



Luminous LED Flowers

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<https://learn.adafruit.com/luminous-led-flowers>

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Overview

Brighten up your next bouquet! Build LEDs into faux flowers for a festive centerpiece, Mother's Day gift, prom corsage, or wedding party.

This simple soldering project is great for beginners! To build your own, you will need:

- Faux flowers - we got ours at a craft supply store
- 10 [Adafruit LED Sequins](http://adafru.it/1758) (<http://adafru.it/1758>) (2 packs) in color of choice
- [Green silicone-coated wire in 30 gauge](http://adafru.it/2005) (<http://adafru.it/2005>) (3 packs)
- [4xAA battery holder](http://adafru.it/830) (<http://adafru.it/830>) (for longer life) or [2x2032 battery holder](http://adafru.it/783) (<http://adafru.it/783>) (small and wearable)
- hot glue gun
- rubber bands
- floral tape
- [wire strippers](http://adafru.it/527) (<http://adafru.it/527>)
- [flush snips](http://adafru.it/152) (<http://adafru.it/152>)
- [soldering iron](https://adafru.it/drl) (<https://adafru.it/drl>)
- [third hand tool](http://adafru.it/291) (<http://adafru.it/291>)
- [heat shrink tubing](http://adafru.it/344) (<http://adafru.it/344>)

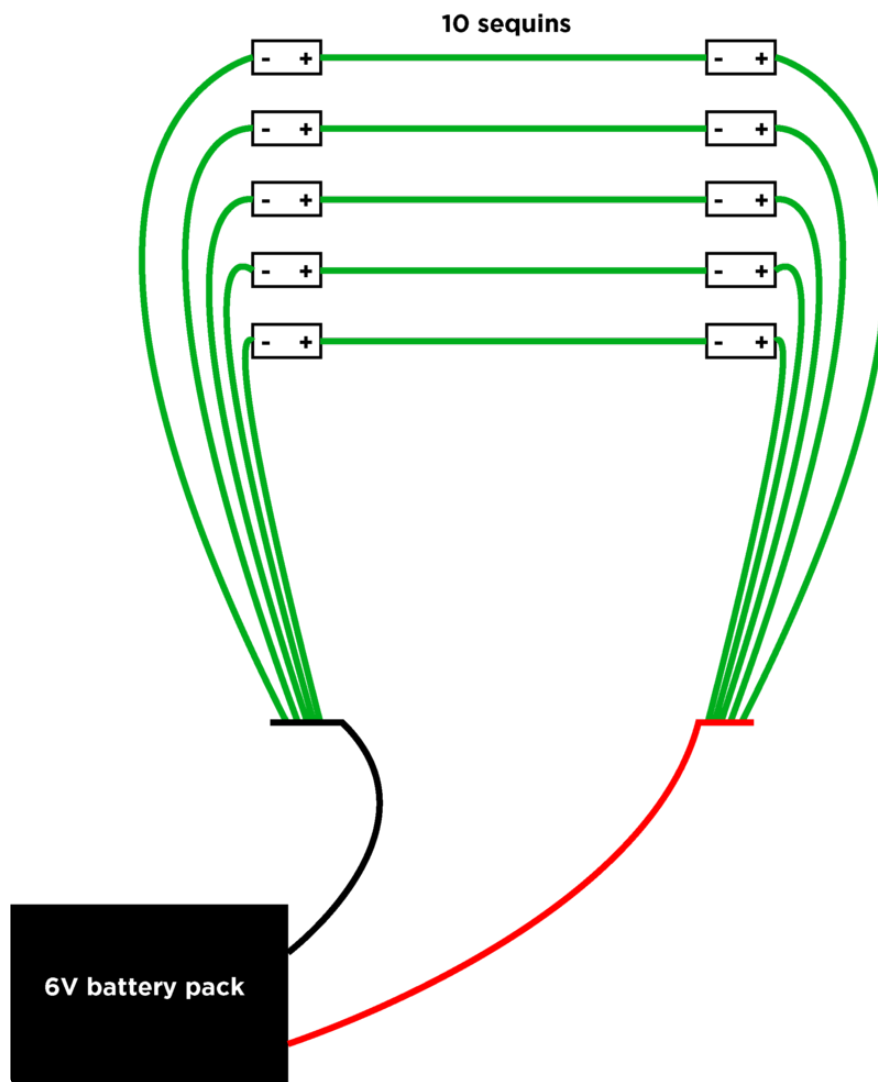
Please review the following guides before you begin:

- [Adafruit Guide To Excellent Soldering](https://adafru.it/drl) (<https://adafru.it/drl>)
- [Adafruit LED Sequins](https://adafru.it/iSf) (<https://adafru.it/iSf>)
- [Battery Powering Your Wearable Electronics](https://adafru.it/e4c) (<https://adafru.it/e4c>)



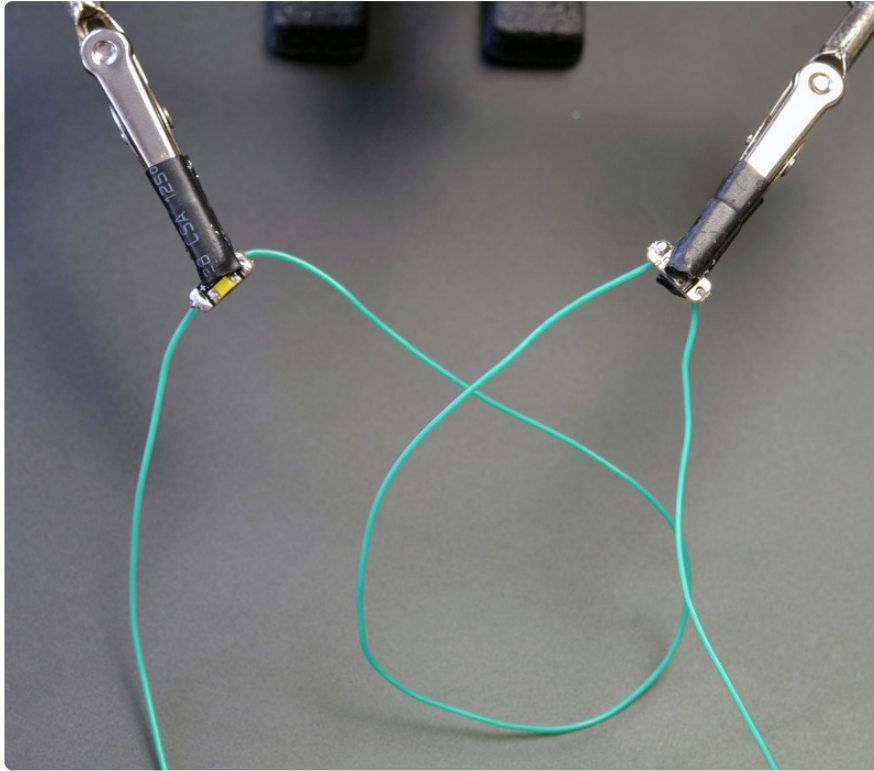


Circuit Diagram

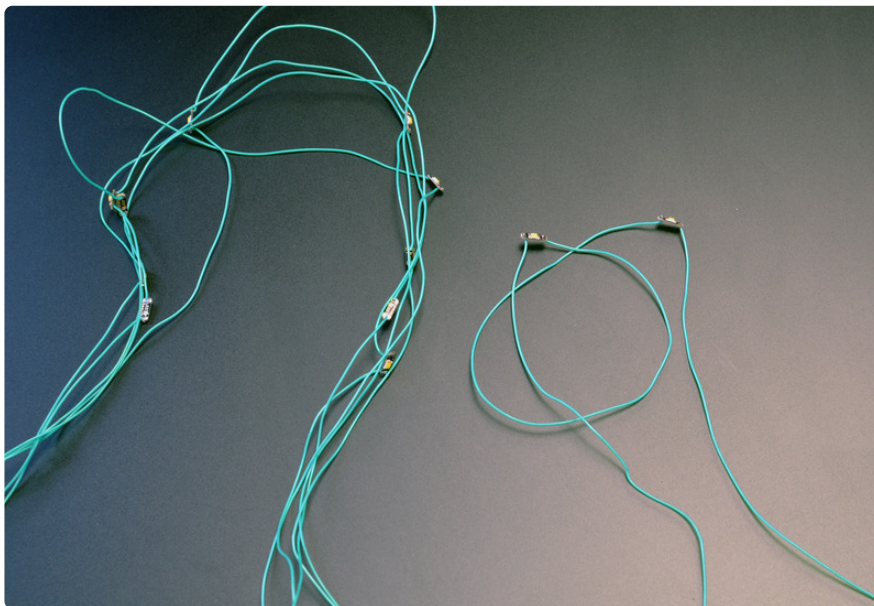


Pairs of two sequins are wired in parallel to a 6V battery pack. How many pairs of LEDs determines how long the battery will last-- add more or fewer based on your design.

Prepare LED Sequins

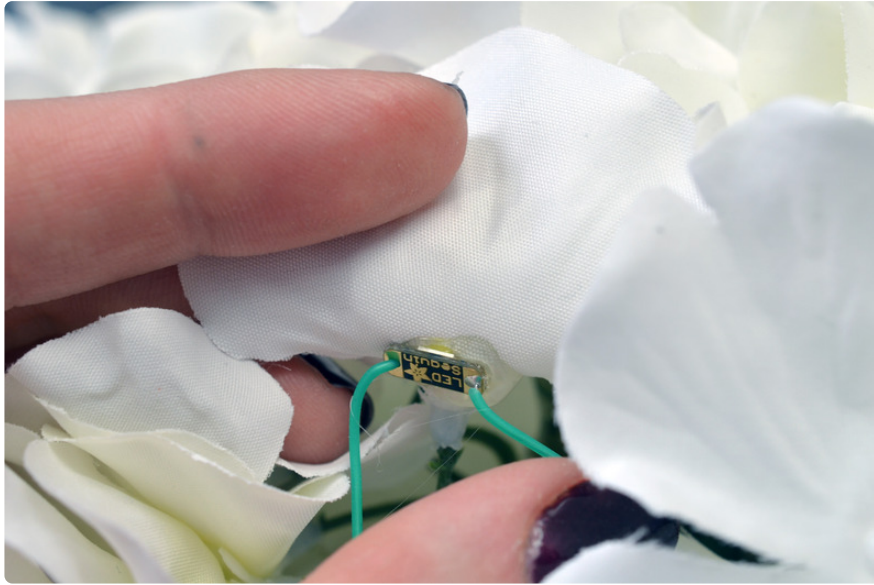


Solder pairs of sequins in series using long lengths of wire that match your flower arrangement. Tin the stripped wire ends with solder before inserting through holes in sequins to prevent stray strands. Use flush snips to trim off wire ends after soldering. Repeat five times or for as many LED pairs you want in your design.



Unless you're color coding your wires, mark the positive ends of wire with a permanent marker so you can sort them later. Inspect your solder joints and double check your LED polarity one more time.

Affix Inside Bouquet



Arrange your flowers together and use rubber bands to secure the stems into a bouquet.

Apply a dab of hot melt glue on the front of the LED sequin, and stick it to the under side of a bloom, near the center. Hold it in place until the glue cools.

Hot glue will burn you! Keep a bowl of ice water nearby.



Tuck the wires inside the bouquet and route the long wires down the stems of your flowers.

