulated layer of the 3 colored wires to expose at least 12 mm of copper wiring.

Smarter by Design

5: Attach Wire Splicer Connector
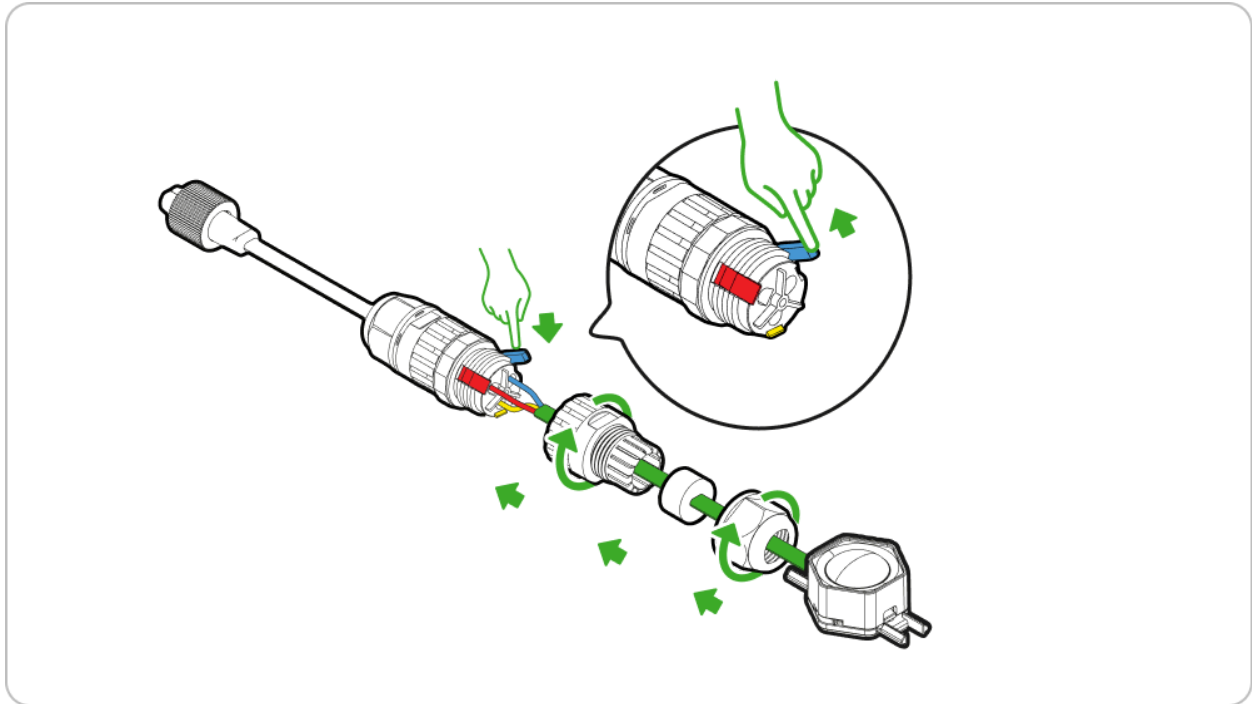
1. Pull back the three colored tabs on your wire splicer
2. Connect each colored wire you just exposed in the previous tab to the corresponding color tab. Close each tab to lock each wire in place.
3. Shift the Shell back into place. Twist it securely onto the main Wire Splicer body.
4. Push the Silicone Plug back into the shell, and firmly screw the Locking Nut back into the Shell.

