PixelLights

SYSTEM INSTALL MANUAL

CONTROLLER

The Controller supplies power and data to the Pixel light strings.

LIGHT STRINGS

The Light Strings come in 3 different lengths, no cutting is required.
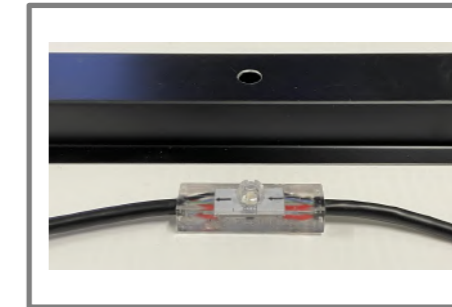
EXTENSION CABLES

Extension cables are used to bridge gaps where lights are not needed.

SPLITTER

The Splitter allows you to split the data signal, and run the light strings in different directions.
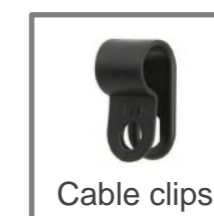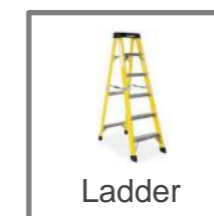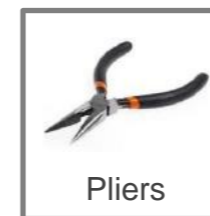
TRACK

Track is pre-punched with holes spaced every 9" and comes in 6' lengths.

TERMINATION END

Termination ends are used to seal and protect the end of the run of lights.

INSTALL TOOLS

Drill	Screws	Measuring Tape	Tin Snips
Pliers	Ladder	Cable clips	Electrical Tape

TABLE OF CONTENTS

INTRODUCTION

This installation manual is intended to guide you through the process of installing a Pixel Lights permanent holiday lighting system. From planning and designing the layout, quoting the project, installing the system and then walking the customer through the App setup and user interface.

Pixel Lights has designed the most efficient and contractor friendly plug & play lighting system on the market. No cutting, splicing or modifying means a quicker install, no waste and greatly reduces time lost to troubleshooting.

In addition to being extremely power efficient and safe, Pixel Lights do not need a permit or to be installed by an electrician.

PREPARATION

The first step in becoming an installer of Pixel Lights, is to learn about the different components and how the system works. Every house is different, and careful preparation is the best way to ensure a successful installation. As with any service, accurately quoting the materials needed will lead to greater success and profitability.

Understanding how the system works and how to operate it with the App is necessary to be able to sell to your customers. Bring samples of the lights, track and controller to demonstrate how it works, and how it will look on their home.

Explain to the customer what options they have for mounting the track and what effect that will create. Facing out will give a more traditional look with the most visibility, while facing down will create a more subdued wall washer effect.

Next step is to determine which areas and roof lines they would like to have the lights installed. Focus on the most visible areas, where the lighting will give the best effect. Take note of areas such as gables and dormers. These areas may require taller ladders, lifts, and/or safety precautions to be able to access them.

LAYOUT DESIGN & QUOTING

After you have decided how the lights will be mounted, and the areas where lights will go, you will need to measure the linear feet. You will need to know how many feet of both lights, and unlit extension cable for the project. Below are examples of how the track can be mounted.
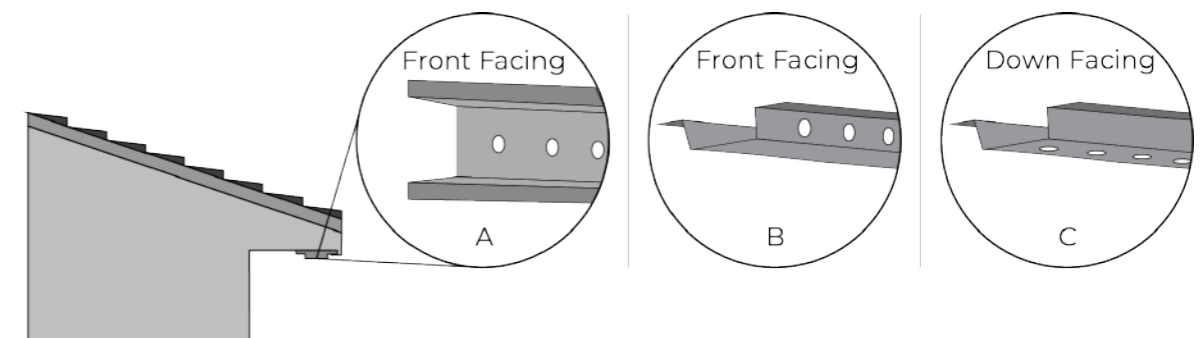

