



BRIGHT HOME LIGHTS

Permanent Holiday Lights

Installation Guide

Installation Guide

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Product overview and installation guide

Introduction



Welcome

We are glad you are taking the steps to installation of your lights. Here at Bright Home Lights, we aim to provide high quality, affordable permanent holiday lighting solutions.

Goal

Our goal is to ensure your installation goes smoothly and any questions you might have, are answered. The guide below and accompanying videos will provide you with plenty of information to ensure your success in your installation journey.

Installation Requirements

At Bright Home Lights we have designed a product that is easy for anyone to install. Our products are low voltage 12V/24V and have to be tested to be safe. Below are some basic requirements:

1. Comfortable on a ladder
2. Basic knowledge of typical household tools like a drill and screws
3. Basic knowledge of low voltage items (12v/24V)
4. Experience cutting and rejoining low voltage wires



Installation Guide

Tools & Accessories

Below are some typical tools used for installation of our LED system. These consist of items provided and items not provided.

Included in the bundle packages



Controller

This converts 120V to 12V/24V. This is the brain of the set up that controls the lights. Features Power outputs (+/-) & Data all fused



Tracks and Lights

This is attached to the soffit; multiple package sizes are available on website & extra tracks can be added as needed on request and custom color tracks can be purchased



Extension Cables

Used to extend connections from one string to another. These can also be cut and extended with cables to make for a longer connection



Pigtails

Used to make longer extensions, comes with male and female ends



Power Injection T

Used for power injection Note: As each LED consumes power, the voltage will drop. These connectors are used to inject power to avoid voltage drop

Not Included in the package



Ladder

Used to get to the installation area.
Length needed varies per installation height

* Practice ladder safety guidelines & use a lift for hard-to-reach areas



Drill and Screws

Used to attach product to roof soffit with screws. You can drill some pilot holes in the tracks as well to assist



Extension Cables

Used for extending power and or data to LED points. Use **Pure Copper/Stranded/16 or 18 AWG**

Note 18/4 or 18/6 wires can be used to carry 3 sets of power without data on a single cable



Wire Strippers

Used to strip wires when making connections



Electric Tape /Heat shrink or solderless connections

Used to connect wires. In the event that cable extensions are needed. Any of these tools will ensure connections are secure



Hand saw or power tool

Used to cut track to fit on shorter areas



Surge protector and timer switch.

Surge protectors are highly recommended to protect the controller against electrical surges. Timer switches are highly recommended to completely kill power when lights are not in use




Accessories

We have a variety of accessories that will assist with installation such as end caps and corner connectors and cables.

Installation Consideration

1. Track placement



<p>Away from walls (More hidden in daytime)</p> 	<p>-Closer to the wall isn't typically done but it's a choice.</p> <p>-Outward facing isn't recommended but it's a choice</p> <p>You want to aim for the most hidden location that cannot be seen in the daytime</p>
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2. Corners or straight lines

<p>Corners - Lights bend around corner</p> 	<p>Straight Lines - No bends around corners</p> 
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3. Controller Location

Indoor	Outdoor
 <p>Indoor location for the controller is preferred</p>	 <p>If using in outdoor area, select a location that is protected from the elements</p>

