



No-Solder Faux Neon Bike Lights

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<https://learn.adafruit.com/no-solder-faux-neon-bike-lights>

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Table of Contents

Overview	3
<ul style="list-style-type: none">• Parts• Tools	
Attach the Battery Pack	6
Protect your Circuit	7
Light up the Basket	8

Overview

Add a strip of flexible silicone faux neon lights to your bike basket in this great beginner project. No previous experience with electronics is necessary. If you can use a screwdriver and zip ties, you can add some bright glowy neon-like lights to practically anything!

This tutorial will cover how to connect a battery pack to a strip of Flexible Silicone Neon-Like LED lights and how to easily attach it to a bike basket.

Pick your favorite color and get started!



Parts

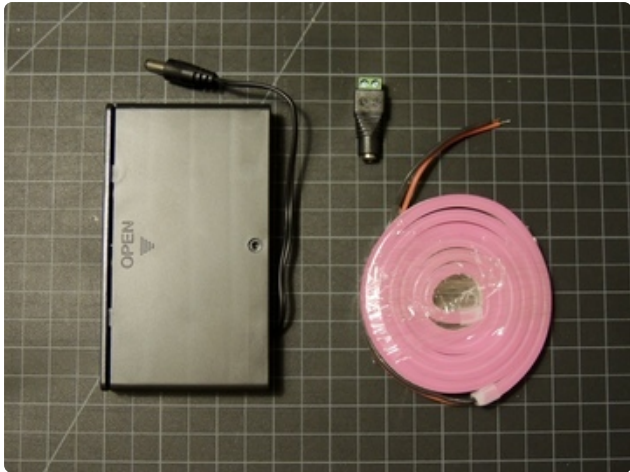


Bike Basket - Consider that the lights are 1 meter long if purchasing a new bike basket.

Zip Ties

Vinyl tape (optional)

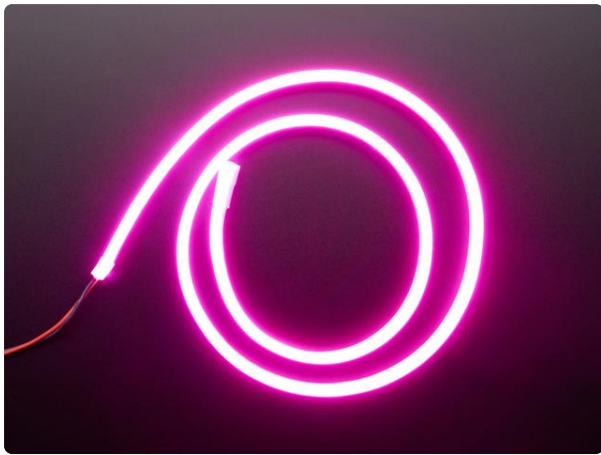
Velcro & hot glue (optional)



1 meter Flexible Silicone Neon-Like LED Strip (<http://adafru.it/3862>)

8 x AA battery holder with 5.5mm/2.1mm Plug and On/Off Switch (<http://adafru.it/875>)

Female DC Power adapter - 2.1mm jack to screw terminal block (<http://adafru.it/368>)



Flexible Silicone Neon-Like LED Strip - 1 Meter

Here at Adafruit we love discovering new and exotic glowing things. Like moths to the flame, we were intrigued by these fresh Flexible Silicone Neon-Like LED...
<https://www.adafruit.com/product/3862>



Female DC Power adapter - 2.1mm jack to screw terminal block

If you need to connect a DC power wall wart to a board that doesn't have a DC jack - this adapter will come in very handy! There is a 2.1mm DC jack on one end, and a screw terminal...
<https://www.adafruit.com/product/368>



8 x AA battery holder with 5.5mm/2.1mm Plug and On/Off Switch

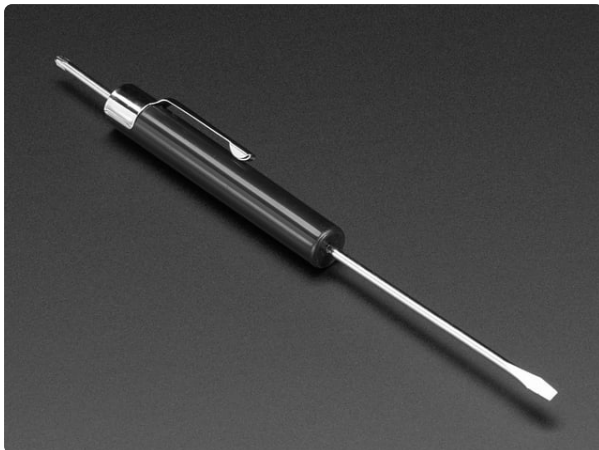
Make a portable power brick with plenty of juice! Use Alkaline AA's for a 12V 3000-4000mAh power supply, or rechargeable NiMH for 2000mAh 9.6V supply. Either one is good for running...
<https://www.adafruit.com/product/875>