To create your layout, please print our Layout Design work sheet. This will help you to calculate what lengths of strings and extension cables you will need.

LAYOUT EXAMPLE

First: Draw a line diagram
of your house.
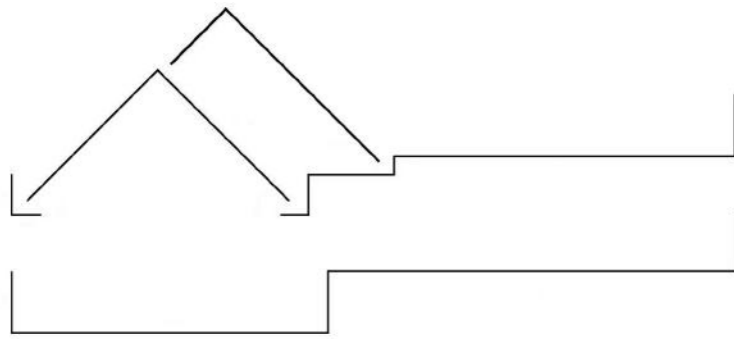
Second: Measure out the areas where you want to install
lights. Also include the unlit sections between
lights. This is where you will use extension cables
to bridge the gap.
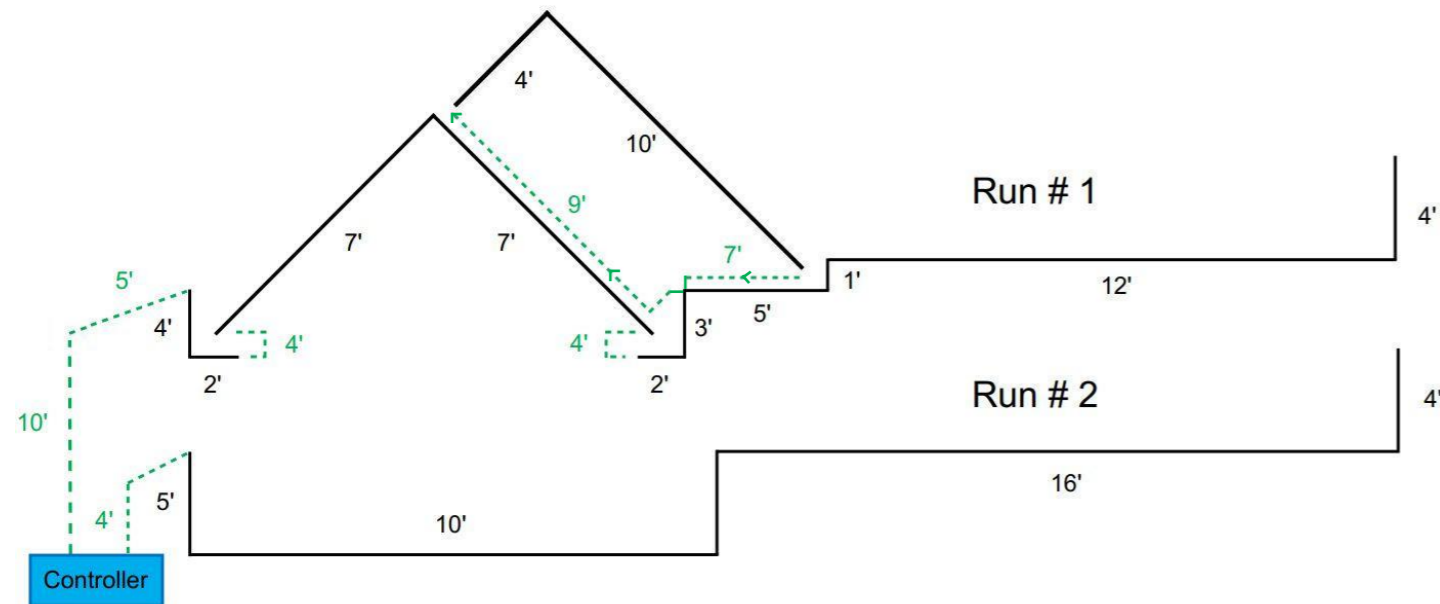
Note: Mark out all the locations of power outlets, this will also
help you determine where the controller will be mounted.