Installation Plan Examples

1. Power source on Left with 2 Power and data lines / 1 Power injection line

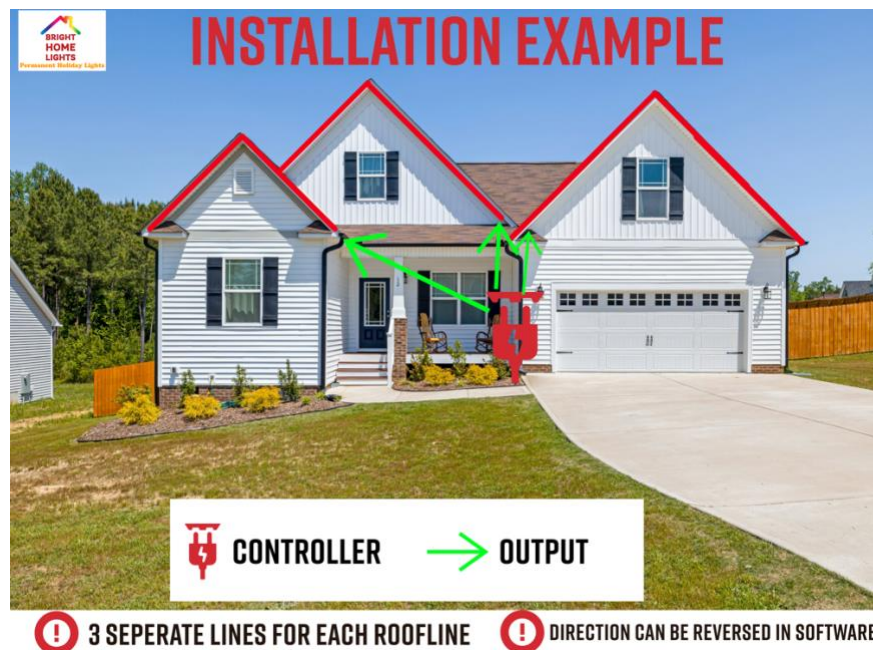


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2. Power source on Right with 1 Power injection and data



3. Power source in middle lines with 3 separate lines



- Planning is key, ensure you design and plan installation prior to getting on a ladder
- 24V LEDS can run for longer without power
- Controllers typically come with multiple data outputs , so no need to wire on one line

Set up Instructions

Tracks and Lights are shipped separately to avoid damage

A. Track assembly

Step 1: Insert lights into holes on tracks and push firmly until it clicks in place. (Do not pre-attach all lights as you will need to make cuts)

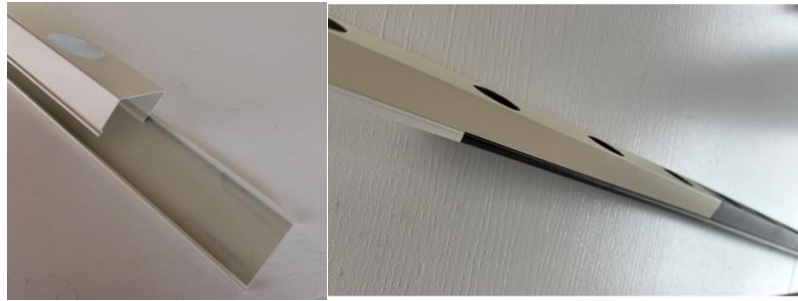


Step 2: Attach the backing to the installation area, using screws

Step 3: Snap the front part into the back that is already attached.

TIP- Align one side first then close the other side as seen in picture below. Tracks can also slide forward/backward once snapped in.

Tracks and lights can be staggered while installation for easier alignment



B. Cutting Tracks

Tracks can be cut to any desired length, style using a basic hand saw or other power tools



Corner connectors are available for purchase, they snap into both ends for a flush look

Corner Connectors



TRACK END CAP



C. Wire management

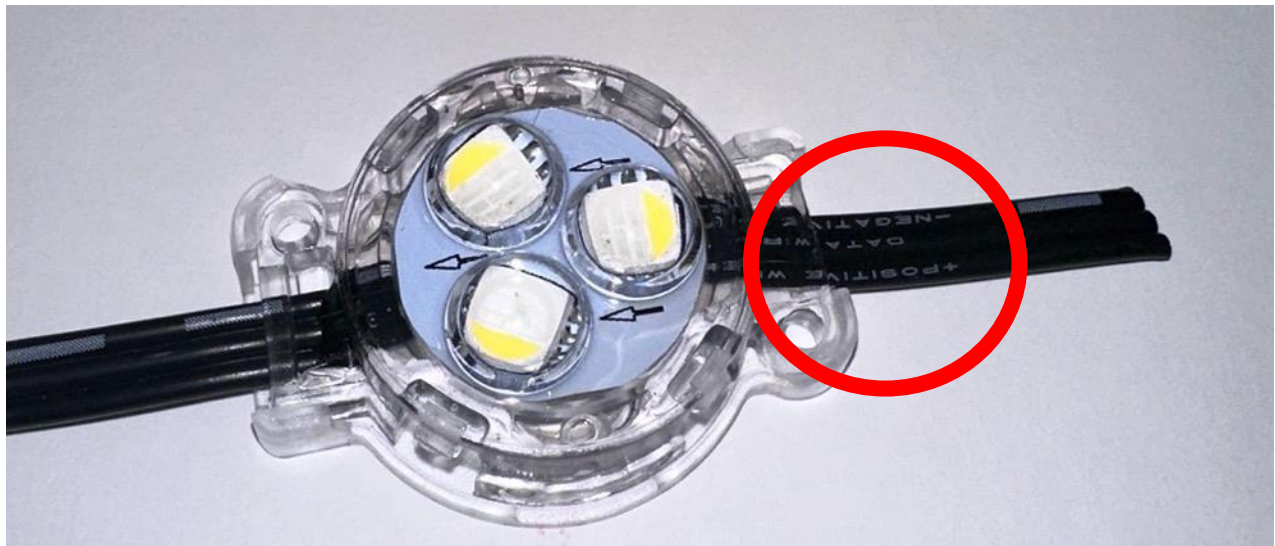
Extra wires can fit securely inside track to be hidden from view. When planning, seek the best place to hide wires. Examples are behind gutters, in attic etc.