Tools



Flush diagonal cutters

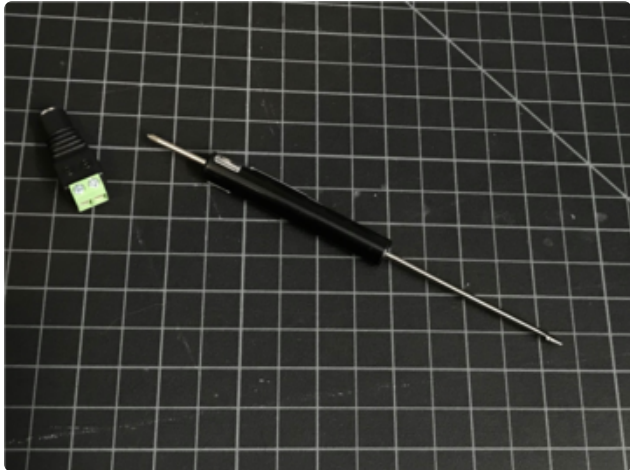
These are the best diagonal cutters, large super-comfortable grip to use and have strong nippers for perfect trimming of wires and leads. I've used my pair every day for years.
<https://www.adafruit.com/product/152>



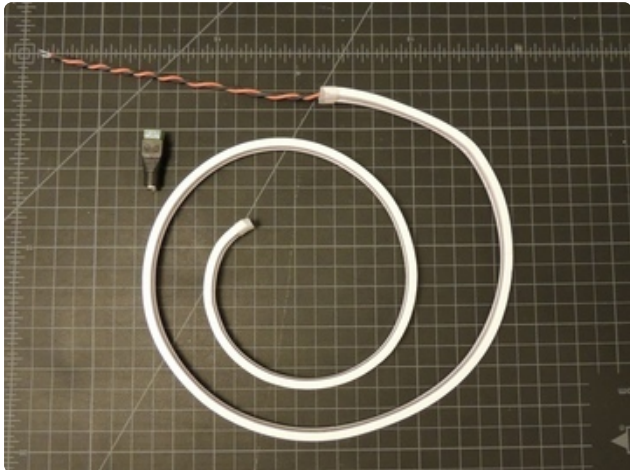
Adafruit Pocket Screwdriver - Black

Have you ever been in a situation where you desperately needed a screwdriver right away? Now you can have one at-the-ready all the time — enter the...
<https://www.adafruit.com/product/3284>

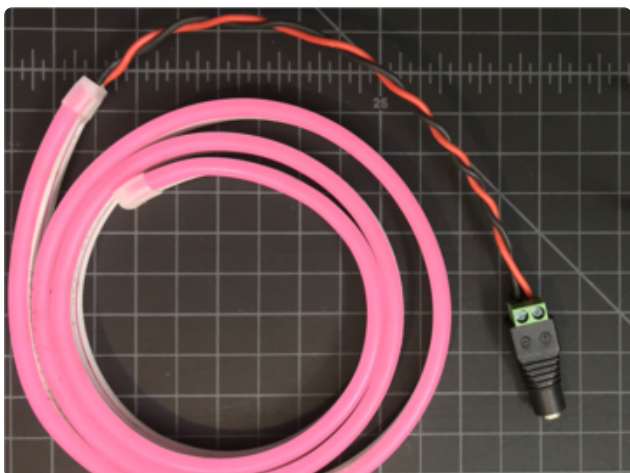
Attach the Battery Pack



Unscrew the two tiny screws on the terminal block as shown in the picture. Since we're making space for wire, the screws shouldn't come out completely.



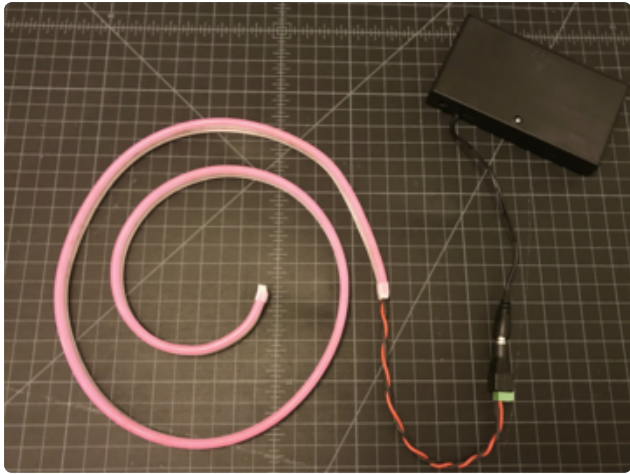
Twist the two wires together. This is optional, but I like doing it to keep things tidy.