STARTING POINT:

Where you install the controller will be your systems starting point. We recommend installing the controller in a central location, near a power outlet. The controller has 2 outputs and each output can power up to **200 linear feet of lights**.

TRANSITIONS & EXTENSIONS:

When planning out your install, there may be areas where you will transition around a corner, or from one roofline to another. When bridging the gap, an unlit extension cable is used.

Extension cable come pre-made in different lengths. When the gap is longer than **10' in length**, **always start with a 10' extension cable**.

USING A SPLITTER:

What happens if you need to run the lights in 2 different directions? The controller has 2 outputs, but in some cases you will need to split in the middle of a run of lights. **You can do this by using our smart splitter. Our splitter will branch the data signal, unlike other systems which only mirror the data by twisting wires together. Twisting wires together will only copy the data and will not give you independent control over the lights**.

ENDING POINT:

When you come to the end of a run of lights, you need to properly cap the end and protect it from the weather. You can do this by using our termination ends. Simply screw it on, and not your lights are protected. This also allows you to add more lights in the future.
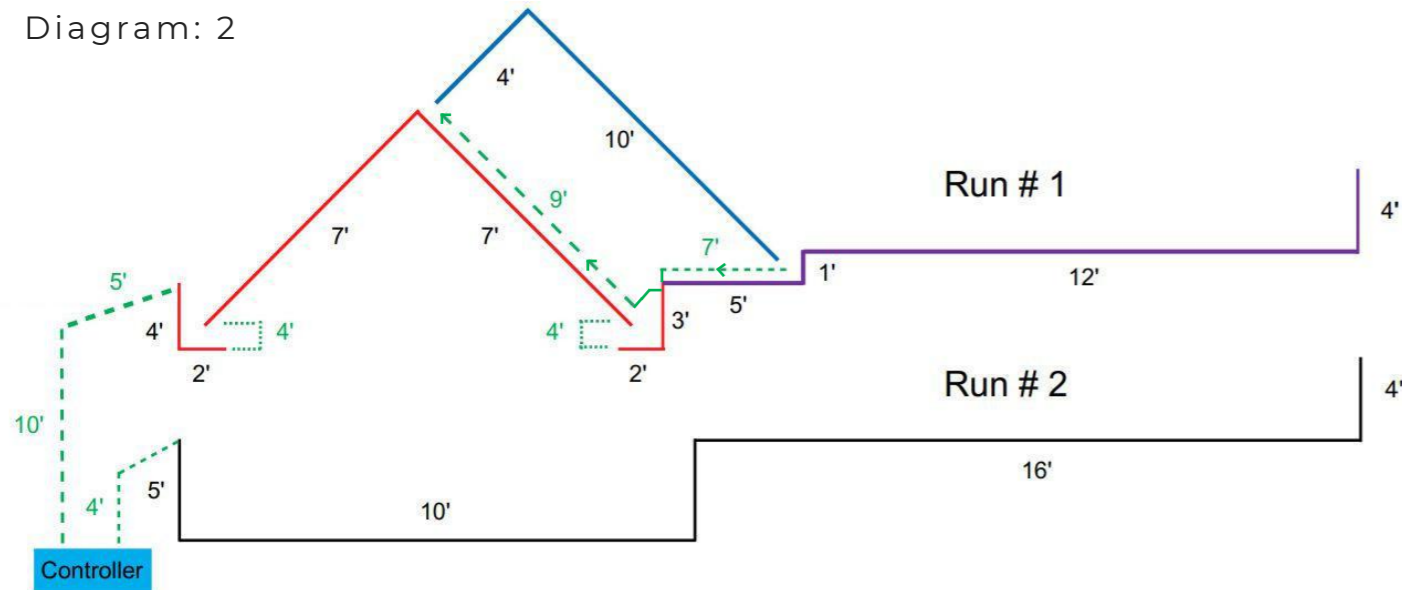
Diagram: 1