D. Led Pucks

Lights: Lights come in a set of 10 LED PUCKS with a male and female end

- a. **Cutting the wires on the lights:** cuts can be made at any point to end a connection or extend them
- b. **Re-Joining Wires:** **Pay attention to wire labels (POSITIVE, NEGATIVE & DATA) always rejoin the same cables back together.**
- c. **Data wire:** Data flows only in one direction indicated by the arrow on the LED PUCK. Do not connect the LED'S in reverse



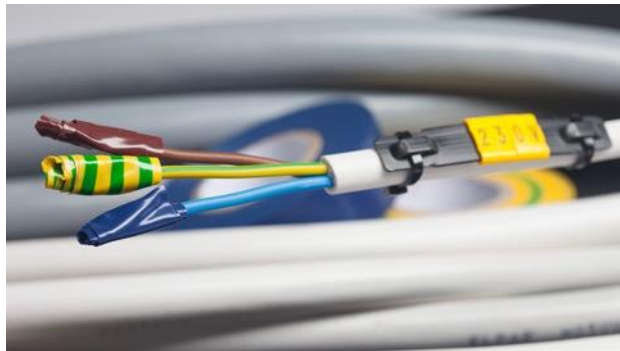
- d. **Reattaching cables:** Follow best practices when reattaching cables.
- e. We do not recommend splitting the light into two. This can lead to power loss and data corruption if not properly wired.
- f. Make sure there is enough wire between the 2 cables to ensure good connectivity.




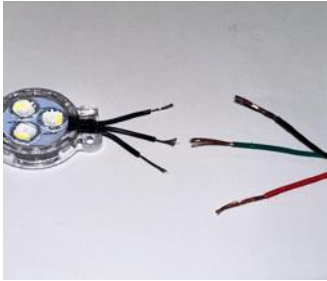
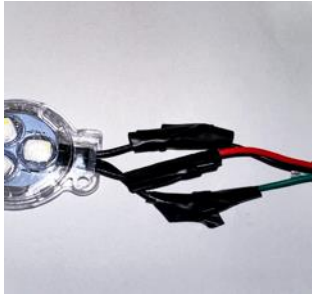

- g. Use electrical tape/heat shrink to ensure connections are secure



- h. Do not leave end connection open, secure them to ensure they are water tight



- i. Attaching wires to led lights
- **AVOID “WAGO”** type connectors as they are not best suited for stranded wires and cannot guarantee a better connection than direct wire joined or soldered together.

Cut wire at end point	Strip wires for both LED and extension wire RED - Positive Black - Negative GREEN/YELLOW - Data	Twist and tape each wire ensuring Positive/Negative/Data are together with electrical tape or heat shrink	Secure all cables together with additional electrical tape
			

