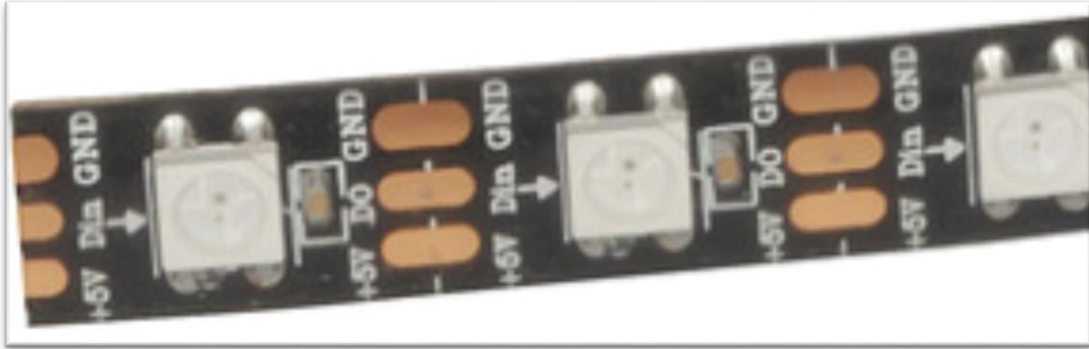


RGB LED Strip

2m RGB "Neopixel" LED strip.

This strip contains 120 individually addressable WS2812B RGB LEDs which can be activated using the neopixel protocol.

Hardware



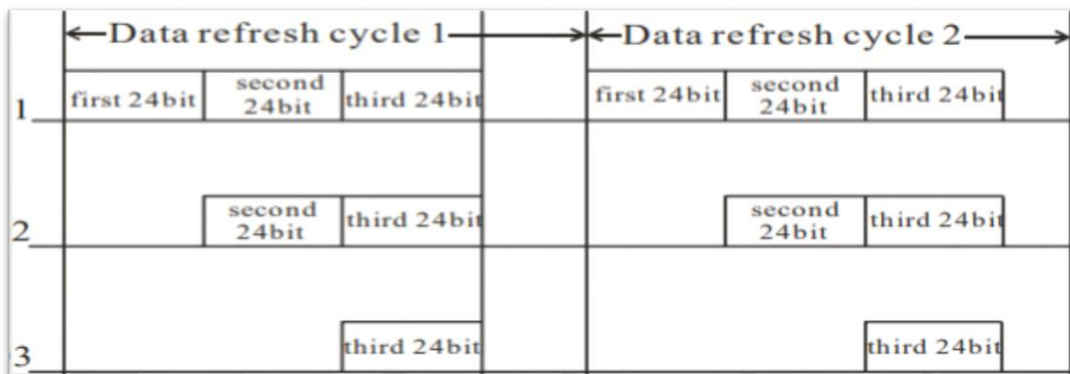
Looking at the end of the strip, you can find 3 connections: 5V, DIN, and GND. These are connected as follows:

LED Strip UNO

5V	5V
DIN	(any PWM pin) such as pin 6
GND	GND

Furthermore, the LED strip can be cut and re-attached at lengths, via cutting through any of the vertical lines that cross over the pads which separate DO to DIN. The strip operates on the principle of the "Data Out" of one strip goes into the "Data In" of the next strip, and the microcontroller provides the initial "Data In".

The following is from the WS2812B datasheet, which can be found on through the internet. For a simple strip of 3 lights, the first LED gets 3x RGB data, which it will "consume" the first bunch, and "pass on" the remaining 2. Then, the second LED will receive 2x RGB data, consume one, and pass on the remainder. This is all managed by the neopixel library.



Australia
www.jaycar.com.au
techstore@jaycar.com.au
 1800 022 888

New Zealand
www.jaycar.co.nz
techstore@jaycar.co.nz
 0800 452 922



RGB LED Strip

Software setup

To set up this strip using the arduino ecosystem, you must install the “NeoPixel” library by Adafruit:

Adafruit NeoPixel by Adafruit Version 1.6.0 **INSTALLED**
Arduino library for controlling single-wire-based LED pixels and strip. Arduino IDE and strip.
[More info](#)

The following code presumes that you have the first DIN pin connected to pin 6 on the Arduino.

```
#include <Adafruit_NeoPixel.h>
#define LED_PIN 6
#define LED_COUNT 120
Adafruit_NeoPixel strip(LED_COUNT, LED_PIN, NEO_GRB + NEO_KHZ800);

void setup() {
  strip.begin(); //always needed
  strip.show(); // 0 data => off.
  strip.setBrightness(50); // ~20% (max = 255)
}
void loop() {
  int n = strip.numPixels();
  // fph = FirstPixelHue
  for (long fph = 0; fph < 5 * 65536; fph += 256)
  {
    for (int i = 0; i < n; i++)
    {
      int pixelHue = fph + (i * 65536 / n);
      strip.setPixelColor(i,
        strip.gamma32(strip.ColorHSV(pixelHue))
      );
    }
    strip.show();
    delay(10);
  }
}
```

Australia
www.jaycar.com.au
techstore@jaycar.com.au
1800 022 888

New Zealand
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techstore@jaycar.co.nz
0800 452 922

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