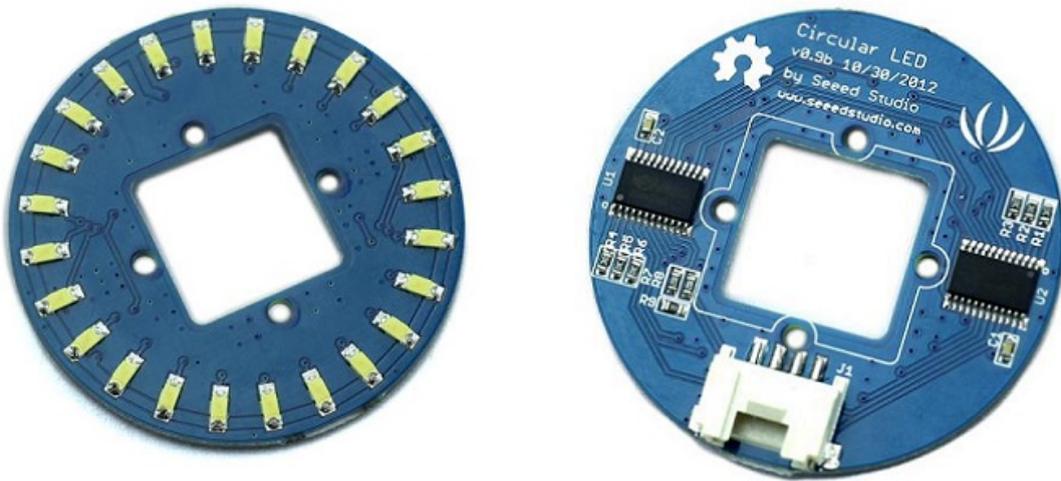


## Grove - Circular LED



This is a unique ring– it has a flroid body with 24 controllable LEDs. Maybe it will drive the inspiration out of you to make a glowing magic ring! There is a 1\*1 square hollow-out in the middle of this module, where you can place a Grove Encoder in and make it a rotary visual encoder!

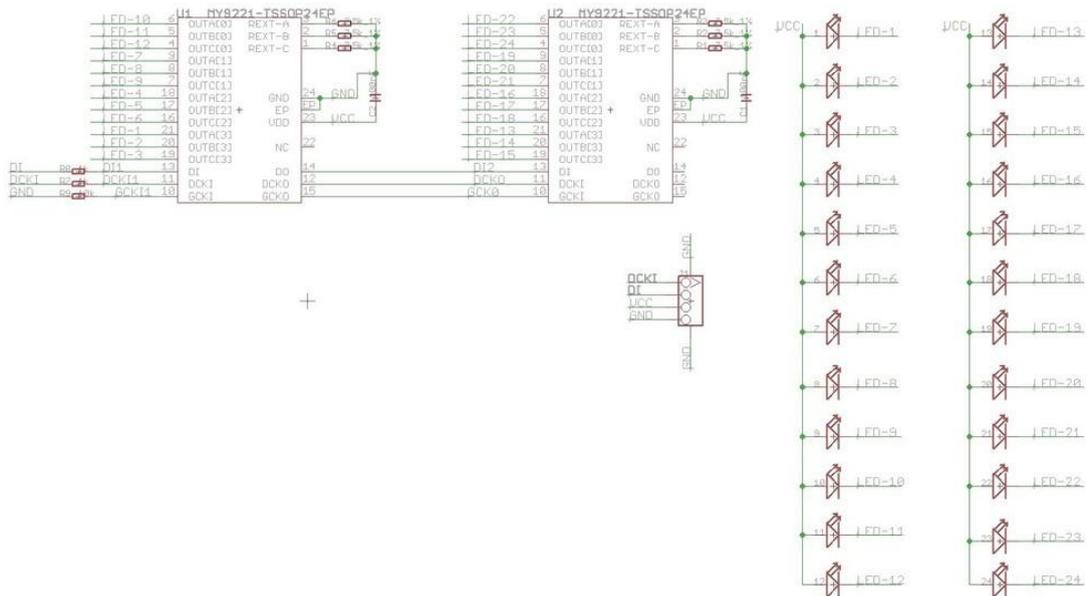
[Get One Now](#) 

[<https://www.seeedstudio.com/Grove-Circular-LED-p-1353.html>]

# Features

- Circular shape
- 24 LEDs, about 5.5 mA drive current for each channel.
- Controllable LEDs with flirid effects
- Grove Interface.

