

# WEARABLE TECHNOLOGY

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FASHION  
**HACKDAY**

# Introduction



Wearable Solar

# Moritz Waldemeyer



# Anouk Wipprecht



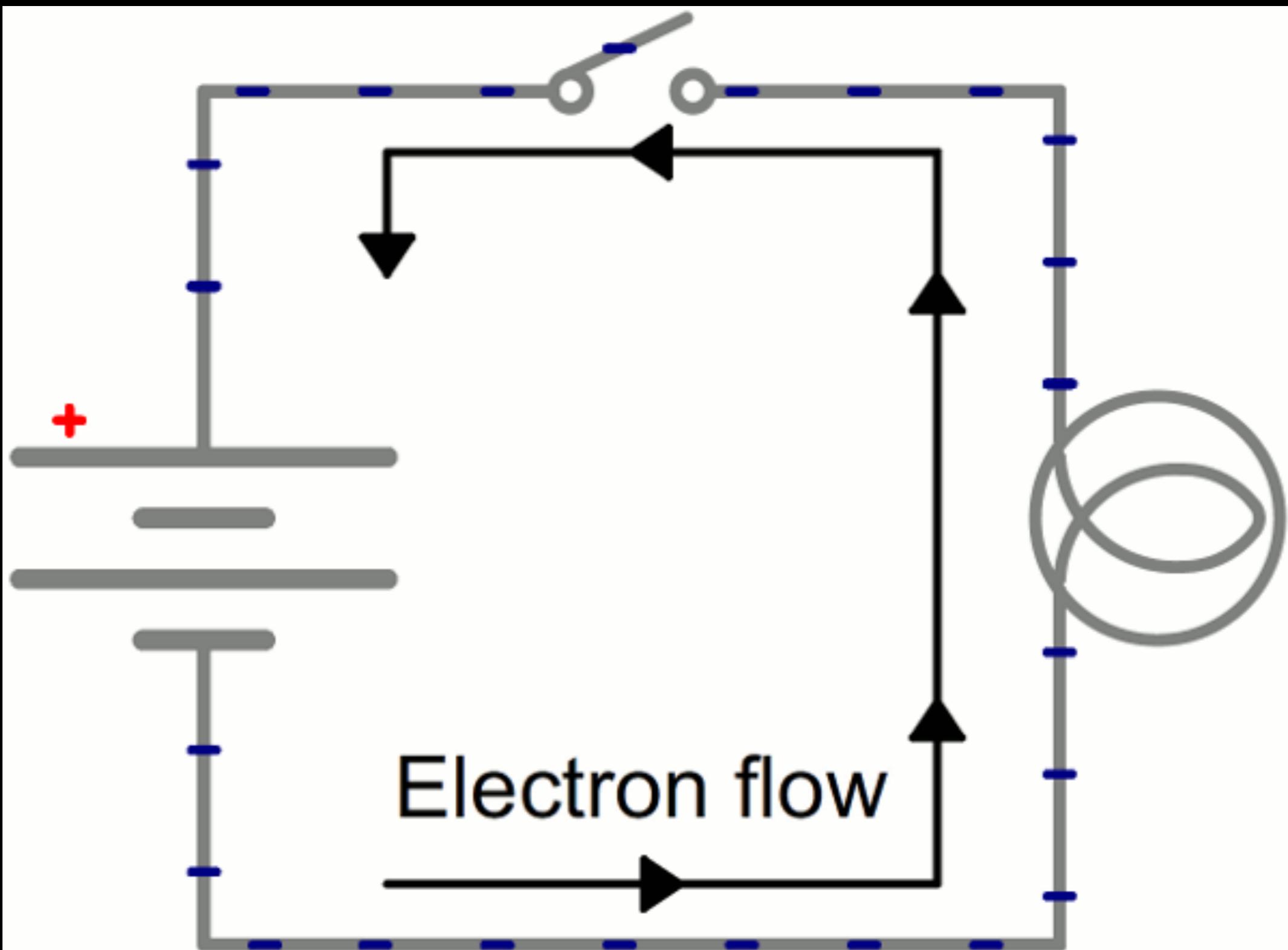
# ElektroCouture



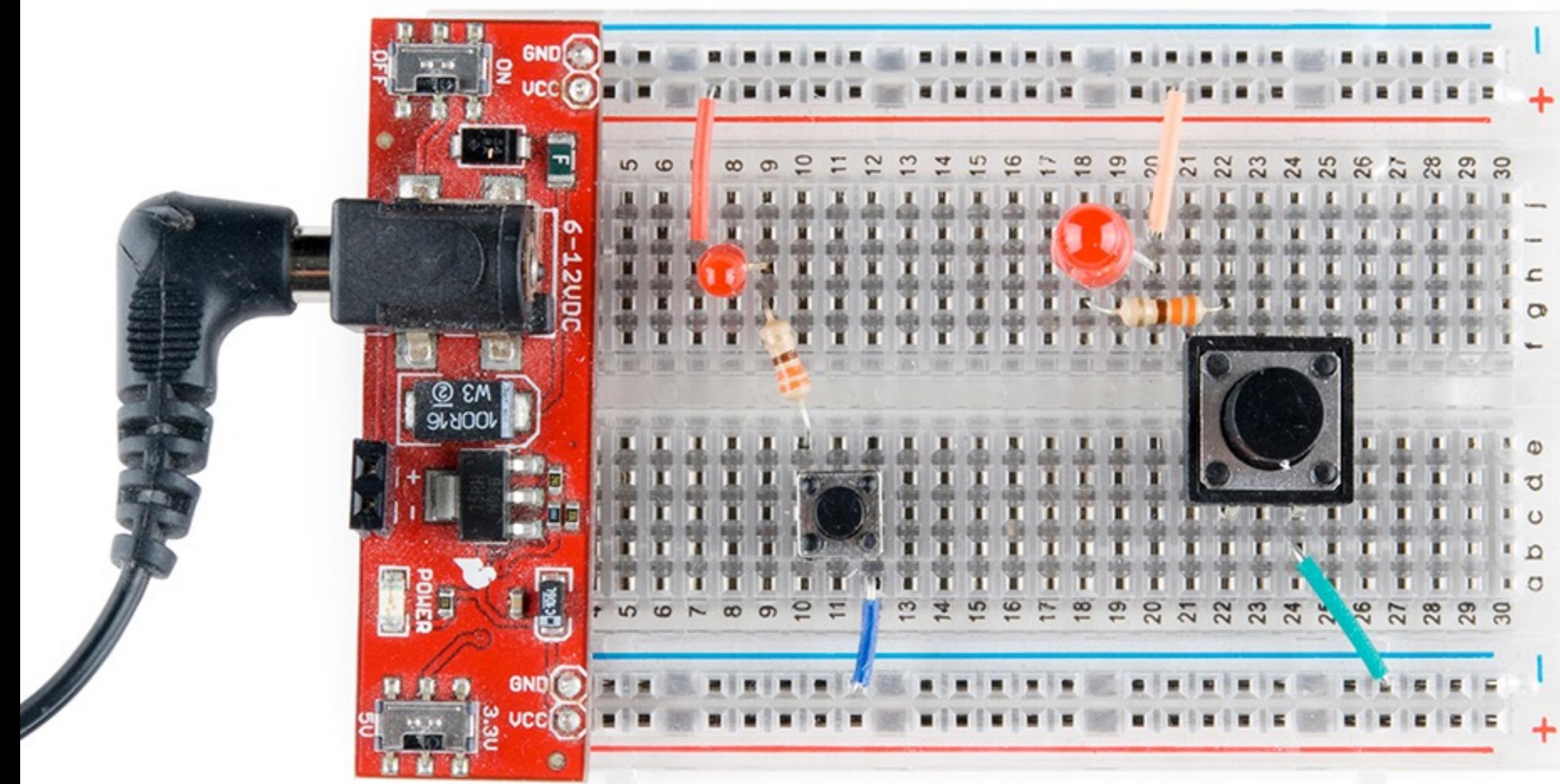
ELEKTROCOUTURE

# Circuits

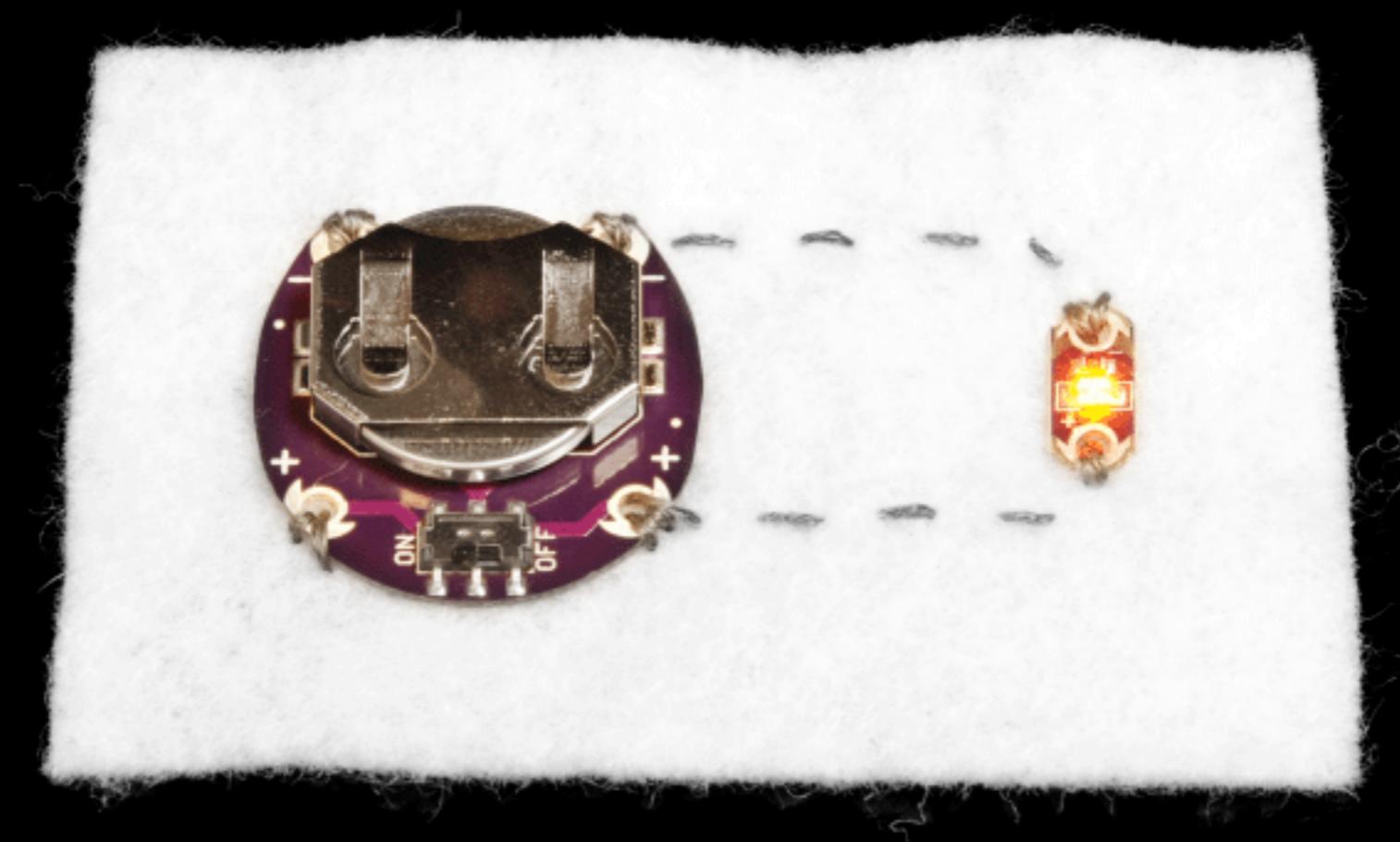
# Circuits



# Circuits