Insert the stripped end of the red wire into the hole on the terminal block with the (+) symbol.

Insert the stripped end of the black wire into the hole on the terminal block with the (-) symbol.

Tighten the screws to hold the wires in place. Give them a little tug to ensure both wires are secure.



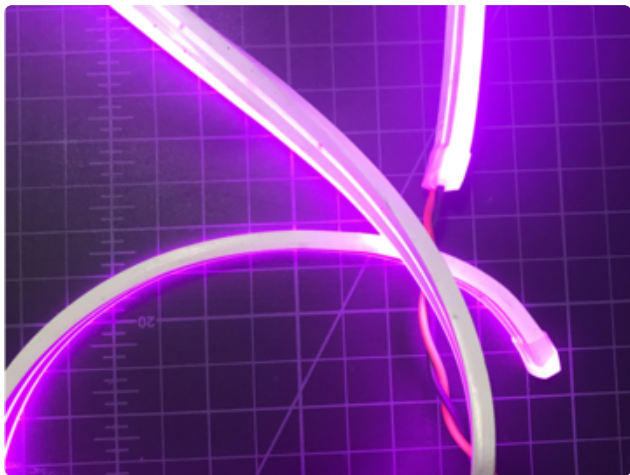
Insert 8 AA batteries into the battery pack.

Plug the battery pack into the terminal block.



Turn on to see the pretty lights!

While they might appear more purple in some photos, these are super pink!

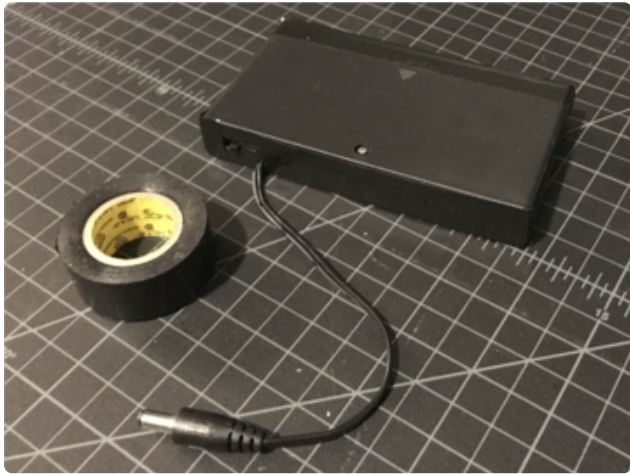


Protect your Circuit

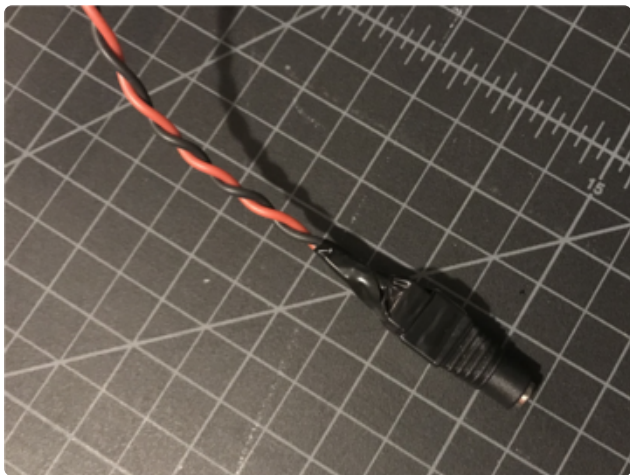
The battery pack & terminal block are not weatherproof! You'll need to take additional steps to weatherize this project if they will be exposed to the elements!

While these steps are optional, protecting your circuit will increase its survival when exposed to the elements. Use some or all of these steps for your project.

Vinyl and duct tapes provide some level of moisture resistance. I like black vinyl tape and clear gorilla tape the most!



Add some tape to the edges of the battery pack.



Add some tape around the terminal, where the black and red wires meet the connector.



Add some protection to where the terminal meets the battery pack.