6: Reconnect to Extension Cable or Next String Light
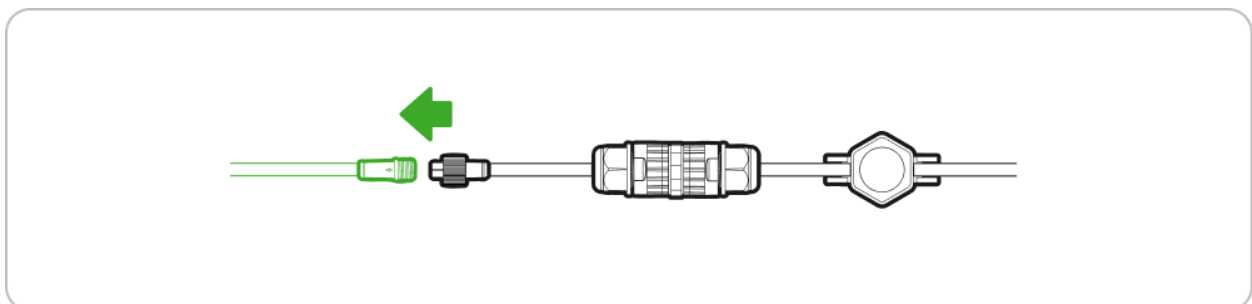
How to Make Corner Joints (OPTIONAL)

To wrap the Light String around corners, follow these steps:

1. Peel the protective liner off the mounting tape & stick the Cable Cover Clip to the surface under the cable. Ensure the cables are straight and tight.
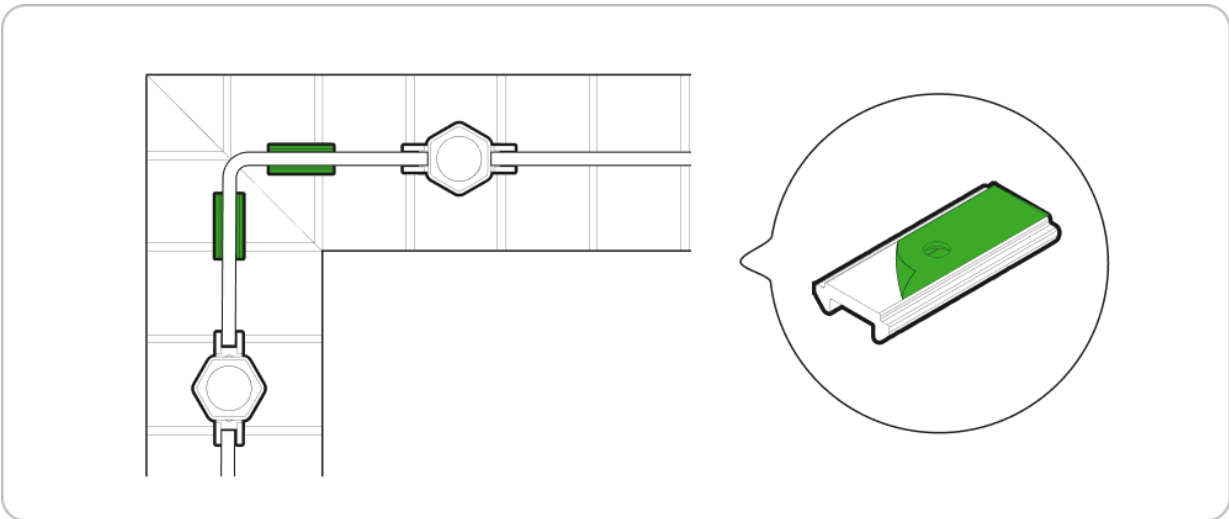
2. Temporarily put the cord aside and screw the Cable Cover Clips in using counter sunk screws (Drill pilot holes first if necessary).
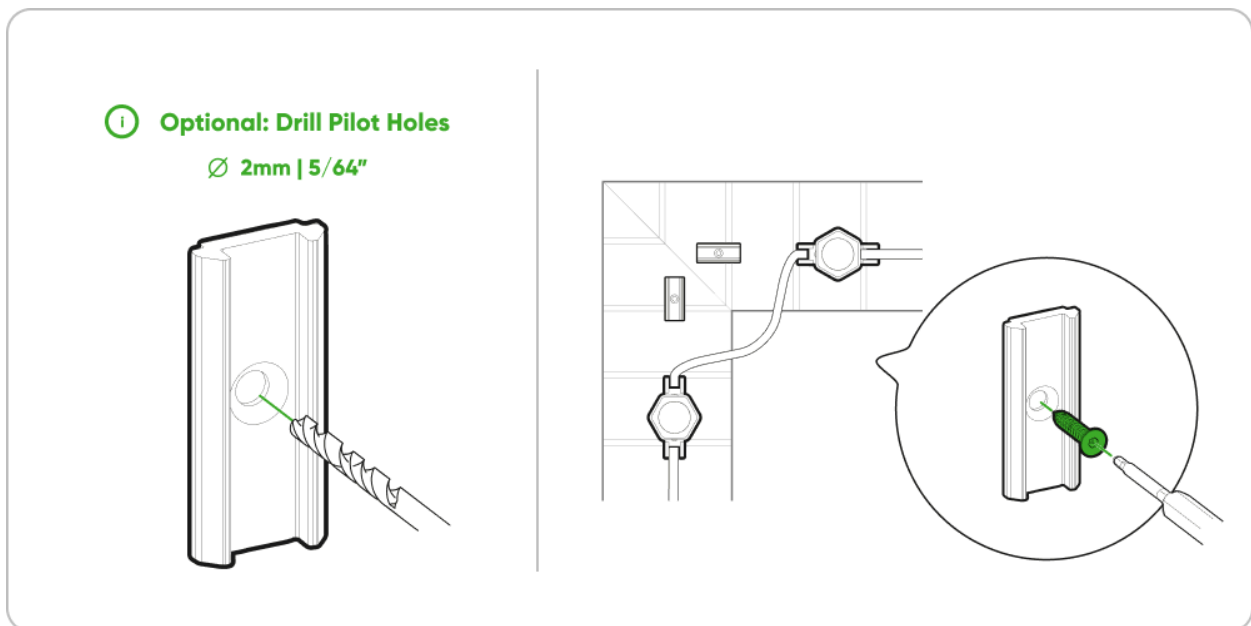
3. Measure the distance between the corner and the puck.

