



ASSEMBLY INSTRUCTIONS

Soldering Guide

Building the LED candle is a great way to light up your pumpkin, holiday decoration, and more! This kit also helps you learn how to solder and identify basic electronics components. Let's get started!

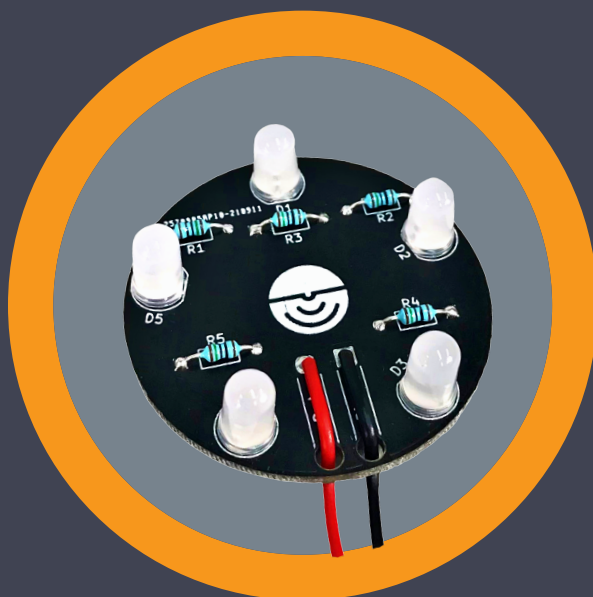
MATERIALS

Kit Includes

- 5 Diffused Yellow LEDs
- 5 150 Ohm Resistors
- battery pack
- Printed Circuit board

You'll Need

- Soldering Iron
- Solder
- 4 AA Batteries
- Wire Cutters
- Wire Strippers



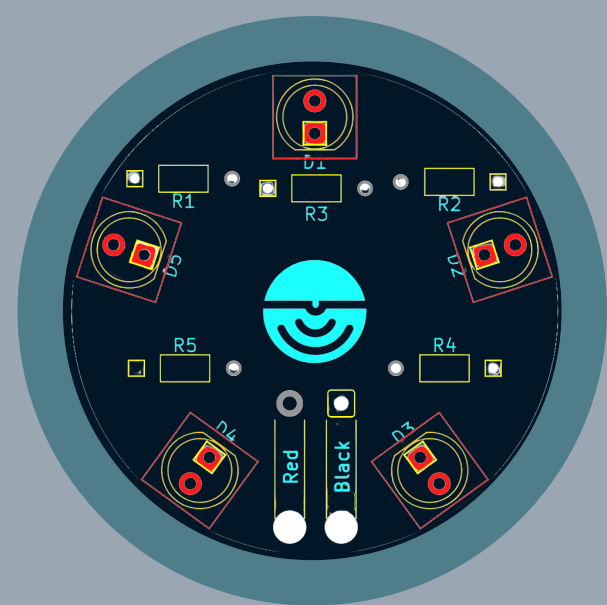
1.

LEDs

Some electrical components only function properly when the flow of current passing through the device is in the proper direction. This is known as polarity.

LEDs are a polar component, having one lead shorter than the other, indicating the negative lead of the LED.

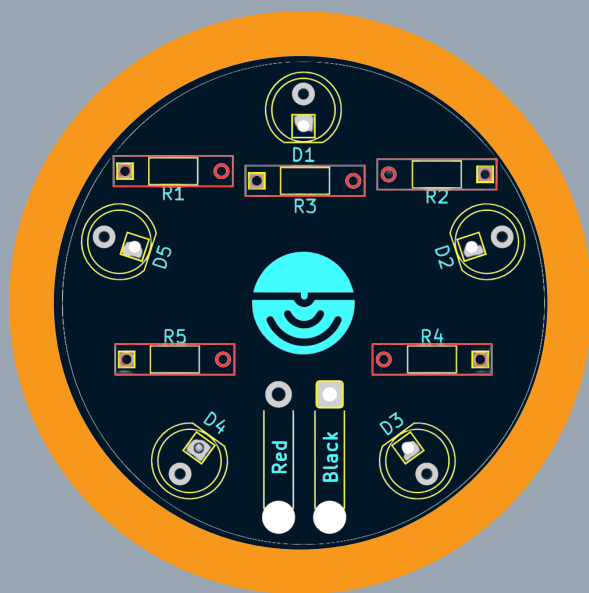
Solder all 5 LEDs such that the shorter leads, are put into the square holes of D1 - D5 highlighted in Red on the left.



2.

RESISTORS

LEDs need to have the amount of current running to them limited or they'll instantly burn out. Putting a resistor in series with the LED limits the current that can flow through the circuit and keeps the LEDs shining for years of operation. Take the five 150 Ohm current limiting resistors and solder them to the footprints R1 - R5, highlighted in red on the right. These components are not polar



BATTERY

As with any electrical system, the most crucial component is a consistent and safe power supply.

Take the included battery pack and insert each wire up through the bottom of the board into the bare holes located closest to the edge. With each wire inserted into the correctly labeled solder point, Bend them back down and insert the stripped section into the corresponding copper plated hole. Solder these connections into place.

3.



Finishing Touches

It is always good to review your work.

- Are your solder joints bonded to the wire and board?
- Are the LEDs oriented Correctly?
- Are the power and ground wires in the correct spots?

When ready, insert batteries, flip the switch, and enjoy your hand soldered electric candle!