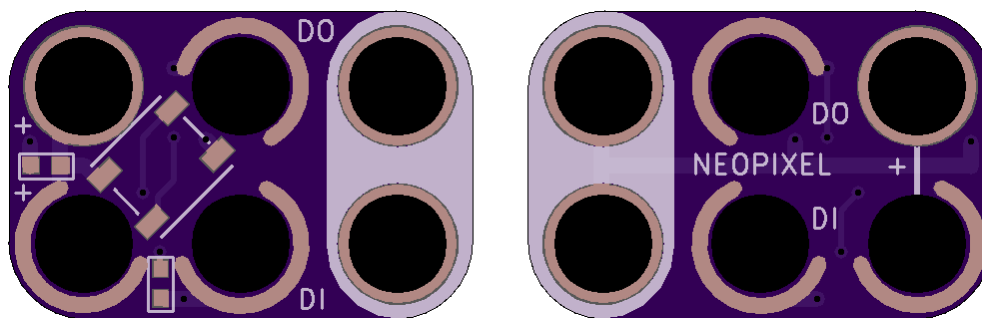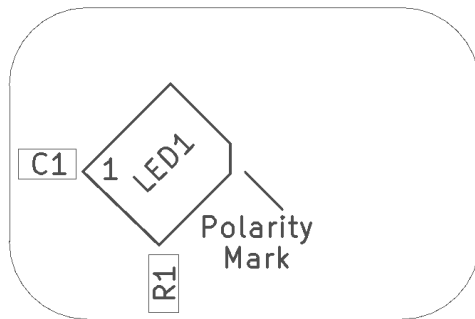# 2x3 LED RGB Neopixel Module v1.1
A Lego-compatible Crazy Circuits module

The WS2812B Neopixel is an RGB LED that's addressable using the Adafruit Neopixel library for Arduino. Neopixels can be chained together by connecting the DOUT pin of one Neopixel to the DIN pin of the next Neopixel.
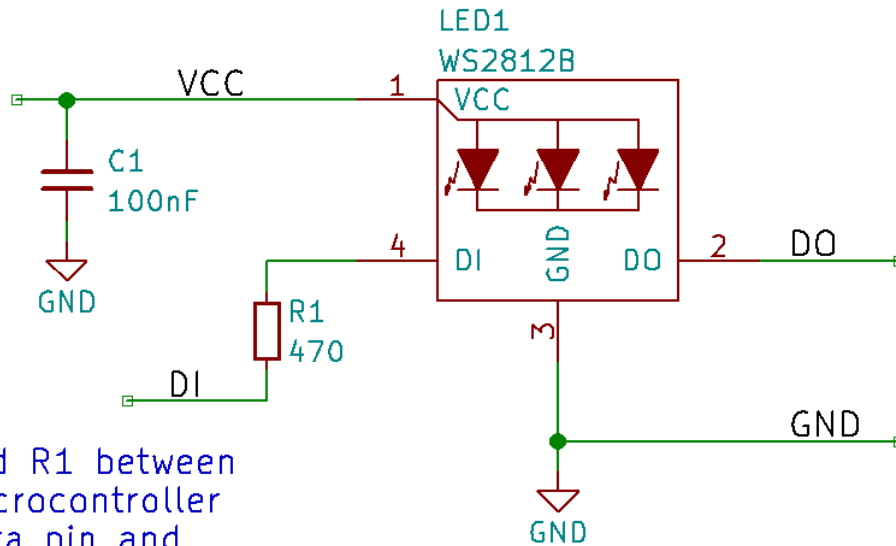
An onboard 0.1uF capacitor protects the Neopixel from the controller and the 470-ohm resistor on DIN helps the microcontroller talk reliably to the Neopixel.

Bill of Materials

Ref	Qty	Description	Digikey PN
C1	1	CAP CER 0.1UF 100V X7R 0603	490-3285-1-ND
LED1	1	LED RGB WS2812B W/DVR 4SMD	1528-1104-ND
R1	1	RES SMD 470 OHM 5% 1/4W 0603	RHM470DCT-ND

Strongly recommended to place
a 100nF capacitor between VCC
and GND between micro and pixels.

LED1
WS2812B

VCC

C1
100nF

GND

DI

VCC

1

4   DI   GND   DO   2   DO

R1
470

3

GND

GND

DO

GND

Add R1 between
microcontroller
data pin and
Neopixel data input to
prevent voltage spikes.