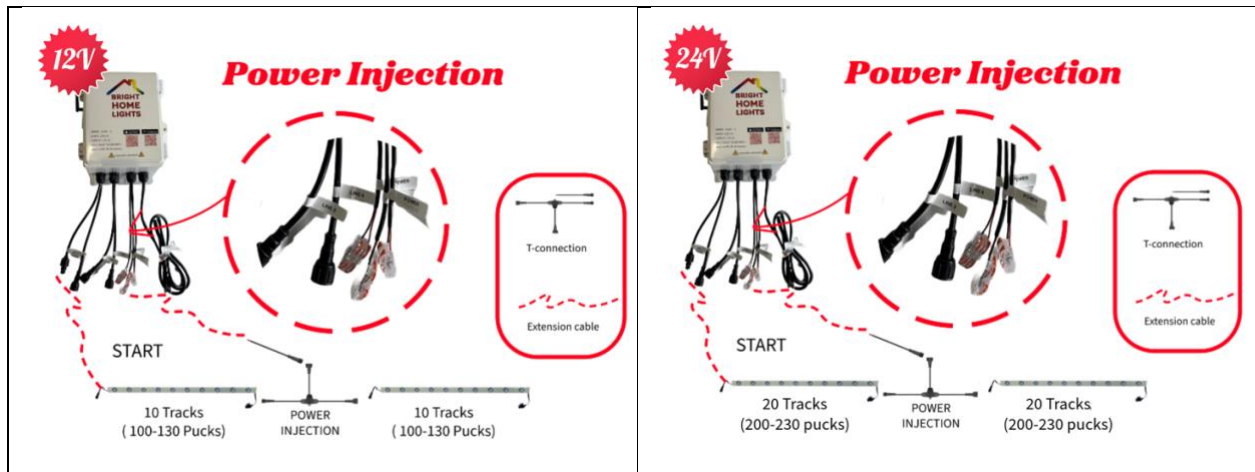
E. Power Injection

Power injection refers to the concept of introducing new power to the LED lights after a long run of lights. Voltage drop happens because as power moves from one LED to the other, they consume power and pass less power to the next set of LEDs. This will vary based on the effect currently been run. Brighter effects will use more power and dimmer effects will use less power, leaving more power for lights down the line.

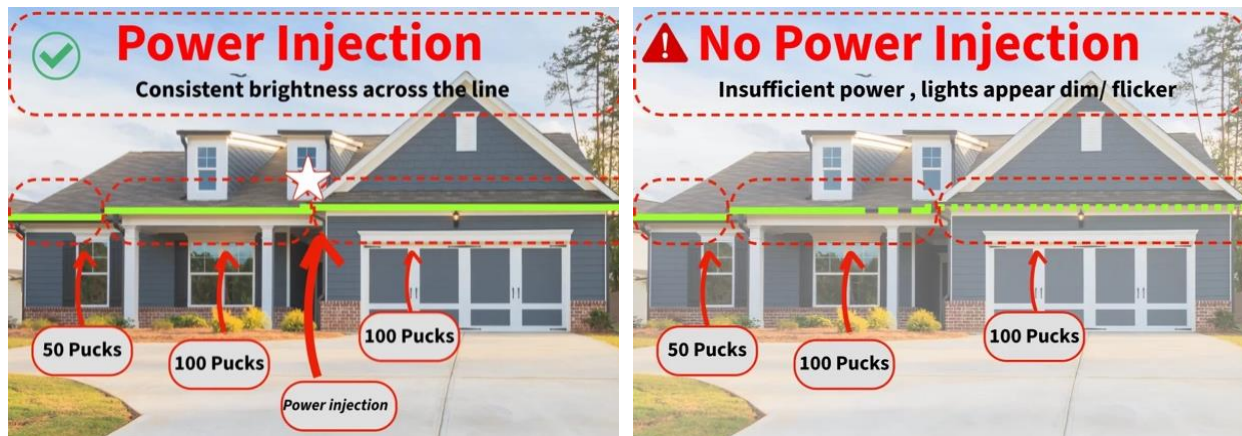


T-connection cables are used for easy power injection. New power feeds in from the bottom of the "T", and the left and right side of the "T" are used to extend the LED data. Alternatively, you can connect wires together without the connector by cutting and adding power directly.

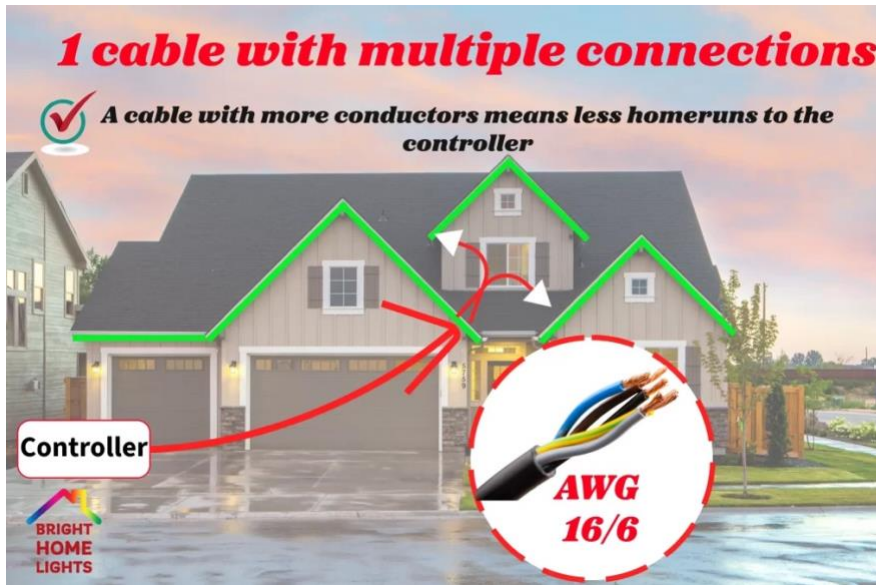
For easier wiring of power injection, it is recommended to use a cable with more conductors in it. The below example shows advantage of a 6-conductor wire over a 2 conductor.