4. Slice the Long Cable Cover in 45 degrees using a hacksaw.
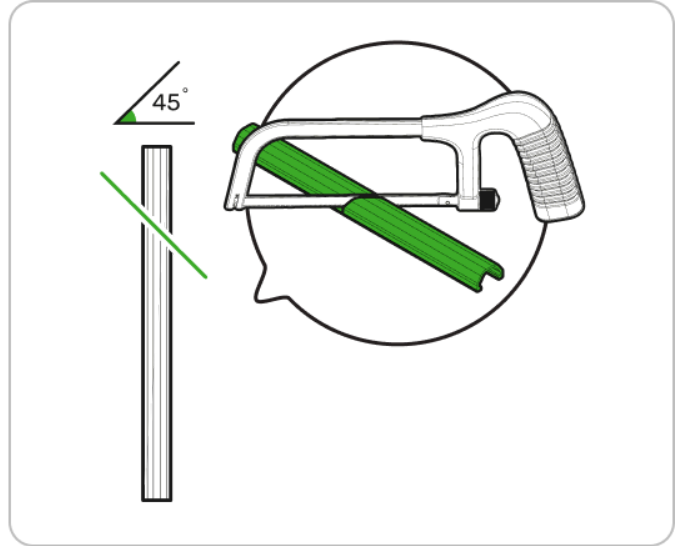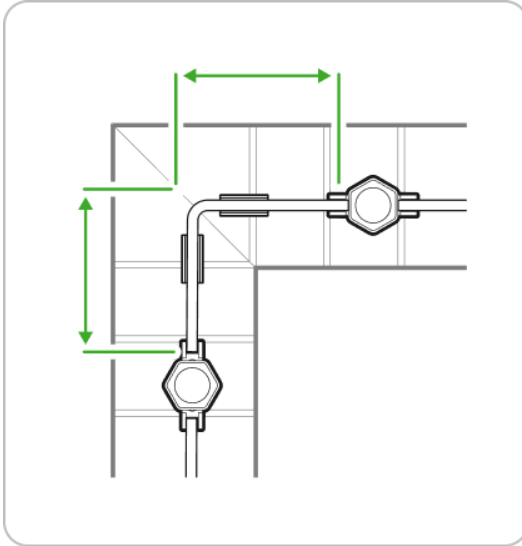
5. Attach the Cable Covers onto the cables.
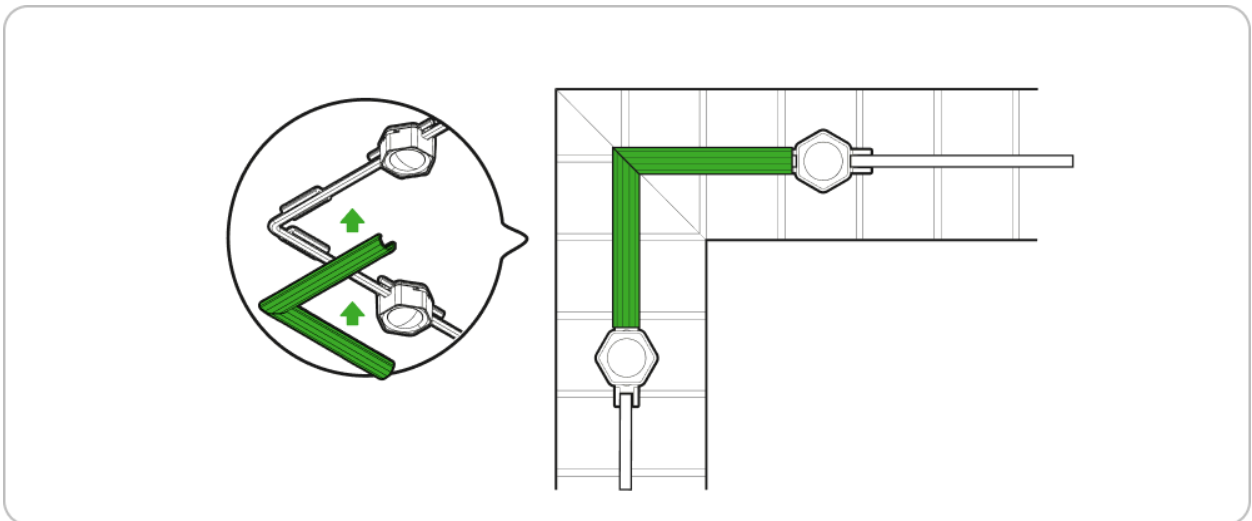
Before You Pair Your Permanent Outdoor Lights