Diagram: 2

Diagram: 3

Run # 1

Section #	1	2	3	4	5	6	7	8	9	10	Total		
Lights Length		6		14		5		14		22	61		
0.75' / 2.5' / 6'			1		2	2		2		2	2	2	1	3	6	3	8
Extension Length	15			4			4			9			7		39		
2' / 5' / 10'	1	1			2			2			2	1		2	1	8	3	1

Run # 2

Section #	1	2	Total		
Lights Length		35	35		
0.75' / 2.5' / 6'		2	5	0	2	5
Extension Length	4		4		
2' / 5' / 10'	2		2	0	0

CREATING A QUOTE:

Calculating all of the materials you will need for a job is the first, and most important part of creating an accurate quote for your customer.

Pixel Lights is a plug & play system that is faster and more efficient to install. Properly planning out your materials may take a bit more time at the start, but will save you hours during installation. Not only saving time, it eliminates waste from cutting your strings to fit. Every cut made with other systems, means more time spent splicing small pieces back together.

Diagram: 1

This diagram shows the layout broken down into sections, with each section connected by an extension cable to become a continuous run of lights.

Diagram: 2

Here you see Diagram: 1 as a line drawing with the measurements. These can now be used to determine the quantities of materials you will need.

Diagram: 3

This table is used to help you break down each section by length. You can now divide these lengths into the available pre-made options. As a general rule, it is recommended to round up when measuring. For example if you measure 5 feet and 6 inches, you would round up to 6 feet.

Channel / Track:

When ordering or making track, you will need as the same length as the total amount of lights. It is recommended to order approximately 10% more to account for waste. It is also a good idea to have a few blank pieces without holes. These are useful in hiding extension cables.

NOTE:

Although extension cables are unlit, they still take time and attention to detail to install properly. Include not only the cost of the extensions in your quote, but he time it will take to install them.

After measuring and calculating all materials, labor and extra costs you can present your quote to the customer. Make sure to include costs for items such as lift rentals, or electrical work in needed. If the customer accepts, the next step is to order materials and set a date for the installation.

Make sure to document any particular details or notes, so you and/or your workers are ready when the installation date comes.

INSTALLATION

INSTALLING PIXEL LIGHTS:

After you get your order in the mail, we recommend assembling and testing the system. This way you can connect the controller to WiFi, and verify everything is working correctly.

TRACK/CHANNEL:

If you are using Pixel Lights track, the pieces come in 6' lengths and have holes punched every 9".

If you are using your own track, you will need to measure and mark out your holes. First start by drilling a 1/8" pilot hole and then follow with our specialized 3/8" drillbit. Our drillbit cuts clean and precise holes, saving you time and making installation much easier.

INSTALLING LIGHTS IN TRACK:

Each light has angled tabs, designed to align the light with the hole. Visually line up the light and press firmly with both hands until the light pops in and you hear a "click". Pixel Lights can be removed and installed again without any problems. If you bend a tab, or it was bent in shipping simply bend it back and re-insert it into the hole.
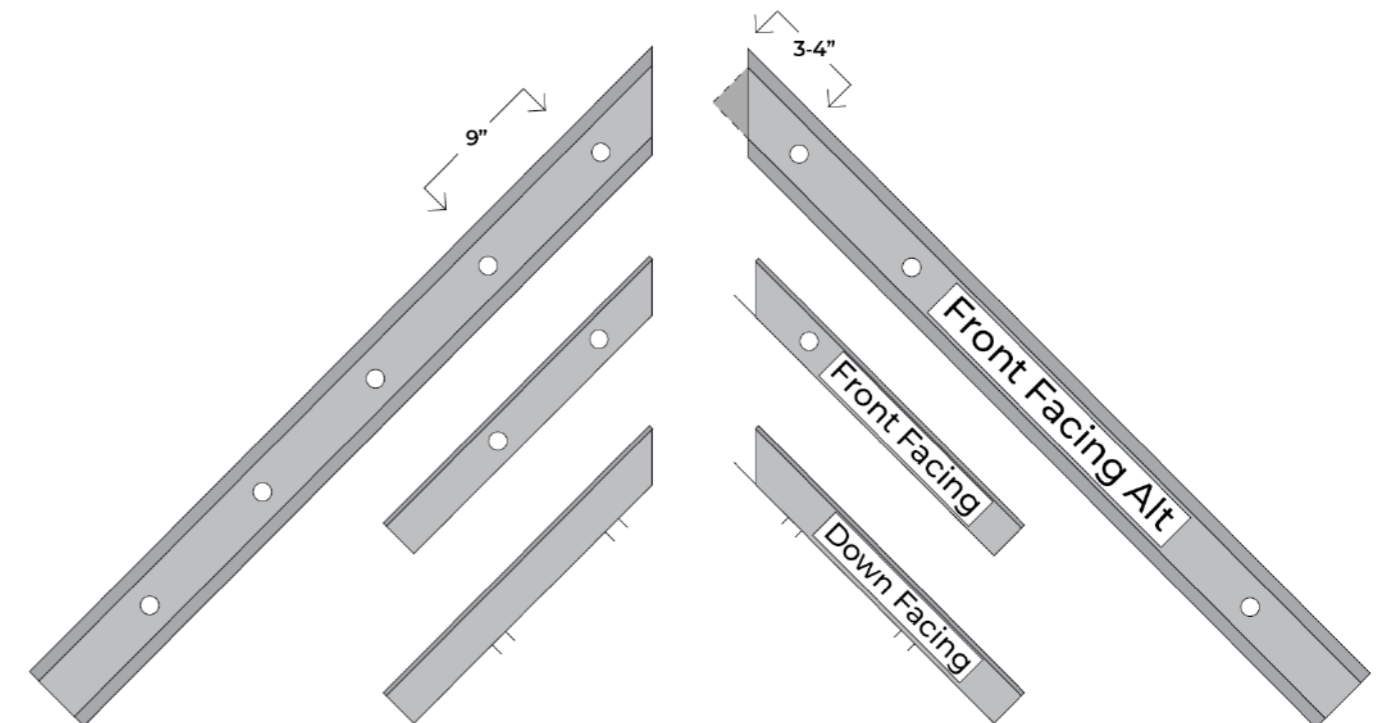
INSTALLING TRACK:

If the first section is longer than 6', you can pop the lights into the track and then mount on the house. If it is shorter than 6', measure and then cut your track to length. Then pop the lights in and mount the track piece onto the house. The track has extra length on each end to allow for overlapping the joints.

INSTALLATION EXAMPLE: Hole Spacing

When installing the lights, planning ahead for hole spacing will keep the lights looking as symmetrical as possible. This is most important in areas such as peaks, and corners.

PEAKS/GABLES:

If you have peaks or gables, you want the lights to be symmetrical. The best way to do this is to start at the top, and work your way down each side. Insert the piece of track and mark the angle of the cut, remove and make the cut. Repeat this for the other piece of track on the opposite side. Now insert the lights into the track, and install the pieces of track. It's much easier to align the pieces at this point, to ensure they are aligned and symmetrical. See the diagram below.