# Circuits



# Components

# Electric Paint



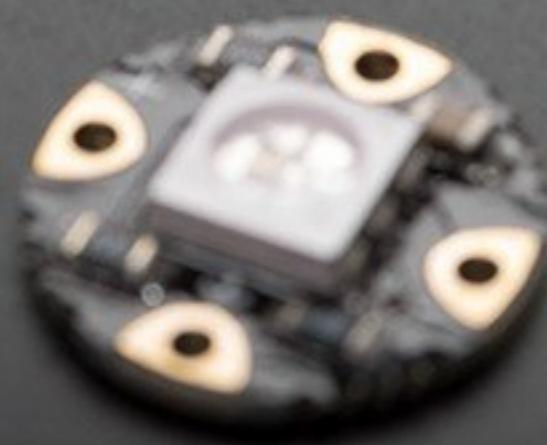
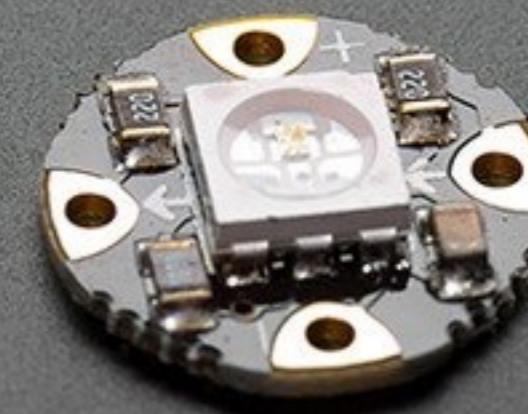
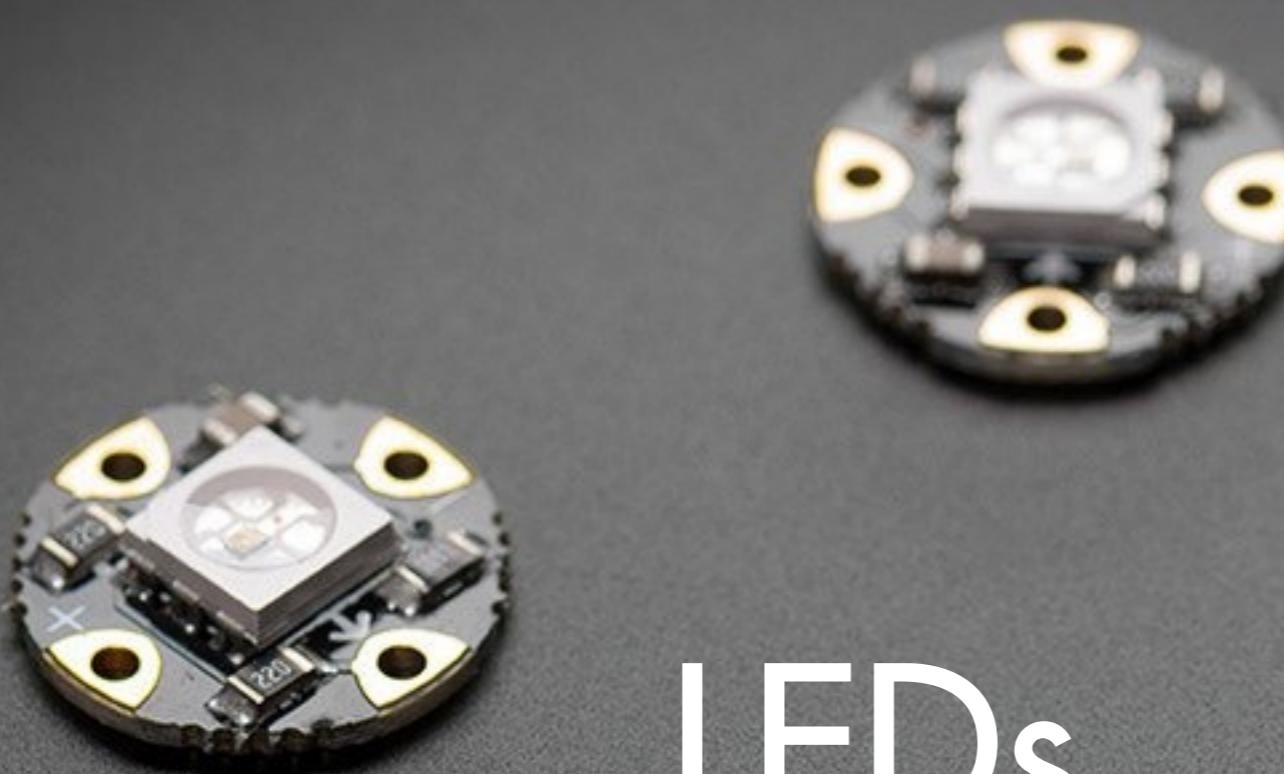
# Conductive Fabric