Your Nanoleaf Permanent Outdoor Lights can run on Wi-Fi, Bluetooth or Matter over Wi-Fi. The way you would like to control your lights will determine which you use, and what features you will get access to.

	NANOLEAF APP	SMART HOME ECOSYSTEM
Connect via:	Wi-Fi, Bluetooth	Matter over Wi-Fi
Requires:		Matter Compatible Hub & Latest firmware on devices
16M+ Colors	✔	✔
Tunable Whites	✔	✔
Brightness Control	✔	✔
Color-Changing Scenes	✔	
Create Your Own Color Palettes	✔	
Magic Scenes	✔	
Set Schedules		✔
Voice Control		✔
Remote Access (away from home)		✔

We always recommend pairing with the Nanoleaf App first, before pairing to a smart home ecosystem for additional features.

To connect to a smart home ecosystem, you will require:

- A Matter compatible smart home hub (e.g. Apple HomePod mini & HomePod 2nd Gen, Google Home Mini & Nest Hub 2nd Gen, Amazon Echo 4th Gen).

- The latest software and firmware on your devices and apps, including a min. of iOS/tvOS 16.5+ or Android OS 8.1+.

Standard Pairing Process with iOS

Pairing with the Nanoleaf App

To ensure a smooth pairing process, make sure you have the following things ready.

YOUR DEVICE	2.4 GHZ WI-FI	PAIRING CODE
Requires iOS 15.4+, turn ON Bluetooth for pairing **Note** iOS 16.5+ is required to pair with a Smart Home Ecosystem	2 GHz Wi-Fi required. 5 GHz networks are not compatible with Nanoleaf products. You can turn ON Bluetooth as a backup.	A QR code and/or 11 digit code on your Quick Start Guide or on the back of the Controller.

