Product Manual

BI-COLOR LED PLUG

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Index

Introduction 2
Specification 2
Variants 2
Supported cables: 3
Details 3
How to interface? 4
Example Codes 7
  Arduino 7
Introduction

Bi-color LED is a handy little component that emits two colors RED & GREEN and is available in a single LED package. Bi-color LED plug has a bi-color LED with two current limiting resistors which can be used as indicator in various projects. This PCB design enables you to bend the Bi-color LED to any position as per the user’s need and also this plug can be mounted anywhere using screws.

Specification

- Operating voltage: 5V
- Size: 20mm x 15mm

Variants

- None
Supported cables:

- 4-4 A

Details

Bi-color LED plug is a digital output device. It has a interfacing port with four pins denoted as G, V, D1 and D2. Here G represents Ground, V represents VCC and D1 and D2 represents Data pin1 & Data pin2 respectively, through which Bi-color LED can be controlled. Red color is controlled by controlling the voltage at the data pin 1 (D1). Similarly Green color is controlled by data pin 2(D2).

<table>
<thead>
<tr>
<th>State of D1 pin on the Bi-color LED PLUG</th>
<th>State of D2 pin on the Bi-color LED PLUG</th>
<th>Bi-color LED plug response</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>LOW</td>
<td>RED</td>
</tr>
<tr>
<td>LOW</td>
<td>HIGH</td>
<td>GREEN</td>
</tr>
<tr>
<td>HIGH</td>
<td>HIGH</td>
<td>ORANGE</td>
</tr>
</tbody>
</table>
### How to interface?

Always use 4-4A cable to interface Bi-color LED plug with the controller board. While connecting make sure that the black wire of the cable is connected to the G pin on both sides.

In the below given pictures one can see 4-4A cable is used to connect Bi-color LED plug to the Pluguino Board. The data pin 1 (D1) & data pin 2 (D2) of the Bi-color LED plug are connected to the GPIO pins 11 & 12 respectively on the controller board. By controlling the voltage at the 11th and 12th GPIO pin of the controller board one can control the Red and Green LEDs respectively.
In this example, we are going to demonstrate the working of the Bi-color LED plug. Initially Red color LED blink once with the delay of one second and after that Green color LED blink once with the delay of one second and finally both Red and Green color blink simultaneously with the delay of one second.
# Example Codes

## Code 1: Arduino

Objective: Red color LED turns ON for one second followed by Green color for one second and finally both Red and Green color turn ON simultaneously for one second.

```c
#define RED_LED 11
#define GREEN_LED 12

void setup()
{
  pinMode(RED_LED, OUTPUT);
  pinMode(GREEN_LED, OUTPUT);
}

void loop()
{
  digitalWrite(RED_LED, HIGH);
  delay(1000);
  digitalWrite(RED_LED, LOW);
  delay(1000);
  digitalWrite(GREEN_LED, HIGH);
  delay(1000);
  digitalWrite(GREEN_LED, LOW);
  delay(1000);
  digitalWrite(RED_LED, HIGH);
  digitalWrite(GREEN_LED, HIGH);
  delay(1000);
  digitalWrite(RED_LED, LOW);
  digitalWrite(GREEN_LED, LOW);
  delay(1000);
}
```

Output video: [https://youtu.be/anmHrSQjiuk](https://youtu.be/anmHrSQjiuk)
Contributors

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