# Conductive Thread



LEDs



- LP 503035  
500mAh 3.7V  
+ 13. 10. 13

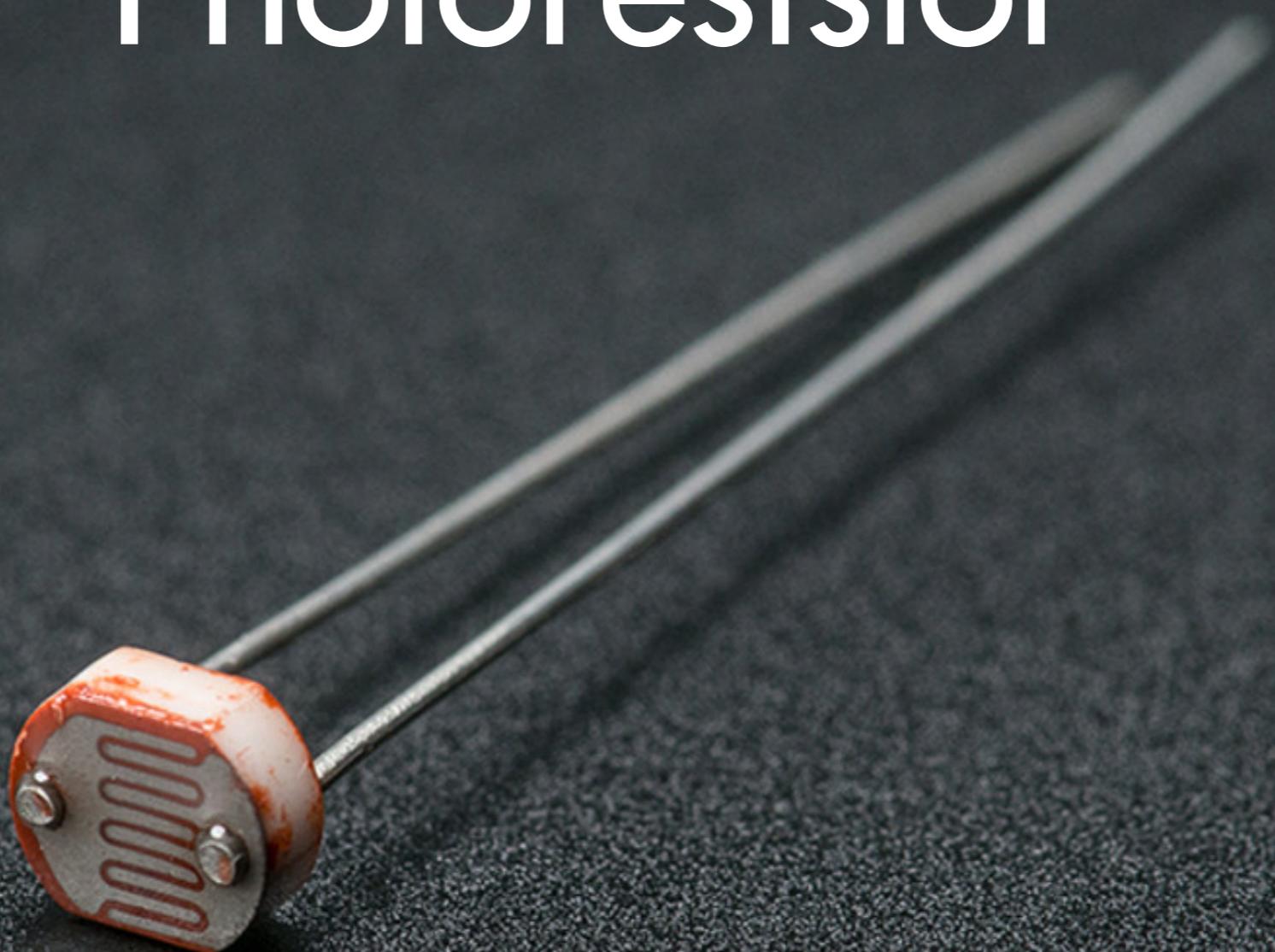
# LiPo Battery

# Sensors

# Velostat



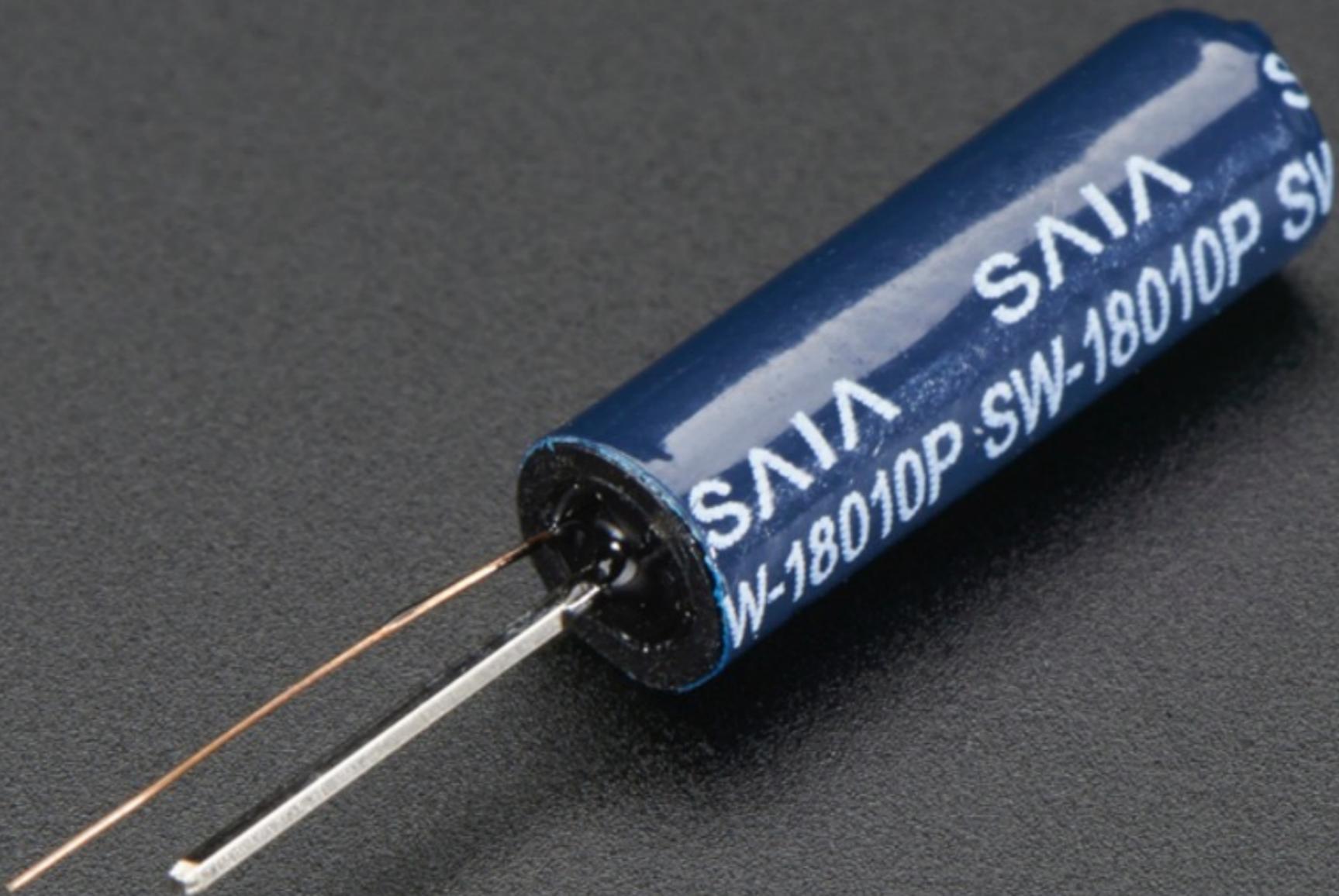
# Photoresistor



# Switch



# Vibration Sensor

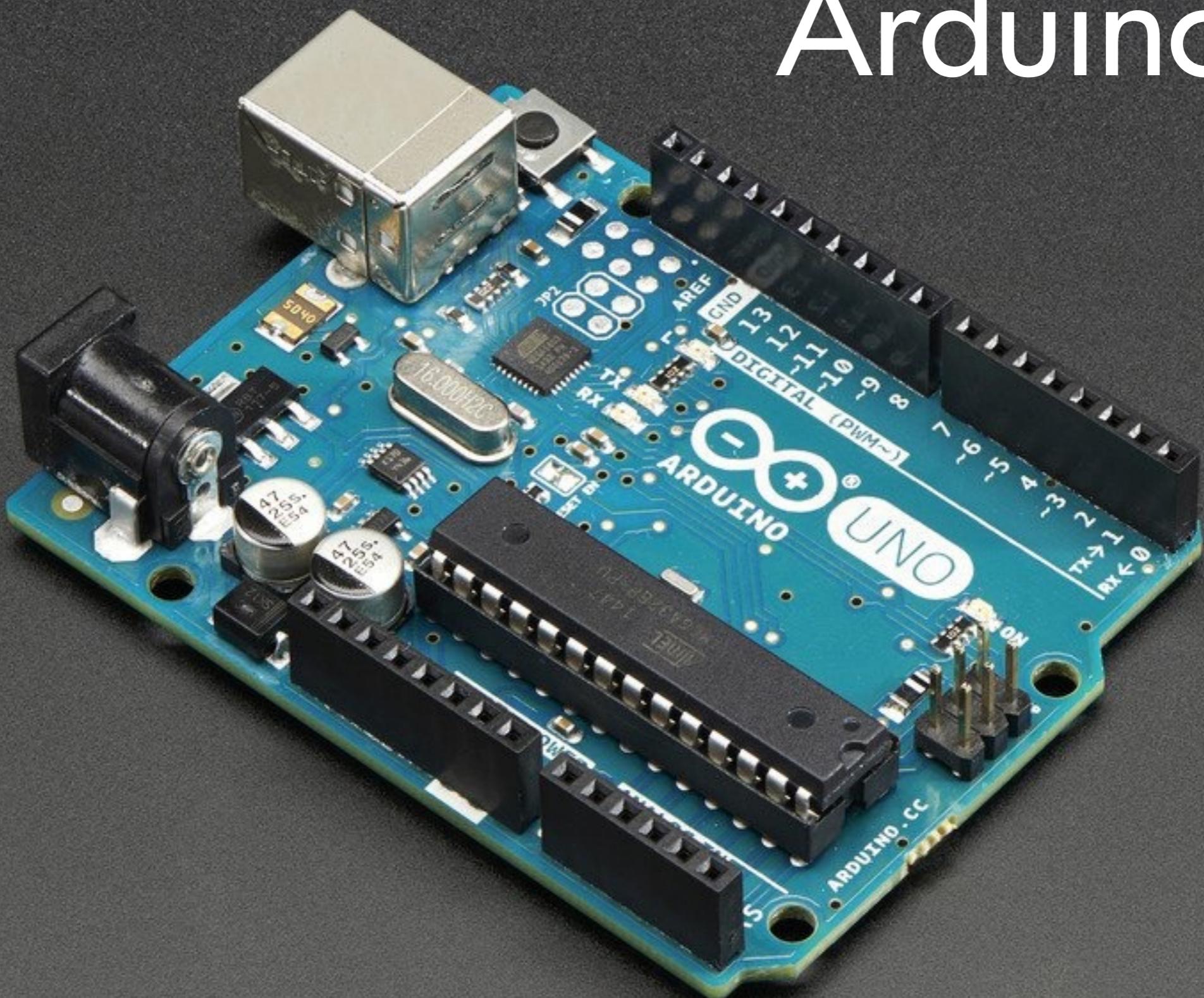




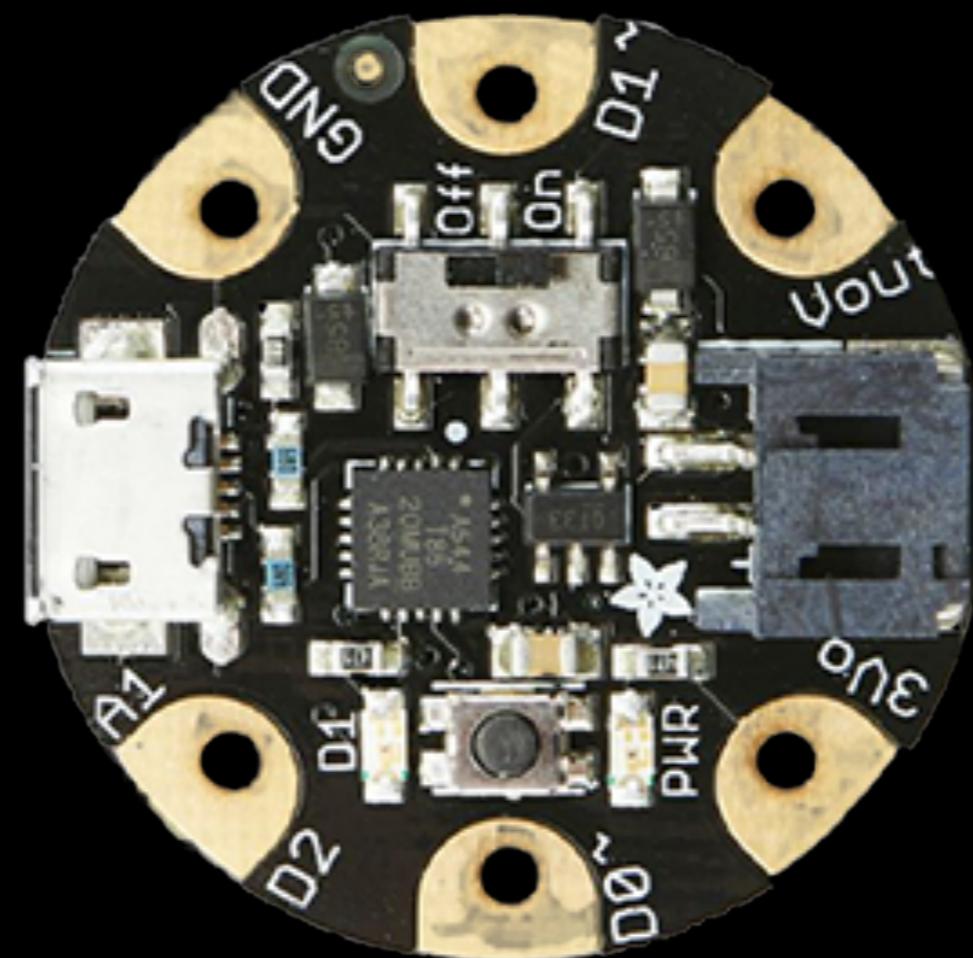
# Piezo

# Microcontroller

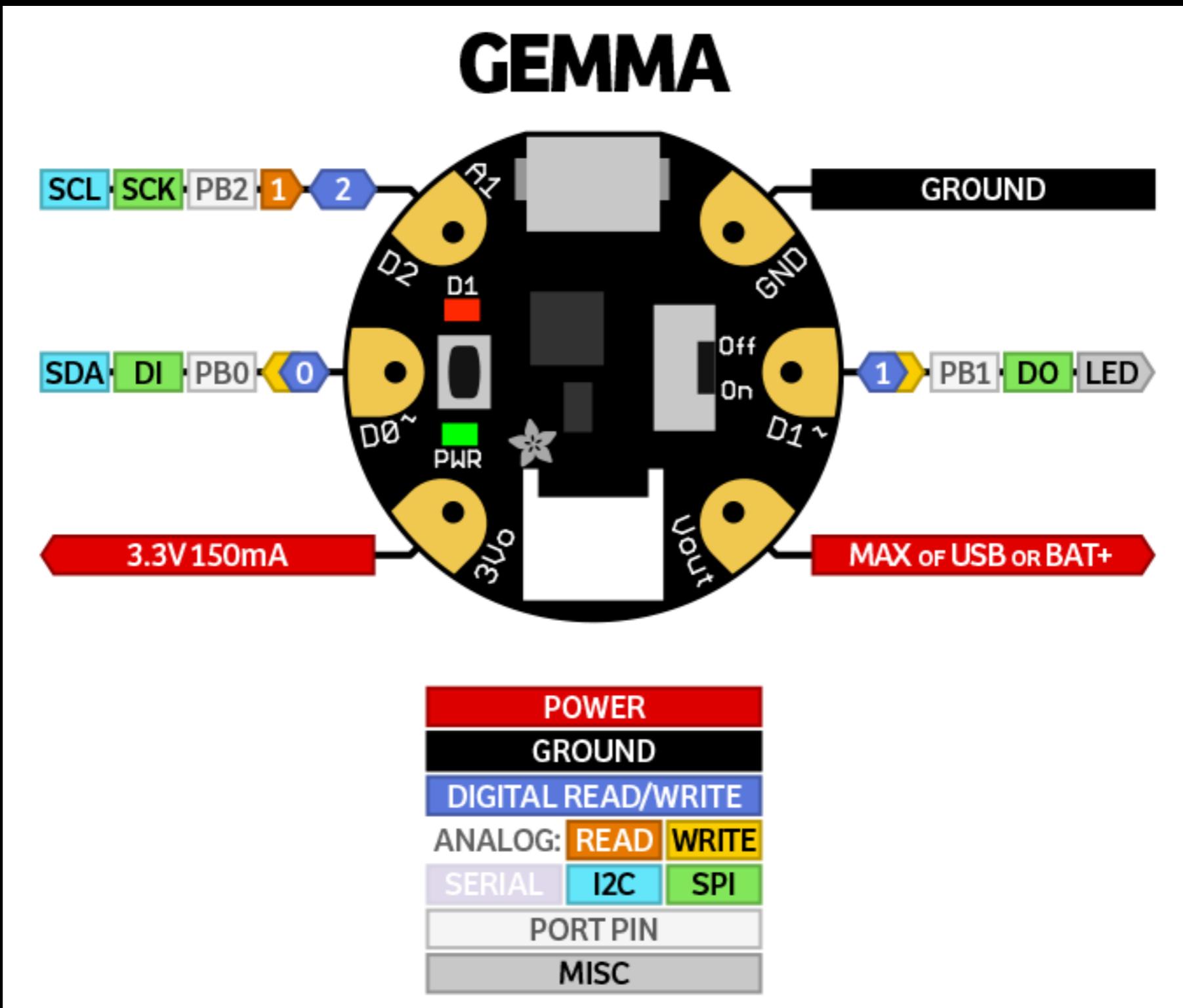
# Arduino



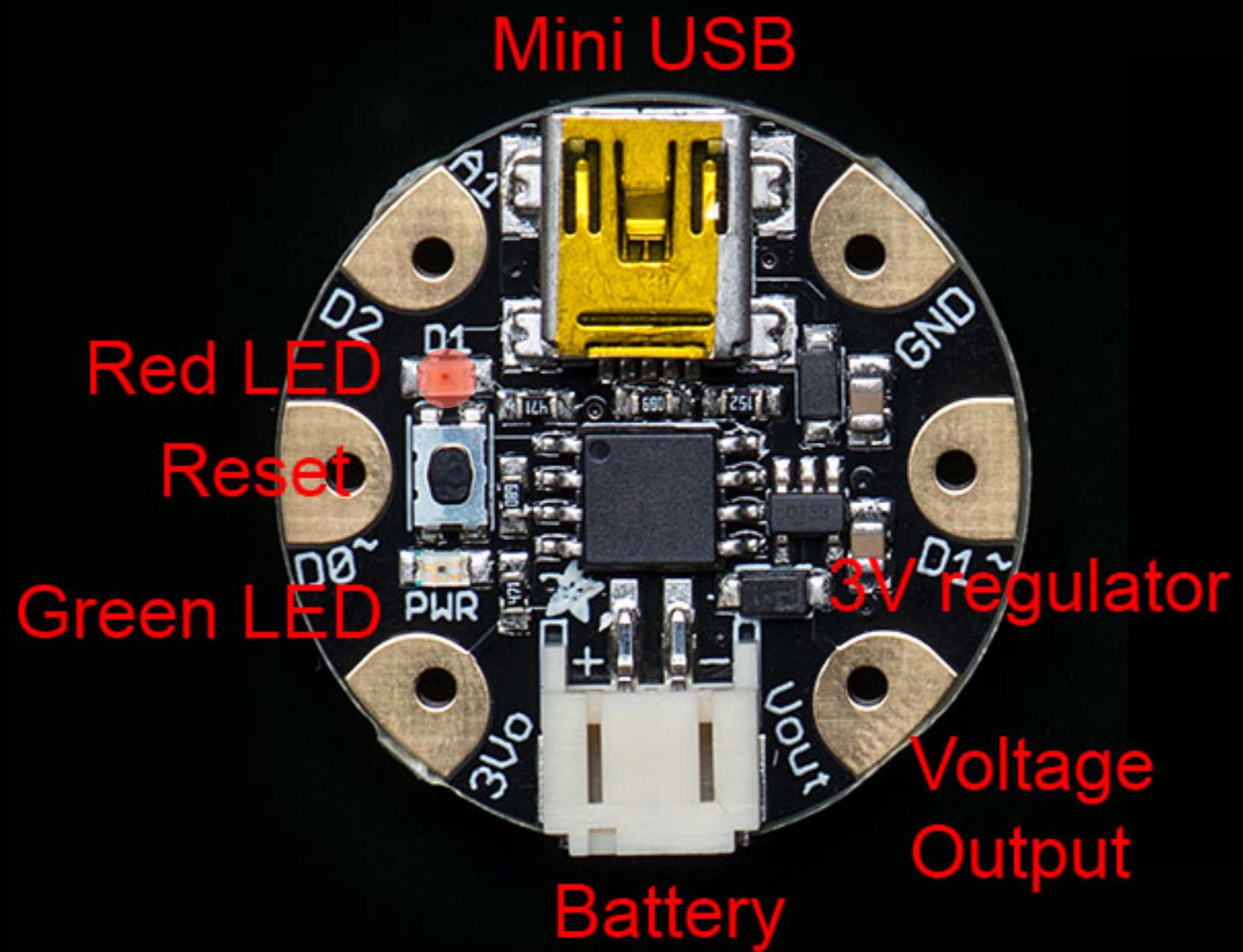
# Gemma



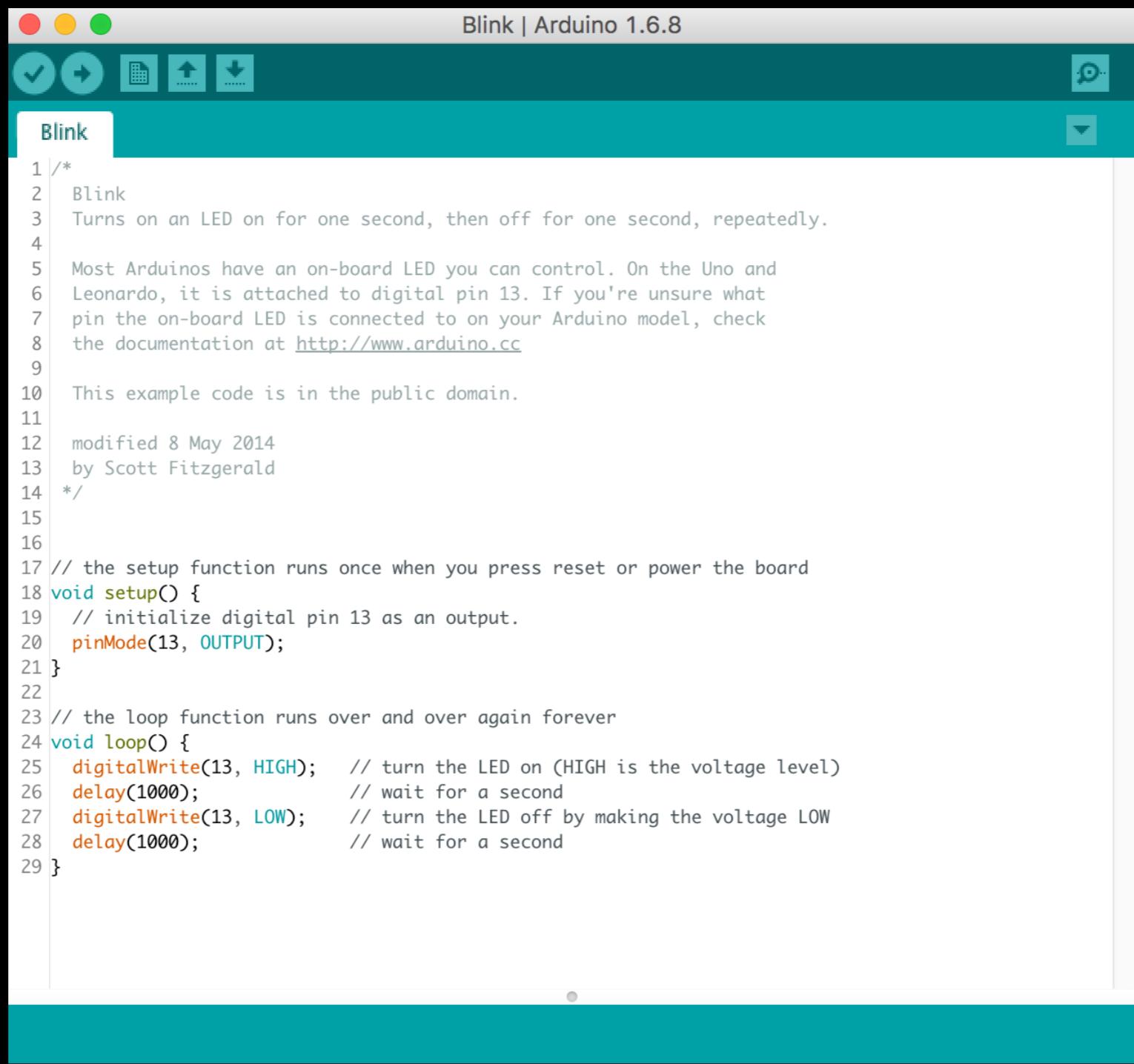