1. Download and Open the Nanoleaf App

You can find the official Nanoleaf App in the Apple App Store. Make sure you have the latest version.

2. Pair your Matter Permanent Outdoor Lights

2.1 On the Dashboard, tap the icon in the top right corner.

2.2 Tap "Add Device +"

2.3 The app will automatically open up the pairing window.

2.4 Follow the instructions on the screen to either:

- Scan the QR code

- Enter the 11-digit pairing code found on the back of the Controller or Quick Start Guide.

2.5 Your Permanent Outdoor Lights should now be ready to go on the Nanoleaf App!

2.6 If a Matter compatible smart home hub is detected in your home, the Nanoleaf App will give you an option to connect your light to Matter and a smart home ecosystem.

- You can always connect to a smart home ecosystem at a later point by accessing your Outdoor String Light settings within the Nanoleaf App.

2.7 Pairing must be initiated within 15 minutes of the light being powered on. Disconnect and reconnect your lights from power to re-enable Matter pairing if needed (this only works when the device has not already been paired via Matter).

PLEASE NOTE: Keeping your Permanent Outdoor Lights firmware up to date helps to ensure a smooth experience. The Nanoleaf App will occasionally show a prompt for you to update your firmware.

Standard Pairing Process with Android

Pairing with the Nanoleaf App

To ensure a smooth pairing process, please make sure you have the following things ready.

YOUR DEVICE	2.4 GHZ WI-FI	PAIRING CODE
Requires Android 9+, turn ON Bluetooth, and Google Play Services app version 22.48.14. Ensure your location settings are enabled on your device.	2 GHz Wi-Fi required. 5 GHz networks are not compatible with Nanoleaf products. You can turn ON Bluetooth as a backup.	A QR code and/or 11 digit code on your Quick Start Guide or on the back of the Controller.

1. Download and Open the Nanoleaf App

You can find the official Nanoleaf App in the Google Play Store. Make sure you have the latest version.

2. Pair your Matter Permanent Outdoor Lights

2.1 On the Dashboard, tap the icon in the top right corner.

2.2 Tap "Add Device +"

2.3 The app will automatically open up the pairing window.

2.4 Follow the instructions on the screen to either:

- Scan the QR code
- Enter the 11-digit pairing code found on the back of the Controller or Quick Start Guide.

2.5 Your Permanent Outdoor Lights should now be ready to go on the Nanoleaf App!

2.6 If a Matter compatible smart home hub is detected in your home, the Nanoleaf App will give you an option to connect your light to Matter and a smart home ecosystem.

- You can always connect to a smart home ecosystem at a later point by accessing your Permanent Outdoor Lights settings within the Nanoleaf App.

2.7 Pairing must be initiated within 15 minutes of the light being powered on. Disconnect and reconnect your lights from power to re-enable Matter pairing if needed (this only works when the device has not already been paired via Matter).

PLEASE NOTE: Keeping your Permanent Outdoor Lights firmware up to date helps to ensure a smooth experience. The Nanoleaf App will occasionally show a prompt for you to update your firmware.

Pairing with Smart Home Ecosystems

To pair with a smart home ecosystem, you must have:

1. A Matter-compatible smart home hub that is already paired to your ecosystem.
2. The latest software and firmware on all your devices and apps (min. iOS/tvOS 16.5+ or Android OS 8.1+).

We recommend pairing first with the Nanoleaf App to ensure the smoothest experience. Refer to the standard pairing process above for instructions on how to pair with the Nanoleaf App.

Starting in the Nanoleaf App

After pairing in the Nanoleaf App, you will be presented with a "Add To An Ecosystem" screen if a Matter compatible smart home hub is detected in your home:

a. Tap the Connect button.

b. On iOS: you will automatically be prompted to add the light to Apple Home.

c. On Android, you will be shown a menu with the following:

- Options for supported apps for direct pairing (select one and you'll be directed through the setup flow in that app)

- "Use pairing code" - select this if the app you want to pair with is on the same phone/tablet but doesn't show up in the list

- "Use QR code" - select this if the app you want to pair with is on a different phone/tablet. Open the app on your other device and scan the new QR code.

