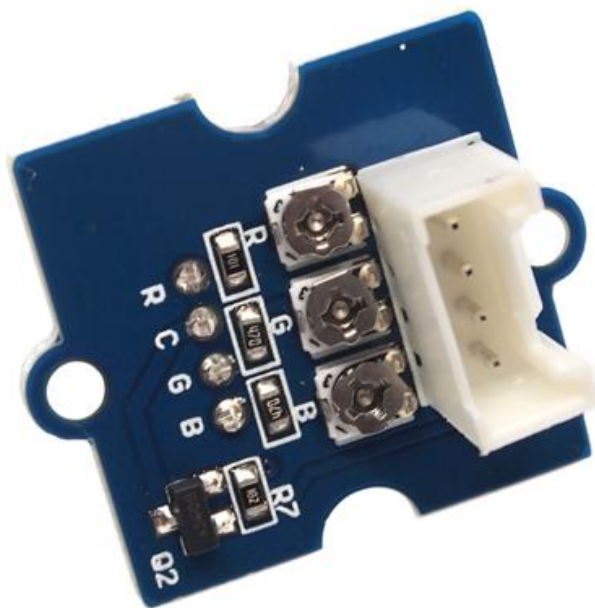# Grove - Variable Color LED

This Grove consists of one 8mm RGB LED. It operates at 5V DC. When SIG pin is logic HIGH, the RGB LED will light up. Perfect for use on Seeeduino digital outputs, or also can be controlled by pulse-width modulation. And it uses three adjustable resistor to change the color of the RGB LED.

Get One Now 🛒

[https://www.seeedstudio.com/Grove-Variable-Color-LED-p-852.html]

Features

- Grove compatible

- Color adjustable

> 🔥 **Tip**
> More details about Grove modules please refer to Grove System [https://wiki.seeedstudio.com/Grove_System/]

Application Ideas

- Toys

- Decoration

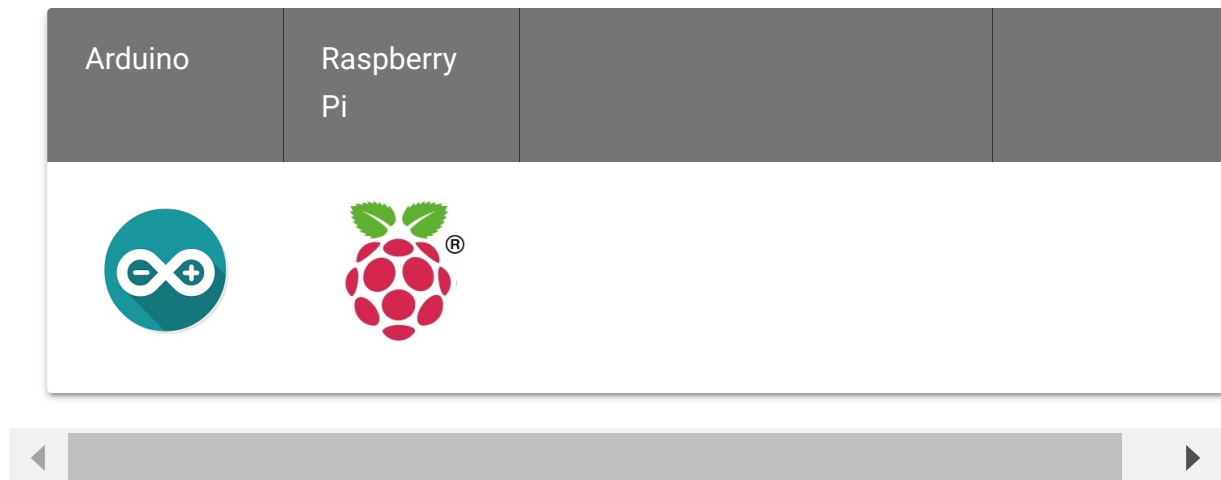> ⚡ **Caution**
> Be gentle while adjusting the R, G and B adjustable resistances in case of over-turning.

Specifications

Item	Typical	Unit
Operate Voltage	5.0	VDC
Working Current	20	mA
Variable Resistor	<1	KΩ

Platforms Supported

| Arduino	Raspberry Pi		

> ⚠ **Caution**
>
> The platforms mentioned above as supported is/are an indication of the module's software or theoritical compatibility. We only provide software library or code examples for Arduino platform in most cases. It is not possible to provide software library / demo code for all possible MCU platforms. Hence, users have to write their own software library.