# Pinouts



# Bootloader



# Arduino IDE



The screenshot shows the Arduino IDE interface with the title bar "Blink | Arduino 1.6.8". The main window displays the "Blink" example sketch. The code is as follows:

```
1 /*
2  * Blink
3  * Turns on an LED on for one second, then off for one second, repeatedly.
4  *
5  * Most Arduinos have an on-board LED you can control. On the Uno and
6  * Leonardo, it is attached to digital pin 13. If you're unsure what
7  * pin the on-board LED is connected to on your Arduino model, check
8  * the documentation at http://www.arduino.cc
9  *
10 * This example code is in the public domain.
11 *
12 * modified 8 May 2014
13 * by Scott Fitzgerald
14 */
15
16
17 // the setup function runs once when you press reset or power the board
18 void setup() {
19     // initialize digital pin 13 as an output.
20     pinMode(13, OUTPUT);
21 }
22
23 // the loop function runs over and over again forever
24 void loop() {
25     digitalWrite(13, HIGH);    // turn the LED on (HIGH is the voltage level)
26     delay(1000);              // wait for a second
27     digitalWrite(13, LOW);     // turn the LED off by making the voltage LOW
28     delay(1000);              // wait for a second
29 }
```

# Software Links

- **Windows:** <https://s3.amazonaws.com/adafruit-download/adafruit-arduino-1.6.4-windows.zip>
- **Mac OS X:** <https://s3.amazonaws.com/adafruit-download/adafruit-arduino-1.6.4-macosx.zip>
- **Linux:** <https://s3.amazonaws.com/adafruit-download/adafruit-arduino-1.6.4-linux32.tar.xz>

# Windows Driver

[https://github.com/adafruit/Adafruit\\_Windows\\_Drivers/  
releases/download/1.0.0.0/adafruit\\_drivers.exe](https://github.com/adafruit/Adafruit_Windows_Drivers/releases/download/1.0.0.0/adafruit_drivers.exe)

# Examples

# Resources

- <http://www.kobakant.at/DIY/>
- <https://learn.adafruit.com/category/flora>
- <https://learn.sparkfun.com/tutorials/tags/wearables?page=all>

# Questions?

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