If you do not see the "Add To An Ecosystem" screen, or if you wish to do this at a later date, you can always do so by accessing your Permanent Outdoor Lights settings within the Nanoleaf App and tapping Connections.

Starting in your Ecosystem App:

If you wish to pair directly with one of the ecosystems, ensure the following requirements are satisfied:

1. A Matter-compatible smart home hub for that ecosystem is already paired

2. Latest software and firmware on all your devices and apps (min. iOS/tvOS 16.5+ or Android OS 8.1+)

3. This is the first ecosystem you're pairing your Essentials to. If you've already paired with one ecosystem via Matter and want to share with a second ecosystem, follow the steps here.

4. Pairing must be initiated within 15 minutes of the light being powered on. Disconnect and reconnect your lights from power to re-enable Matter pairing (this only works when the device has not already been paired via Matter).

Then, proceed with the following steps in the links below for your desired ecosystem:

APPLE HOME*	GOOGLE HOME	AMAZON ALEXA	SAMSUNG SMARTTHINGS
Apple Instructions	Google Instructions	Alexa Instructions	SmartThings Instructions

Pairing with Apple Home is only available using an iOS device.

Sharing Matter Devices between Ecosystems

One of the promising features of Matter is Multi-Admin which lets you share your Matter devices between ecosystems. Using this feature, it can be controlled by any or all of the ecosystems (ie. Apple Home, Google Home, Amazon Alexa, and Samsung SmartThings) simultaneously!

INSTRUCTIONS

Controlling your Permanent Outdoor Lights

Controller

Nanoleaf Permanent Outdoor Lights comes with preset color Scenes you can access directly through the controller, without downloading the Nanoleaf app.

Power ON/OFF
1x (Press and hold for 10s to reset)