INSTALLATION EXAMPLE: Hole Spacing continued

CORNERS:

When installing the track you will come to areas where you need to make an inside or outside corner. When coming into the corner, make sure you do not have a hole that is too close to where the bend or joint will be made. There needs to be enough room for the light itself and for the cable to bend. See the diagram below showing spacing, and how to make a corner joint.
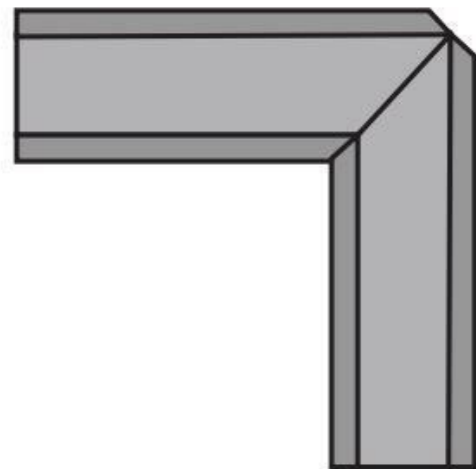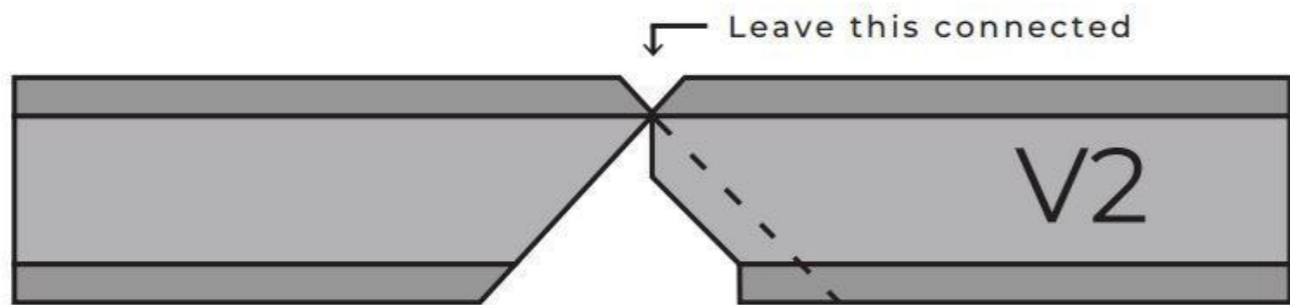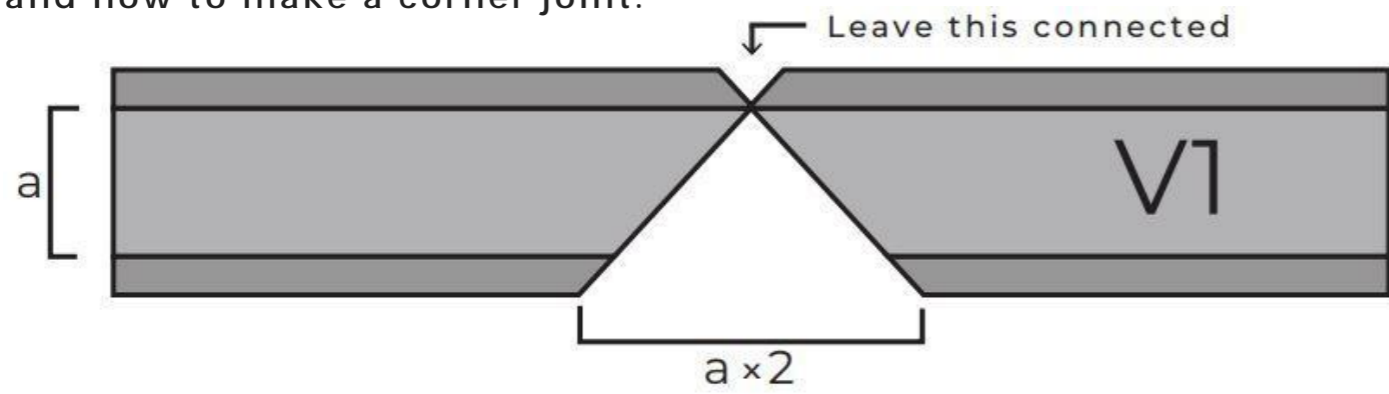

To create a corner, make cuts as shown above, and then fold them together. In version 2, leave a flap on one side, and then fold it underneath the other side to block any light peeking through.

