

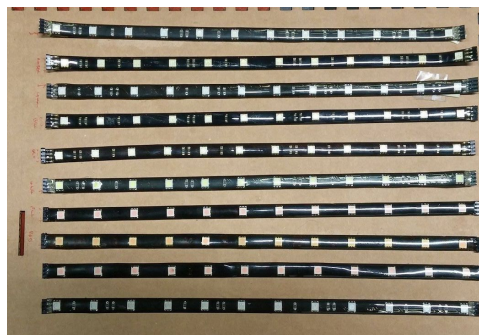
Illuminator

Materials:

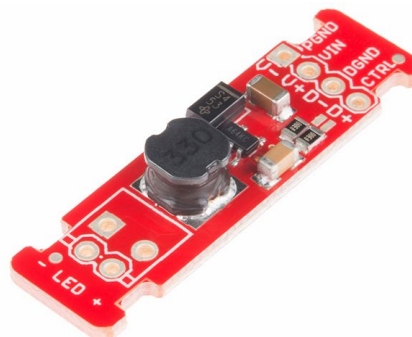
- Arduino Micro
<https://www.arduino.cc/en/Main/arduinoBoardMicro>



- LED strips (Red, Green, Blue, UV, Amber, Pink, Yellow)



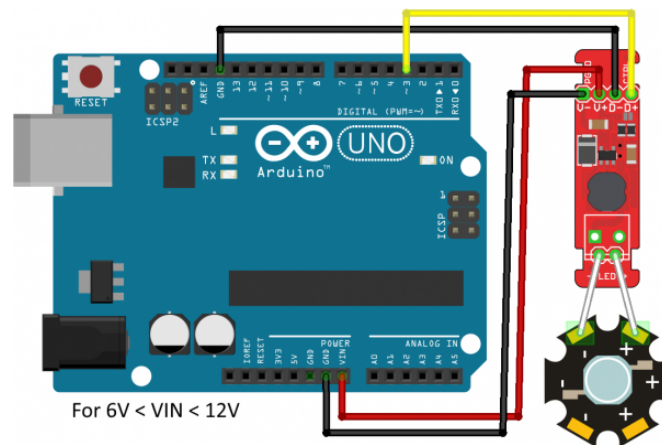
- LED Driver
<https://www.sparkfun.com/products/13716>



- Wires
- A power supply of at least 12V

Simple LED TEST

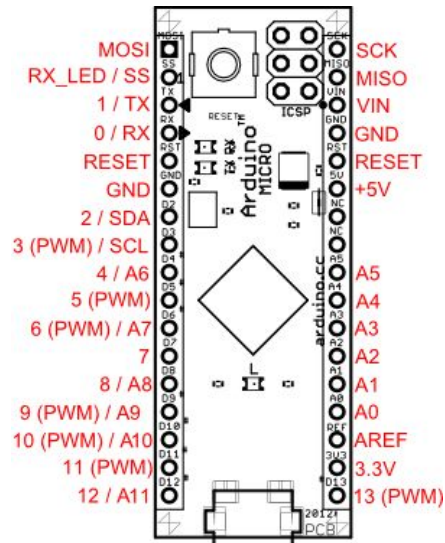
1. Connect one LED driver to both the arduino board and an LED strip and test.



LED Control input can be any Analog Pin or PWM Pin.

Analog Pin: A0 - A11

<https://www.arduino.cc/en/Tutorial/AnalogInputPins>

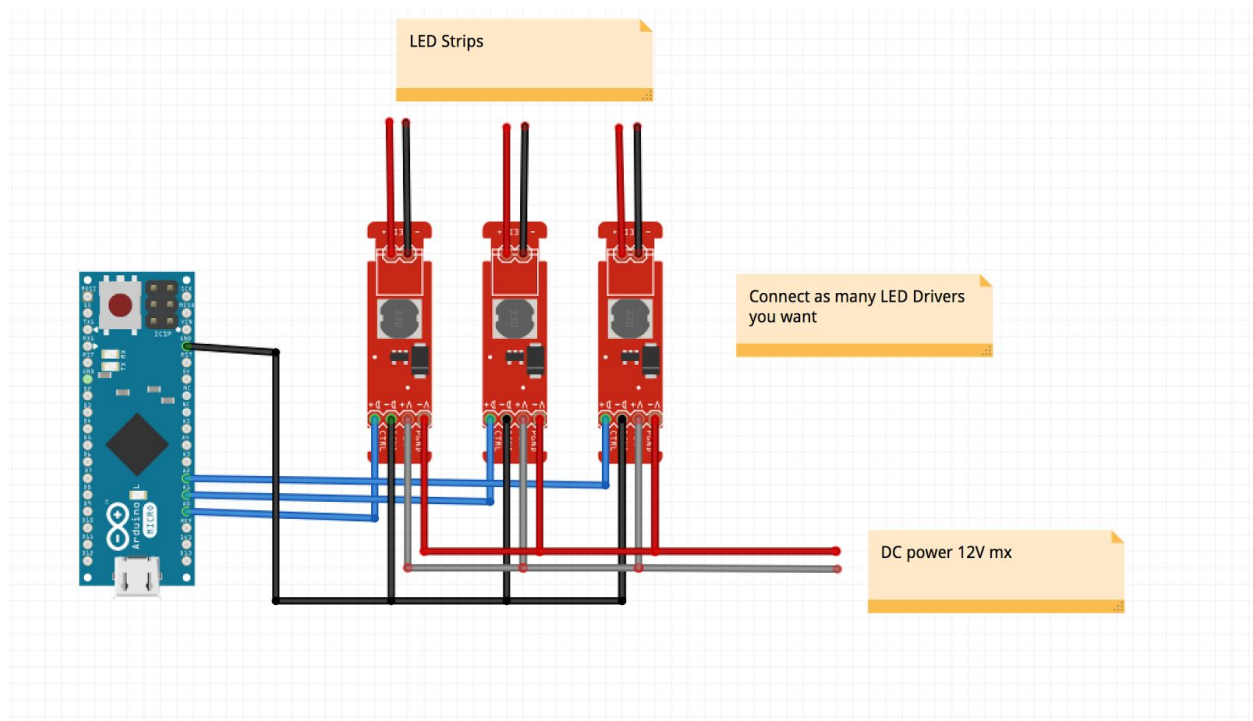


PWM Pins

<https://www.arduino.cc/en/Tutorial/PWM>

Use Code **LEDDriver** or **SimpleLEDDriver**

Connect more than one LED Driver



2. Expand similarly to 5-7 strips instead of just one.
3. Use code **MultipleLEDDriver** to test the connections

Build Box

3 layer cardboard boxes

- 2 double layer
- 2 single layers

Control Illuminator from Python

1. Upload the serial communication Arduino code to the Arduino Micro
SerialPython
2. Open the python code from the Illuminator folder of the dropbox.
(Dropbox → ASU Course → Hardware → Illuminator → Python → Serial.ipynb)
3. Install Serial for Python with
pip install pySerial