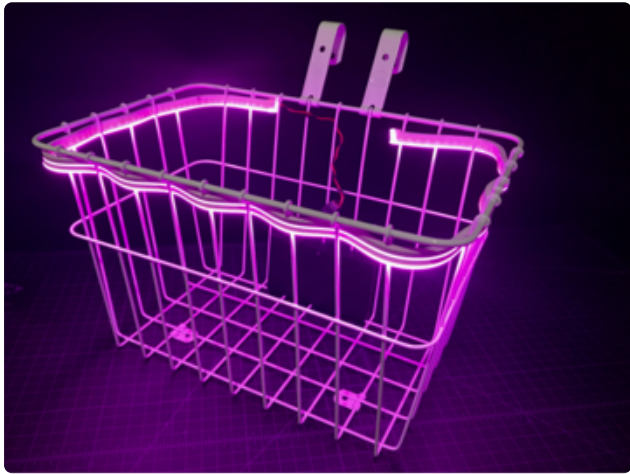
Light up the Basket

Get creative in attaching your light strip to your basket!

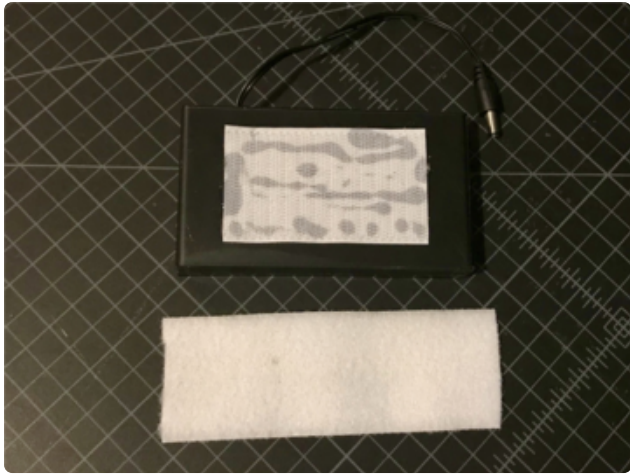
I started by matching the halfway point of the lights with the front center tine on my basket and then wove the light strip between the tines.



The strip emits the most light from one of the short sides, which I wanted to point towards the ground. The two wider sides of the lights look a little bit different.



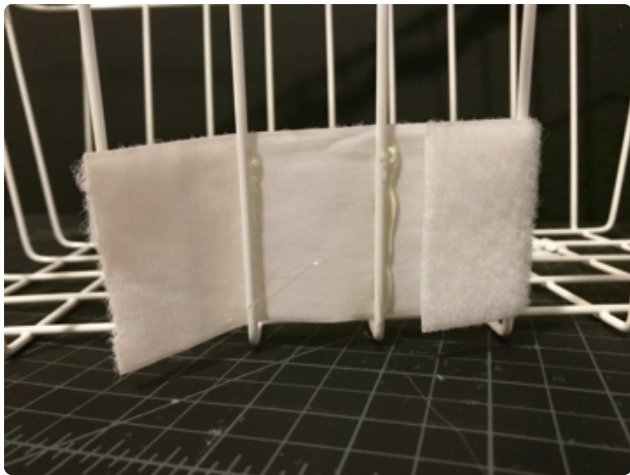
I looked at both options and chose to have the side with a little stripe pointing outwards.

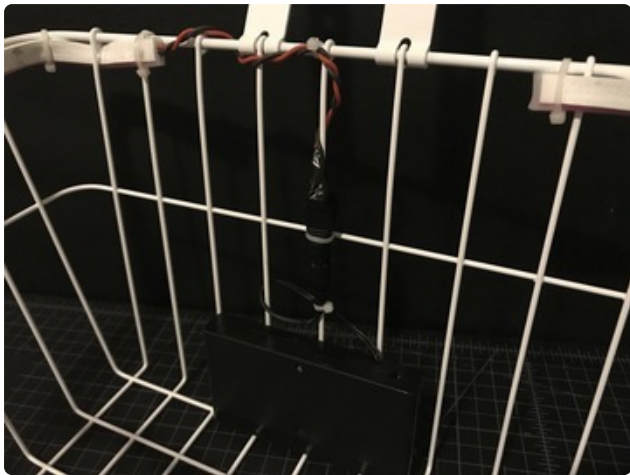


(Optional) Attach the battery pack with velcro

Use hot glue to attach one side of a piece of velcro to the battery pack and the other to the basket.

I used a longer piece on the basket, wrapping it around the tines and securing it with hot glue.





Use zip ties to secure the lights, cables, and battery pack if necessary.



If the basket isn't already on your bike, attach it and enjoy!

