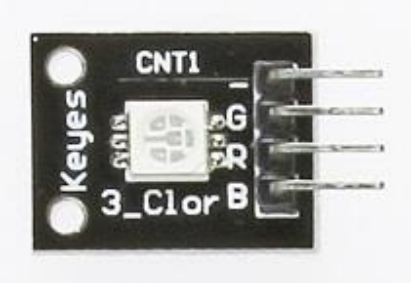
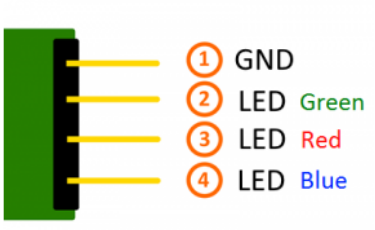
KY-009 RGB COLOR LED SMD MODULE

Vysoce svítivá SMD RGB led dioda.

- RGB LED s pouzdrem SMD
- LED dioda má společnou katodu ('-' Pin)
- **Není zapojen ochranný sériový odpor!!!** Doporučená hodnota 220 ohmů.
- Tiskový PCB je nesprávné, jej ukazuje, zelené a červené přípojky zapnutý.



Pinout



Specifikace:

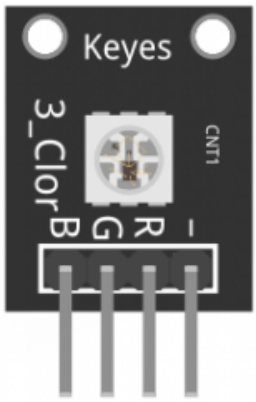
- Typ LED: 5050
- Integrované ochranné rezistory
- Pracovní napětí: 5V
- Rozměry: 20x10x7 mm
- LED Drive Mode: Sdílená katoda
- Řídí pomocí PWM
-
- Color: red, green and blue
- Brightness: High
- Voltage: 5V
- Input: digital level
- Size: 30 * 20mm
- Weight: 3g

Parametry produktu:

Kompatibilní s různými mikroprocesory
Max. proud: 20 mA
Úbytek napětí (červená): 1,78 V
Úbytek napětí (zelená): 2,38 V
Úbytek napětí (modrá): 2,59 V
Rozměry: 20 x 10 x 7 mm
Typ LED: 5050
Typ zapojení: se společnou katodou

KY-009 Description

RGB full color LED Module KY-009 for Arduino, emits a range of colors by mixing red, green and blue. The amount of each primary color is adjusted using PWM.



KY-009 Specifications

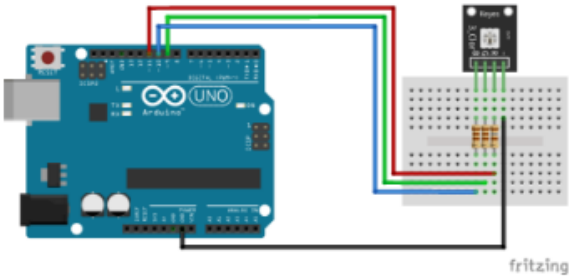
The KY-009 RGB Full Color LED SMD Module consists of a 5050 SMD LED, use with limiting resistors to prevent burnout. Compatible with popular electronics platforms like Arduino, Raspberry Pi and ESP8266.

Operating Voltage	5V max Red 1.8V ~2.4V Green 2.8V ~ 3.6V Blue 2.8V ~ 3.6V
Forward Current	20mA ~ 30mA
Operating Temperature	-25°C to 85°C [-13°F ~ 185°F]
Dimensions	18.5mm x 15mm [0.728in x 0.591in]

KY-009 Connection Diagram

You need to use resistors to prevent burnout, check the 5050 LED SMD Datasheet on the downloads section for more info.

KY-009	Breadboard	Arduino
R	180Ω resistor	Pin 9
G	110Ω resistor	Pin 10
B	110Ω resistor	Pin 11
-	GND	GND



click to enlarge

KY-009 Example Code

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

```
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(1);
  }
}

```

Zdroje:

http://sensorkit.en.joy-it.net/index.php?title=KY-009_RGB_LED_SMD_module
http://arduinomodules.info/ky-009-rgb-full-color-led-smd-module/
http://www.adrirobot.it/sensori/37_in_1/KY-009-RGB-full-color-LED-SMD-module/37_in_1-KY-009-RGB-full-color-LED-SMD-module.htm
https://www.aliexpress.com/store/product/KEYES-KY-009-RGB-3-Color-Full-Color-LED-SMD-Module-For-Arduino-AVR-PIC-Free/1185416_32271687442.html
https://arduino-shop.cz/arduino/1404-ky-009-5050-rgb-smd-led-modul-pro-arduino-a-dalsi-1474447748.html
http://www.hwpro.cz/oc/index.php?route=product/product&product_id=191
https://tkkrlab.nl/wiki/Arduino_KY-009_3-color_full-color_LED_SMD_modules
https://www.youtube.com/watch?v=pXnUGB2wM0Y