

RGB MODULE

The KY-016 Full Color RGB LED emits a wide range of different colors by mixing red, green and blue light. Compatible with many popular microcontrollers like Arduino, Raspberry Pi and ESP32.



SPECIFICATIONS:

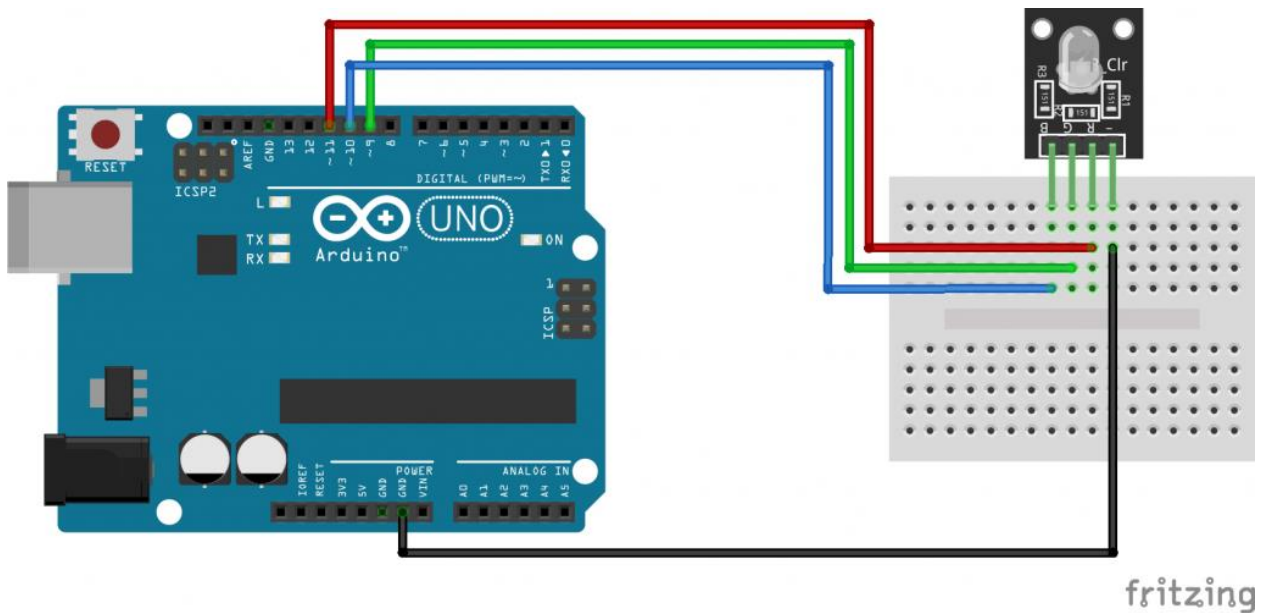
This module consists of a 5mm RGB LED, 3 150 Ω limiting resistors to prevent burnout and 4 male header pins. Adjusting the PWM signal on each color pin will result on different colors.

Operating Voltage	5V
LED Drive Mode	Common cathode drive
LED Diameter	5mm
Board Size	15mm x 19mm [0.59in x 0.75in]

CONNECTION DIAGRAM:

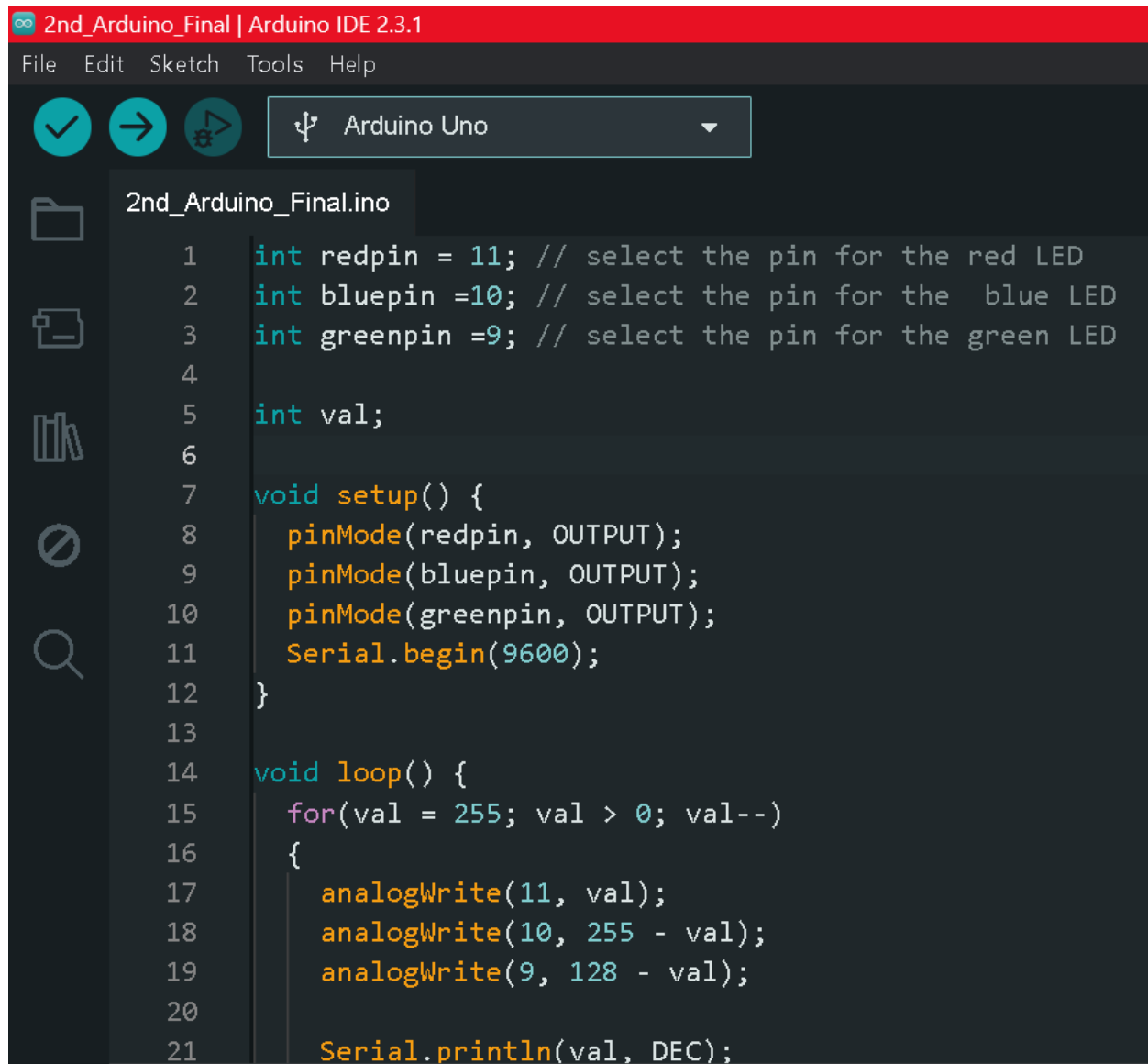
Connect the module red pin (R) to pin 11 on the Arduino. Blue (B) to pin 10, green (G) to pin 9 and ground (-) to GND.

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



ARDUINO CODE:

The following Arduino sketch will gradually increase/decrease the PWM values on the red, green and blue pins causing the LED to cycle through various colors.



```
2nd_Arduino_Final | Arduino IDE 2.3.1
File Edit Sketch Tools Help

2nd_Arduino_Final.ino
1  int redpin = 11; // select the pin for the red LED
2  int bluepin =10; // select the pin for the  blue LED
3  int greenpin =9; // select the pin for the green LED
4
5  int val;
6
7  void setup() {
8      pinMode(redpin, OUTPUT);
9      pinMode(bluepin, OUTPUT);
10     pinMode(greenpin, OUTPUT);
11     Serial.begin(9600);
12 }
13
14 void loop() {
15     for(val = 255; val > 0; val--)
16     {
17         analogWrite(11, val);
18         analogWrite(10, 255 - val);
19         analogWrite(9, 128 - val);
20
21     Serial.println(val, DEC);
```



Arduino Uno



2nd_Arduino_Final.ino



```
14 void loop() {
15     for(val = 255; val > 0; val--)
16     {
17         analogWrite(11, val);
18         analogWrite(10, 255 - val);
19         analogWrite(9, 128 - val);
20
21         Serial.println(val, DEC);
22         delay(5);
23     }
24     for(val = 0; val < 255; val++)
25     {
26         analogWrite(11, val);
27         analogWrite(10, 255 - val);
28         analogWrite(9, 128 - val);
29
30         Serial.println(val, DEC);
31         delay(5);
32     }
33 }
```

REFERENCE:

<https://arduinomodules.info/ky-016-rgb-full-color-led-module/>