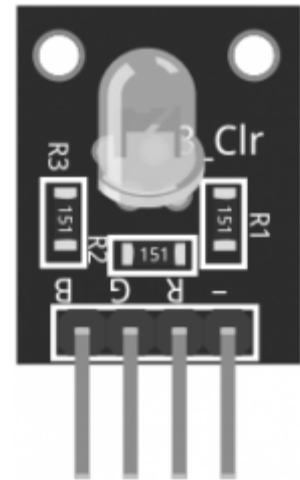# RGB LED Module

RGB full color LED Module for Arduino emits a range of colors by mixing red, green and blue. The amount of each primary color is adjusted using PWM.

This module consists of a 5mm RGB LED and three 150Ω limiting resistors to prevent burnout. Adjusting the PWM signal on each color pin will result on different colors.

Operating Voltage	5V
LED drive mode	Common cathode
LED diameter	5 mm
Operating Voltage	5V

Pinout and Connection to Arduino

Connect the red pin (R) on the KY-016 to pin 11 on the Arduino. Blue (B) to pin 10, green (G) to pin 9 and ground (-) to GND. Notice that you do not need to use limiting resistors since they are already included on the board.

Module	Arduino	KY-016
R	Pin 11	R
B	Pin 10	B
G	Pin 9	G
-	GND	-
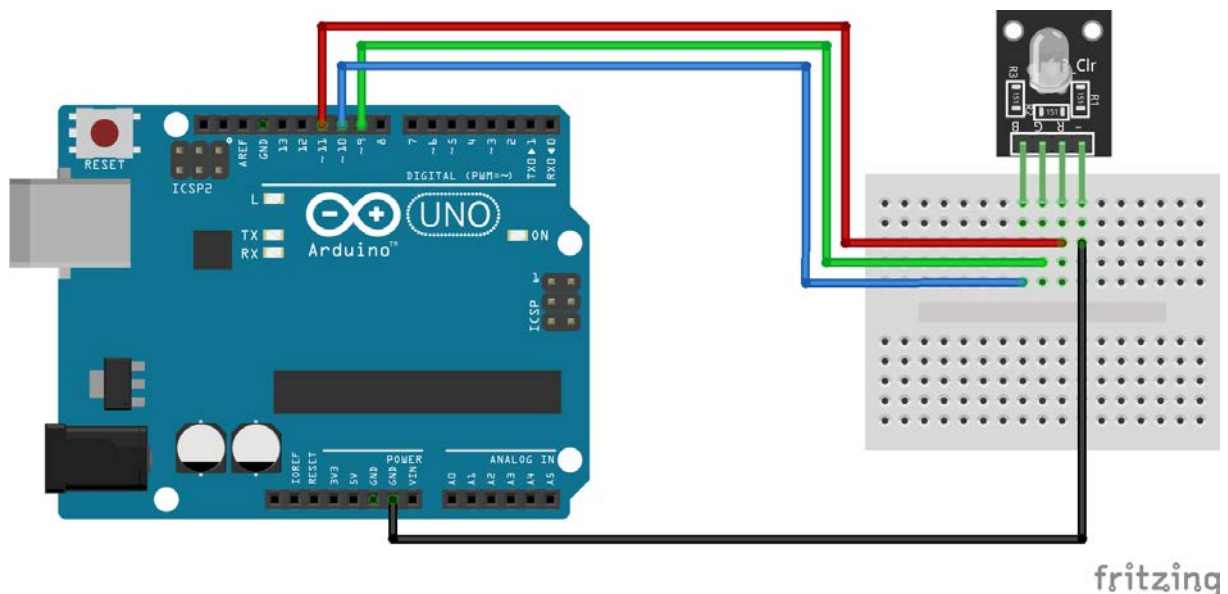
Arduino Example Sketch

The following Arduino sketch will cycle through various colors by changing the PWM value on each of the three primary colors.

```arduino
int redpin = 11; //select the pin for the red LED
int bluepin =10; // select the pin for the  blue LED
int greenpin = 9;// select the pin for the green LED

int val;

void setup() {
  pinMode(redpin, OUTPUT);
  pinMode(bluepin, OUTPUT);
  pinMode(greenpin, OUTPUT);
  Serial.begin(9600);
}

void loop()
{
  for(val = 255; val > 0; val--)
  {
    analogWrite(redpin, val);  //set PWM value for red
    analogWrite(bluepin, 255 - val); //set PWM value for blue
    analogWrite(greenpin, 128 - val); //set PWM value for green
    Serial.println(val); //print current value
    delay(1);
  }
  for(val = 0; val < 255; val++)
  {
    analogWrite(redpin, val);
    analogWrite(bluepin, 255 - val);
    analogWrite(greenpin, 128 - val);
    Serial.println(val);
    delay(5);
  }
}
```