# Schematic



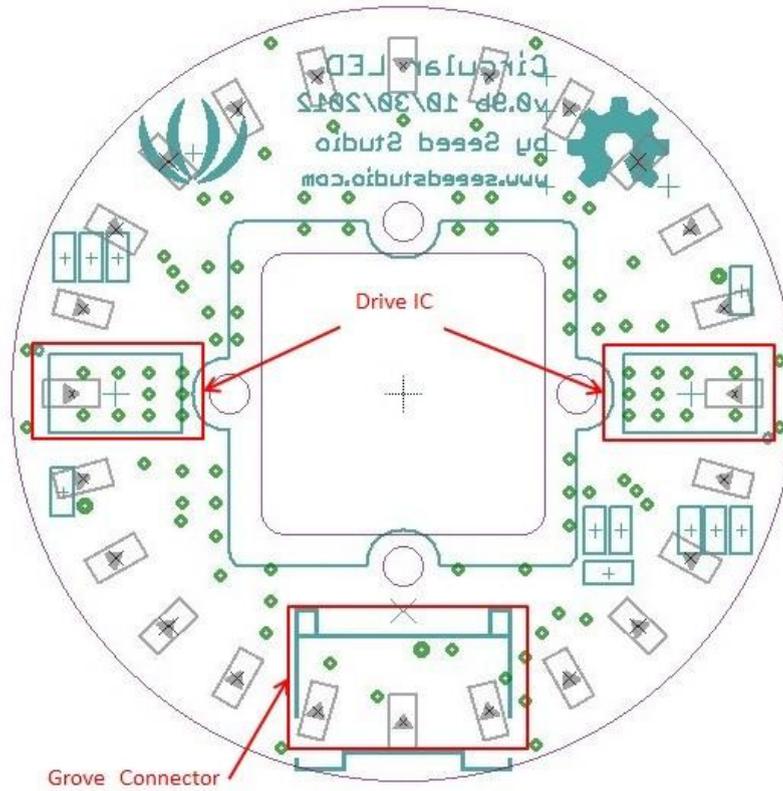
# Specification

Item	Min	Typical	Max	Unit
Voltage	4.5	5	5.5	VDC
Current	/	5.5 for each LED		mA
Dimension	Ring Form:4.5 diameter			cm
Net Weight	12			g



## Interface

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## Getting Started

### Materials required

Seeeduino V4.2



Base Shield



Get ONE Now

[<https://www.seeedstudio.com/Seeeduino-V4.2-p-2517.html>]

Get ONE Now

[<https://www.seeedstudio.com/Base-Shield-V2-p-1378.html>]

In addition, you can consider our new [Seeeduino Lotus M0+](https://www.seeedstudio.com/Seeeduino-Lotus-Cortex-M0-p-2896.html) [<https://www.seeedstudio.com/Seeeduino-Lotus-Cortex-M0-p-2896.html>], which is equivalent to the combination of Seeeduino V4.2 and Baseshield.



#### Note

**1** Please plug the USB cable gently, otherwise you may damage the port. Please use the USB cable with 4 wires inside, the 2 wires cable can't transfer data. If you are not sure about the wire you have, you can click [here](https://www.seeedstudio.com/Micro-USB-Cable-48cm-p-1475.html) [<https://www.seeedstudio.com/Micro-USB-Cable-48cm-p-1475.html>] to buy

**2** Each Grove module comes with a Grove cable when you buy. In case you lose the Grove cable, you can click [here](https://www.seeedstudio.com/Grove-Universal-4-Pin-Buckled-20cm-Cable-%285-PCs-pack%29-p-936.html) [<https://www.seeedstudio.com/Grove-Universal-4-Pin-Buckled-20cm-Cable-%285-PCs-pack%29-p-936.html>] to buy.

## Hardware Connection

- **Step 1.** Connect the Grove - Circular LED with the **D6** port of the Base Shield.
- **Step 2.** Plug Grove - Base Shield into Seeeduino.
- **Step 3.** Connect Seeeduino to PC via a USB cable.



### Note

If we don't have Grove Base Shield, We also can directly connect Grove - Circular LED to Seeeduino as below.

Seeeduino	Grove - Circular LED
5V	Red
GND	Black
D7	White
D6	Yellow

## Software



### Attention

If this is the first time you work with Arduino, we strongly recommend you to see [Getting Started with Arduino](https://wiki.seeedstudio.com/Getting_Started_with_Arduino/) [[https://wiki.seeedstudio.com/Getting\\_Started\\_with\\_Arduino/](https://wiki.seeedstudio.com/Getting_Started_with_Arduino/)] before the start.

