

FLASHLIGHT

This is a basic circuit to show you how to turn on a LED and use it as a flashlight.

You will learn to use some tools like soldering iron and cutting pliers, also to identify electronics symbols.

It's an entry DIY kit so previous knowledge is no needed.



STEAM

This kit tries to comply STEAM ideology, it involves math, analysis, assembling, among others, it is practical and theoretical.

Check the backside to see the schematic diagram, symbols and limit resistor formula, this is your creation so don't forget to sign it.

Kit content:

1 x Flashlight PCB		
1 x Resistor		
1 x Push button		
1 x Battery holder		
1 x LED		
1 x LED holder		

CAUTION: You will use sharp & high temperature tools, use eye protection.
 Parental supervision required.

You will need:

- Soldering iron
- Cutting pliers
- Solder wire/solder paste

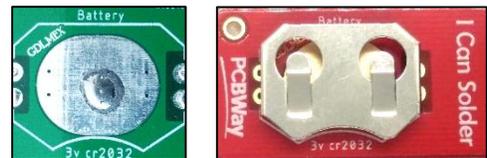


Instructions

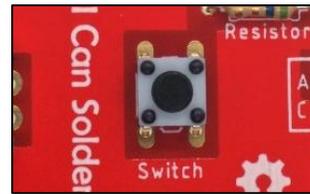
Take the resistor, bend the leads such as they fit on his footprint, insert the resistor all the way until make contact with the PCB.



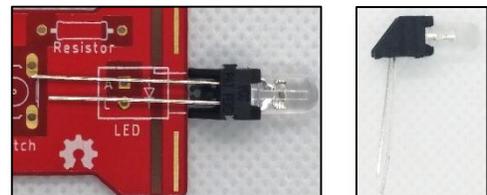
Add a small blob of solder to the negative battery pad on PCB and spread it.



Fit the battery holder matching the silkscreen, flip the board and solder the pins.

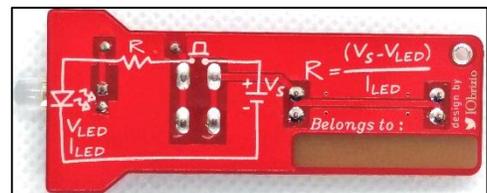


Insert the push button all the way and solder.



Put the LED into the LED holder, assure it's on the right position, long lead (+ anode) has to be facing the Anode marking area on PCB, bend the leads on right angle as close to the LED holder.

You'll note it matches the LED footprint, now insert it, flip the board and solder.



Insert a 3v cr2032 battery facing the "+" mark to up.



Press the button to turn on your LED flashlight.