Usage

The three resistances RED, GREEN and BLUE of the module control the R, G and B channels respectively. By adjusting the three adjustable resistances, it can turn out variable color. The thing to notice, however, is that be gentle when turning the adjustable resistances.

The following sketch demonstrates a simple application of controlling its brightness. As the picture on the below indicates, the Variable Color LED is connected to digital port 9 of the Grove - Base Shield [/Base_Shield_V2]. The hardware installation is as follows:
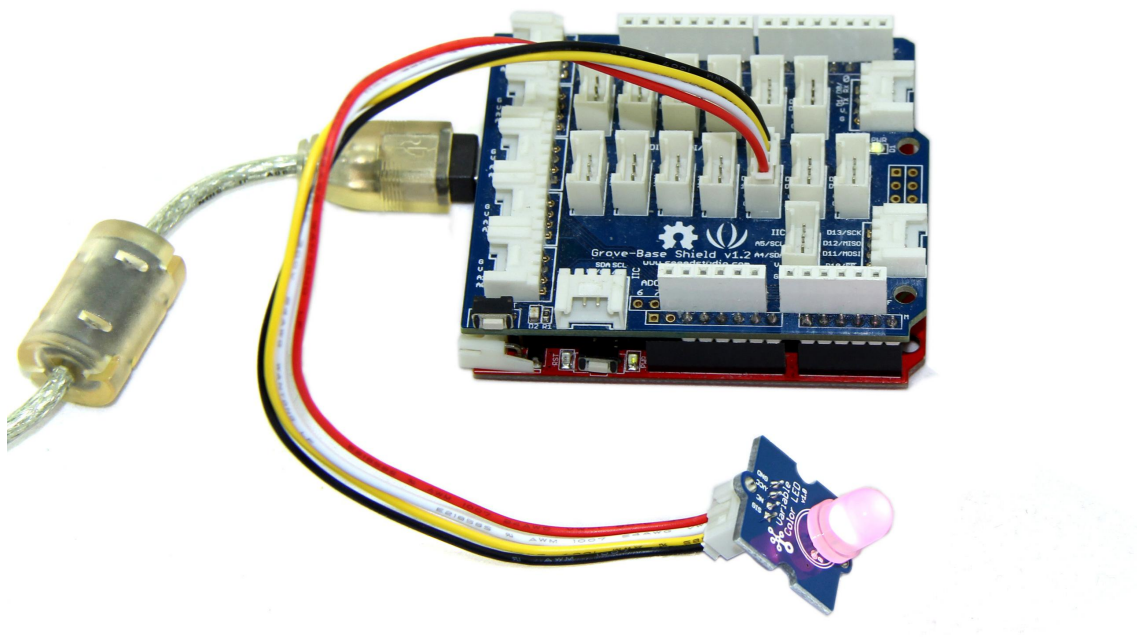
- Copy and paste code below to a new Arduino sketch.

Demo code like:

```
int ledPin = 9;     // LED connected to digital pin 9

void setup() {
```

```
4        // nothing happens in setup
5    }

6

7    void loop()  {
8        // fade in from min to max in increments of 5 points
9        for(int fadeValue = 0?; fadeValue <= 255; fadeValue
10            // sets the value (range from 0 to 255):
11            analogWrite(ledPin, fadeValue);
12            // wait for 30 milliseconds to see the dimming e
13            delay(30);
14        }

15

16        // fade out from max to min in increments of 5 point
17        for(int fadeValue = 255?; fadeValue >= 0; fadeValue
18            // sets the value (range from 0 to 255):
19            analogWrite(ledPin, fadeValue);
20            // wait for 30 milliseconds to see the dimming e
21            delay(30);
22        }
23    }
```

- Upload the code.Adjust the three adjustable resistances, I am sure you will like it. Have a try!

Schematic Online Viewer

Resources

- Variable Color LED eagle_file
  [https://files.seeedstudio.com/wiki/Grove-Variable_Color_LED/res/Variable_Color_LED_eagle_file.zip]

Tech Support

Please submit any technical issue into our forum
[https://forum.seeedstudio.com/].

[https://www.seeedstudio.com/act-4.html?
utm_source=wiki&utm_medium=wikibanner&utm_campaign=newpr
oducts]