Implications of now power injection



Power injection cable recommendation



F. Installation


<p>Lay the back of tracks in desired location</p> 	<p>Ensure the next track is aligned with the first</p> 	<p>Attach power injection cables with wire hooks to back</p>  <p>This is optional but will help speed up all wiring /avoid having to hold/feed cables in tracks later</p>	<p>Align and snap front into place</p> 
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Technical Details

A. Lights

Item Type	Puck Lights
LED type	Individually addressable
Light Source	LED
Input Voltage(V)	DC 12V/24V
Lamp Luminous Flux(lm)	110-120
Waterproof	IP68
Max Power Consumption 1 String (FULL WHITE)	9W
Protection	Fuses (5 AMPS & 10 AMPS)
Site packages	50FT - 600FT

B. Controller Technical Specifications

 <p>The image shows a white, rectangular controller unit for Bright Home Lights. It features the company logo at the top, followed by technical specifications: Model: 1000W-8, Input: 120V AC, Output: 12V DC/ 1000W, WiFi: BRIGHTHOMELIGHTS, and DATA OUTPUTS: 8 Channels. There are also two QR codes and a warning symbol at the bottom.</p>	<p>Components</p> <ol style="list-style-type: none"> 1. Wall pluggable power supply ready to use 2. WIFI Control board with data outputs and power outputs. Ethernet available on some models 3. Onboard Fuses to protect against overcurrent / short circuit <ol style="list-style-type: none"> a. 5 AMP - Used for main connections b. 10 AMP used for power injections 4. Female end connections to plug directly to lights
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Larger power supplies are available upon request to accommodate larger installs up to 1600W. We will also always provide the right amount of power for your project.

Troubleshooting

VISIT <https://www.brighthomelights.com/help/> for help video and articles.

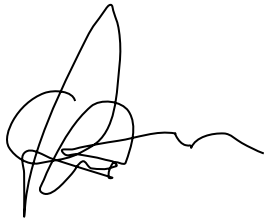
Problem	Remedy
Diming Lights: Lights start off bright and then appear dim towards the end	This is an issue of voltage drop, TRY: 1. Count the number of lights in the segment to ensure it does not exceed the recommended number (100-130) 2. Test the voltage where the dimming begins using a voltage meter, if lower than 9v, power injection is needed
Lights flicker: Lights flicker or change random colors when on	This is an issue of voltage drop or bad ground connection, TRY: 1. Count the number of lights in the segment to ensure it does not exceed the recommended number (100-130) 2. Test the voltage where the flickering occurs using a voltage meter, if lower than 9v, power injection is needed 3. Ensure connection are secure and solid. A bad negative connection will almost always cause flicking in LED
APP Loses connection: App loses connection to lights	This is an issue of WIFI connection, TRY: 1. Ensure good WIFI coverage in controller location 2. Use WIFI extenders were possible 3. Ethernet modules are available when needed
Lights flicker after long jumps	This is an issue of data connection, TRY: 1. Ensure connection on DATA and NEGATIVE line are properly connected 2. A data booster can use used to help with data signals when needed
Lights are blue and do no respond to color changes	This is an issue of data connection, TRY: 1. Ensure connection on DATA line cable is connected properly . BLUE lights means the lights are getting power but no power. 2. If you made changes to the "LED preferences in the APP, ensure the GPIO number is correct.

Conclusion

We hope this guide has been helpful in providing you with the necessary information you need to install bright home lights. Please never hesitate to call or email us with any questions.

Congratulations on your installation journey.

Charles

A handwritten signature in black ink, appearing to be "Charles", with a stylized, flowing script.

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