INSTALLATION EXAMPLE: Hole Spacing continued

BOX ENDS:

When you come to the end of a section, or run you will need to close the end of the track. If you will continue the run with an extension, you will need to leave an opening for the cable to exit the track. See the diagram below for examples on making a box end.
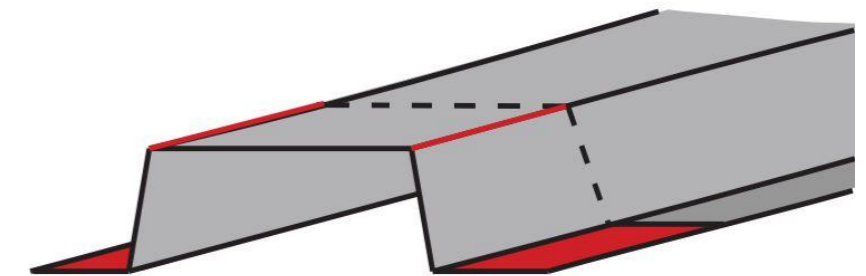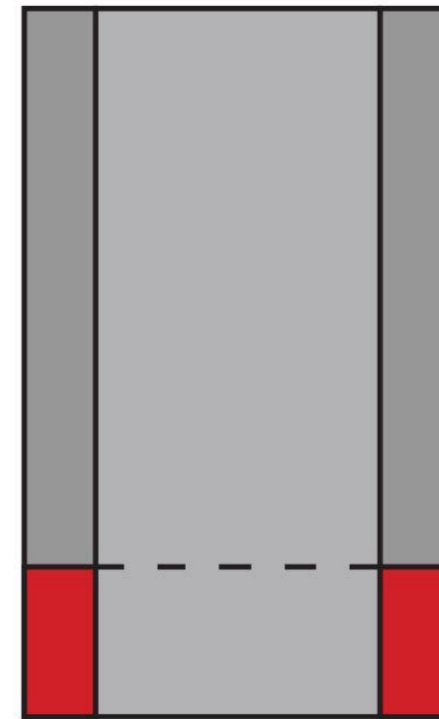
To create a box end, cut the red areas, and fold on the dotted lines. This will close off the piece of track, and block the light from getting out.

EXTENSION CABLES:

When using extension cables to join different sections of a run, we recommend installing and testing the lights before spending time to hide the cables.

The reason for this being, if you have any issues it is much easier to troubleshoot at this point when you have easy access to your cables and connections.

If you have pre-tested your system, the chances for issues is low. Some issues that you may run into are:

- Pinched wires
- Punctured wires (screw)

INSTALLATION EXAMPLE: Extension Cables

Depending on the exterior of the house, there are different ways to hide extension cables from sight.

EXAMPLE: Metal/Vinyl Siding

These types of exteriors offer the most options for hiding cables. Edges and corners are made with trim pieces, where you can tuck your cables into.

EXAMPLE: Stucco/Plankboard

These types of exteriors offer less options for hiding the extension cables as the edges and corners are seamless without any trim pieces to hide cables. When you can't use trim pieces to hide your cables, the best practice is to keep the cables as neat and organized as possible.

INSTALLATION EXAMPLE: Extension Cables continued

See the examples below, on ways to hide the extension cables.

Stucco/Plank

Metal/Vinyl

ENDING POINT:

When you come to the end of your run, and you close the end of the track with a box end, you will also need to protect the string. To protect the end of the string you will need to install a termination end. This will protect the string from being exposed to the weather, and if needed you will be able to add more lights in the future.
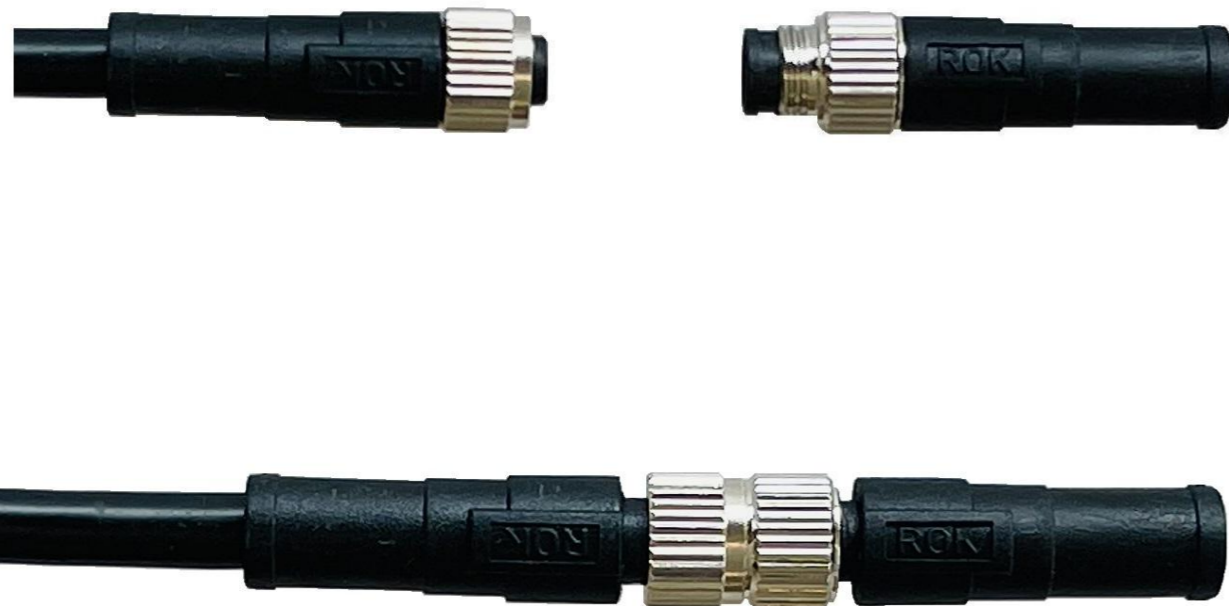
INSTALLATION COMPLETE:

After you've finished installing the lights, hiding the extensions and testing the lights the next step is to walk the customer through the App. Show them how to operate the App and control their new lights.

To learn how to set up the controller, and to use the App please read through the Controller Setup Guide.

RECOMMENDATIONS

TIPS, TRICKS & RECOMMENDATIONS:

Maximum Run Length:

The controller has two outputs, capable of powering 200' each, for a total output of 400'. Although extensions are unlit and don't have any lights, they do add resistance and voltage drop. Using 20'-30' of extensions won't affect your total run length by much, but just keep in mind that it will reduce your total length by some degree.

Mounting Controller:

The controller is weatherproof and designed to be mounted on the exterior of the home. The controller can be mounted inside, such as inside a garage but you will need to check with your local electrical codes when running electrical cables through the wall of a building. When possible, we recommend installing the controller out of direct exposure to the elements. Not only does this help to make the system less noticable, but helps to reduce any chances of accidental physical damage.

TIPS, TRICKS & RECOMMENDATIONS: continued

Hot Plugging:

"Hot Plugging" is when the strings are connected to a controller that is plugged into power. If you do this there is the possibility that the string could short, and cause damage to the individual light(s). If this happens, the damaged string will not be covered by warranty.

Testing During Installation:

During installation, periodically stop to test your lights. This will confirm that the lights are functioning properly, and no damage has happened while installing. Make sure you are connecting the strings while the controller is disconnected from power. Only plug in the controller to test the lights, or when you have finished installing the lights and the job is complete.

Multiple Controllers:

What do you do if the install is over 400' in total? For larger installs, you can use more than one controller. Also if you have more than one building in the install, such as a house with a detached garage. When multiple controllers are used they are synced together inside the App. You can choose to control them separately, or have them act as one single controller.

Cutting, Splicing or Modifying:

Pixel Lights is a "Plug & Play" system, and does not require or allow any modifications. If any component is modifed, it will not be covered by the warranty.

Warranty Form:

The warranty covers all product for 3 years. The warranty form must be filled out and submitted within 90 days of installation. If the form is submitted after the 90 days, the warranty will not be valid. The warranty form can be found on our website and also in our Pixel Lights App.

Warranty Claim Form:

If there is an issue with any of the product, you can submit a claim to have the product replaced under warranty. To do this, you will need to submit a warranty claim form. A link to the form can be found on the Pixel Lights website.