Cycle Colors
2x

Next Scene
1x

Brightness ↑
1x
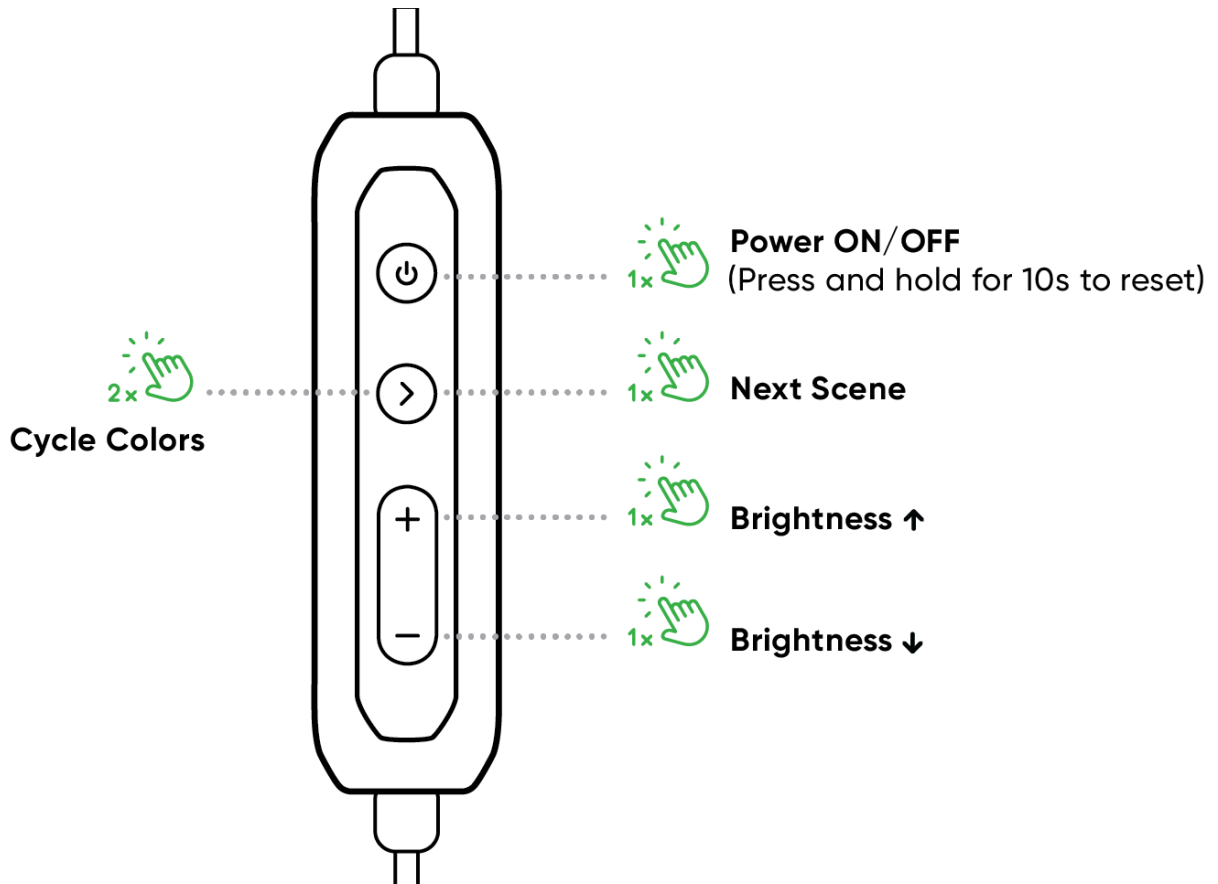
Brightness ↓
1x

Nanoleaf App

With the Nanoleaf App, you can turn your lighting on/off, control brightness, group lights by room, create your own color-changing Scenes or explore thousands of already made ones.

Nanoleaf Permanent Outdoor Lights feature addressable LED pucks so there are endless possibilities to customize your lights!

⌂	**Dashboard** Control your rooms and devices. Click on a specific device to adjust brightness, change the Scene it's playing, or create your own Scene!
☁	**Discover** Find and download new Scenes created by the Nanoleaf community. Search up any word or phrase to get inspired by what others have created or have our Magic Scene generator create a color palette inspired by your search term.
◉	**Resources** Find helpful information including tutorials, app features and integrations.

Smart Home Ecosystems

Nanoleaf Permanent Outdoor Lights are Matter-enabled and work with Apple Home, Google Home, Amazon Alexa and Samsung SmartThings. To control your lights with a smart home ecosystem, you must have:

- Matter compatible smart home hub (e.g. Apple HomePod mini & HomePod 2nd Gen, Google Home Mini & Nest Hub 2nd Gen, Amazon Echo 4th Gen)

- Latest software and firmware on your devices/app (min. iOS/tvOS 16.5+ or Android OS 8.1+)

Through a smart home ecosystem, you will be able to:

- Change the color of your Permanent Outdoor Lights (single color Scenes only)
- Adjust brightness
- Set Schedules
- Use Voice Commands

- Control your device away from home

Voice Control

You can control your Nanoleaf Permanent String Lights by voice in a few different ways if you connect it to a smart home ecosystem and Matter compatible hub.

Make sure to name your device something simple in the Nanoleaf/smart home ecosystem app. Use your smart home ecosystem's voice assistant to utilize voice control.

Hey Siri...

"Turn [Device Name] on/off."

"Set [Device Name] to 10% brightness."

"Brighten/dim the lights."

"Brighten/dim the lights to [%]."

"Set [Device Name] to [Colour]."

Okay Google...

"Turn on [Device Name]."

"Turn on/off the lights in [Room Name]."

"Turn on/off all my lights."

"Turn off [Device Name]."

"Brighten/dim [Device Name]."

"Brighten/dim all my lights."

"Set [Device Name] to [%]."

"Set [Device Name] to [Colour]."

Problems & Solutions

Reset Options

To reset your Permanent Outdoor Lights, hold the power button on the controller for 10 seconds while the device is plugged in and powered on. The string lights will flash red 3 times after a successful reboot.