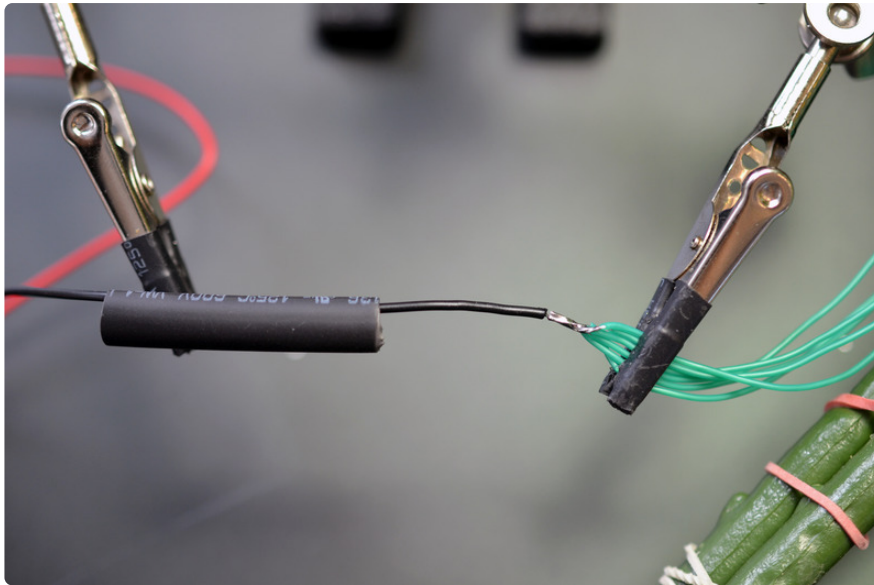
Connect Battery & Enjoy



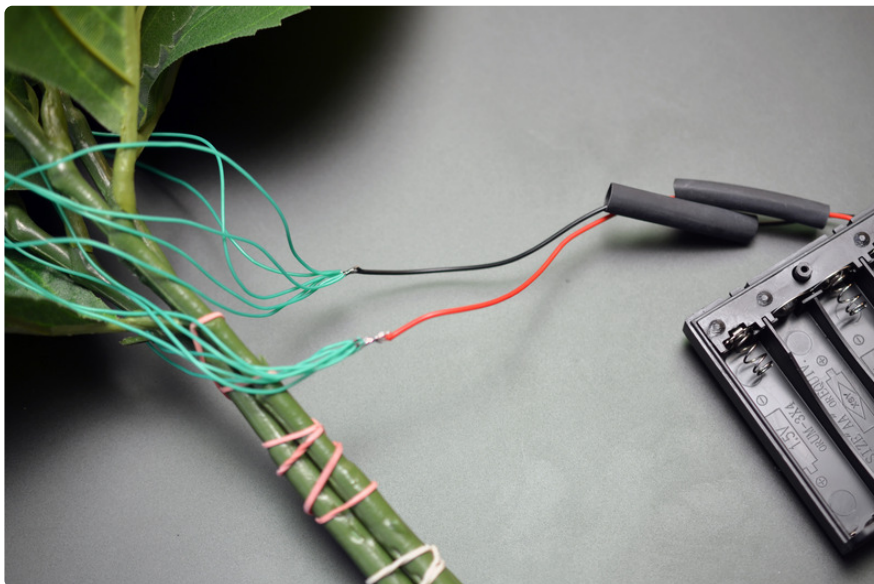
Using the marks you made earlier, sort the wires into two bundles: positive and negative.



Trim, strip, and solder each bundle together.



Slide a piece of heat shrink tubing over each battery wire. Solder the black battery wire to the negative bundle, and the red battery wire to the positive bundle.



Before you shrink the heat shrink tubing, carefully test your circuit by loading up the battery pack and switching it on.



If all your LEDs light up, you're good to go! If none light up, you likely have a power problem. If some light up, you likely have some that are wired backwards. Make any necessary fixes and carefully shrink the heat shrink tubing with a heat gun, hair dryer, or lighter.



Use floral tape to wrap the wires to the stems.



Arrange bouquet in a vase, your bridesmaid's hands, or your prom date's wrist. If you're using the small wearable battery holder, don't forget to pack a few spare CR2032s!