

Assemble a Circuit Board!

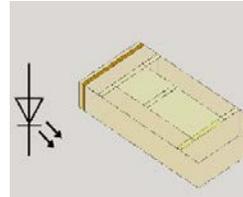
Required Parts:



Silver solder paste

Source: www.mouser.com

Part Number: 557-7459



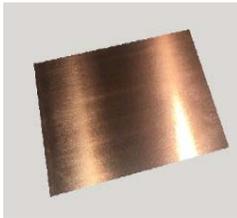
Light Emitting Diode (LED)

1.17V 20MA

Surface Mount

Source: www.mouser.com

Part number: 606-7016X11



Pre-Milled Circuit Board

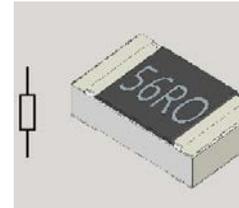
Copper Clad

Circuit Board

Single Sided 1/16"

Source: www.mouser.com

Part number: 590-521



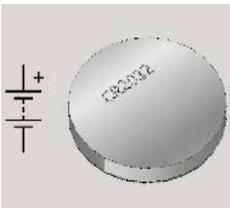
Resistor

56OHM

Surface Mount 1206

Source: www.mouser.com

Part number: 667-ERJ-8ENF56R0V

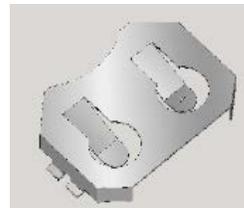


Battery

3V Button Cell

Source: www.mouser.com

Part number: CR2032



Battery Holder

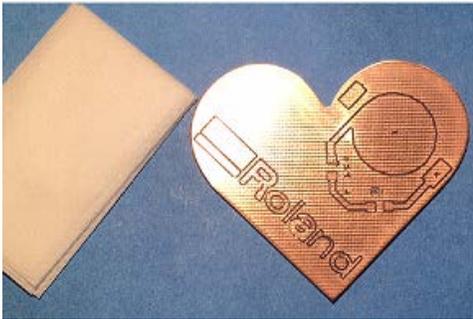
Surface Mount

Source: www.mouser.com

Part number: 712-BAT-HLD-001

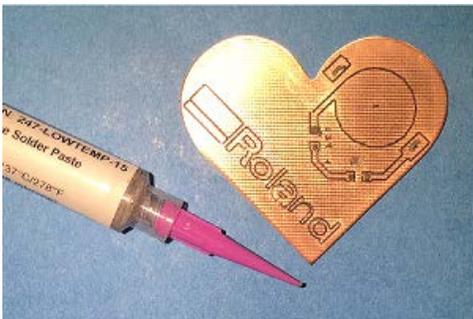
Other tools:

- Alcohol Cleaning Swab
- Hot Air Soldering Pencil
- Forceps/Tweezer



Step 1: Prepare Board

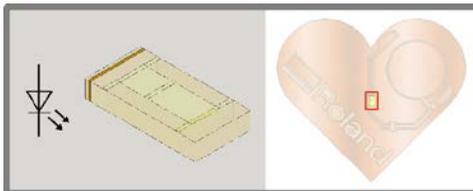
Thoroughly clean the circuit board with the alcohol cleaning swab.



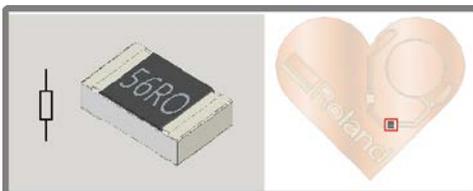
Step 2: Apply Solder Paste

Apply a very small amount of solder paste onto the solder pads as shown in the illustration. Check to make sure no solder paste is left outside of the confines of the solder pads on the circuit board.

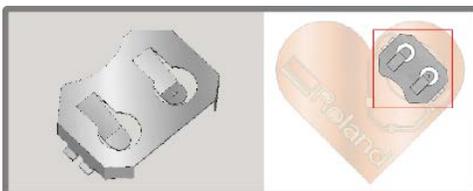
Step 3: Components (use tweezers)



Place LED onto the left-most solder pad. Ensure that the cathode mark (light silver line) on the LED is oriented to the top of the heart, or negative solder pad.



Place the resistor onto the solder pads between the battery holder and LED. Make sure the silver contact points on the resistor are oriented with the solder pads on the board.

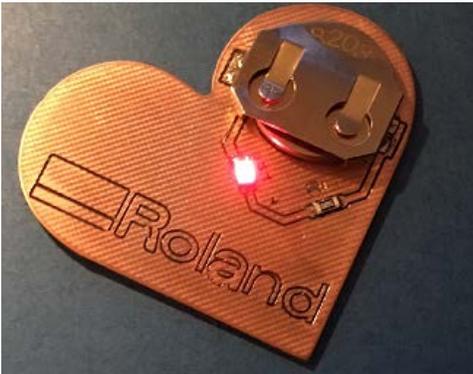


Place the Battery Holder onto the soldering pads in the upper right corner. Orient the battery holder to allow the battery to be inserted from the upper right hand corner of the board.



Step 4: Heat Solder

Using the heat pencil, carefully heat the solder until it becomes bright silver. The solder will solidify as it is cooled adhering the components to the circuit board.



Step 5: Insert Battery

Insert the battery into the battery holder with the positive side up. This will light the red LED at the center of the heart.