After this reset, starting the pairing process again.

Still stuck? Contact our support team, or visit the Nanoleaf Help Desk for more articles.

CONTACT SUPPORT

FAQs

Q: Am I able to cut the light string to a specific length?

A: Yes, you can cut the light string to your desired length by using a wire stripper (not included). We do not recommend cutting the last light string segment at the end of your setup. If you have to trim the last 5m segment of your layout, we suggest doing it from the side connected to the previous light string segment.

Please make sure you disconnect the power supply before cutting your light string.

NOTE: Cutting and joining of the wires should only be done by a qualified professional. Do NOT attempt to use a Splicer on the cabling for the Power Supply Unit or Controller. This will render your system inoperable and voids the warranty.

Q: How many sets can I connect together?

A: You can connect up to a total of 147ft (45m) to one controller.

Q: How many LED pucks are there in each light string segment?

A: Nanoleaf Permanent Outdoor Lights come in 16.4ft (5m) light strings segments. Each 16.4ft (5m) segment contains 10 LED pucks. Within each puck, there are 3 Warm White LEDs, 3 Cool White LEDs, & 1 RGB LED.

Q: Can I use just the mounting tape provided to install the light string? Do I have to use screws?

A: The 3M tape provided is only meant for short term use, and to help make the setup process a little easier. You must use the included screws for reinforcement and permanent mounting.

Our unique mounting method allows you to slide the light string and pucks on/off easily if you need to keep them up temporarily.

Q: What surfaces can these lights be mounted on?

A: Wood, Metal, Vinyl, Fiber Cement and Concrete.

Q: Are these Matter, Wi-Fi or Bluetooth compatible?

A: You can control the Nanoleaf Permanent Outdoor Lights over Bluetooth, Wi-Fi or with Matter over Wi-Fi.

You can connect your lights to the Nanoleaf App via Wi-Fi or Bluetooth. Connecting to a smart home ecosystem app on the other hand, will require Matter over Wi-Fi (you need a Matter compatible hub as well).

Q: Can these Permanent Outdoor Lights only show a single color at once?

A: There are several types of Scenes for you to choose from! With the Nanoleaf App, you can choose from or create your own static single color Scenes, animated multicolored Scenes and/or Rhythm Scenes (reacts to sound & music).

Even the default Scenes that you can access directly through the controller are a mix of static color Scenes, animated Scenes and Rhythm Scenes.

Q: How do I connect my device to a Smart Home Ecosystem app using Matter?

A: To connect your Permanent Outdoor Lights to a smart home ecosystem like Apple Home, Google Home, Amazon Alexa, or Samsung SmartThings, you will need the following:

1. A Matter compatible hub that is already set up in your home
2. Latest software/firmware on all your devices.

We recommend pairing with the Nanoleaf App first, and then following the instructions within the App to pair with a smart home ecosystem. Refer to the **Pairing with Smart Home Ecosystems** section for more details.

Q: How do I control my lights with voice commands?

A: To access voice commands, your lights must be connected to a smart home ecosystem using Matter. Once connected, you will be able to use common voice commands with your chosen voice assistant to control your lights. See the **Voice Control** section for more details.

Q: How do I change the colors on my lights with the Controller?

A: When your lights are on, you can cycle through the preset Scenes with a single press on the ">" button on the Controller.

You can also cycle through a Warm White, Cool White, Cyan, Magenta, and Yellow by doing a quick double press.

Q: How do I create my own animated color Scenes?

A: Go to the Nanoleaf App Dashboard, and click on the device you'd like to create a new Scene for (this can later be shared with other Nanoleaf devices).

Hit "Create Scene" to create your own single colored, or dynamic (multiple colors and/or motion) Scene!

You can also try out Magic Scenes for some AI magic – simply type in a phrase or word, and watch as a color palette is automatically generated for you.

Q: Can my lights react to music?

A: Yes! You can find or create your own sound and music reactive Scenes on the Nanoleaf App (look for Scenes with a music note icon).