- **Step 1.** Download the [Grove - LED Bar Library](https://github.com/Seeed-Studio/Grove_LED_Bar) [https://github.com/Seeed-Studio/Grove\_LED\_Bar] from Github.
- **Step 2.** Refer [How to install library](https://wiki.seeedstudio.com/How_to_install_Arduino_Library) [https://wiki.seeedstudio.com/How\_to\_install\_Arduino\_Library] to install library for Arduino.
- **Step 3.** Open **Arduino IDE -> File -> Examples -> Grove\_LED\_Bar -> BasicControl**
- **Step 4.** Uncomment the **define MY9221\_LED\_NUM 24** and comment **#define MY9221\_LED\_NUM 10** as below.

```
1 // #define MY9221_LED_NUM 10
2 #define MY9221_LED_NUM 24
```

- **Step 5.** Upload the example to Arduino. If you do not know how to upload the code, please check [how to upload code](https://wiki.seeedstudio.com/Upload_Code/) [https://wiki.seeedstudio.com/Upload\_Code/].
- **Step 6.** You can see the led is running from .C, 23 and AB repeatedly.

## Play with Codecraft

### Hardware

**Step 1.** Connect a Grove - Circular LED to port D5 of a Base Shield.

**Step 2.** Plug the Base Shield to your Seeduino/Arduino.

**Step 3.** Link Seeduino/Arduino to your PC via an USB cable.

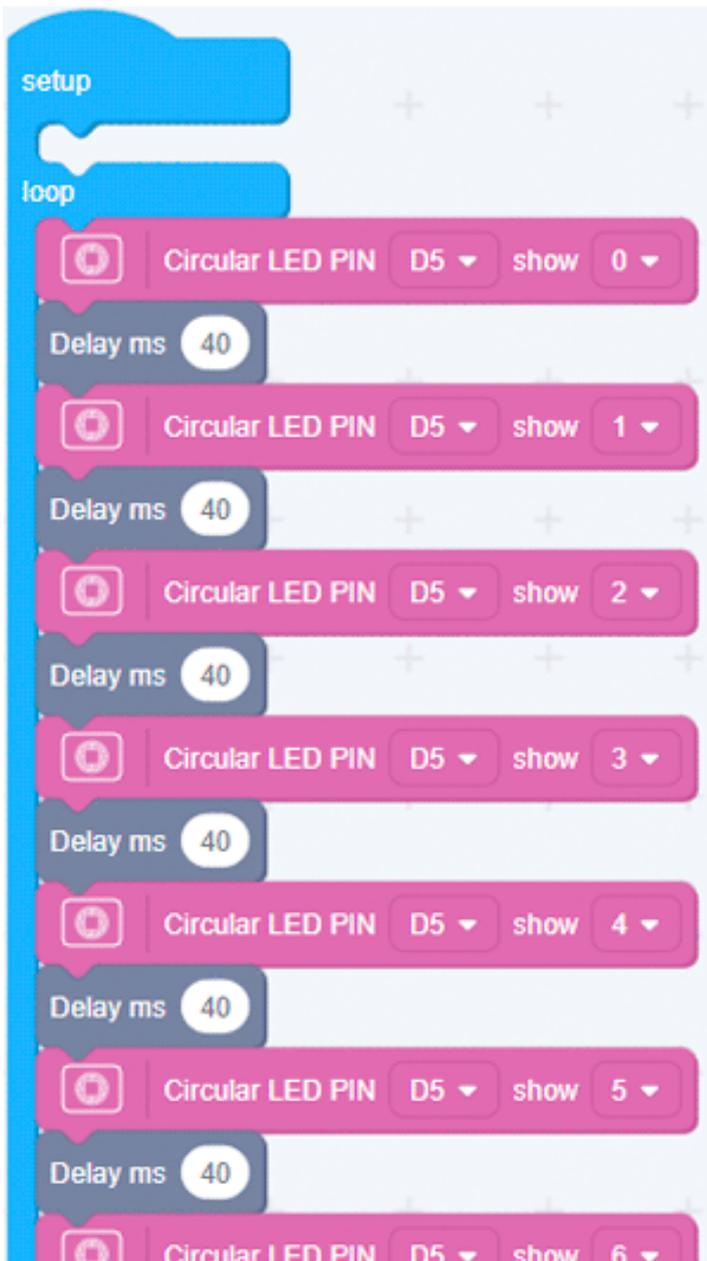
### Software

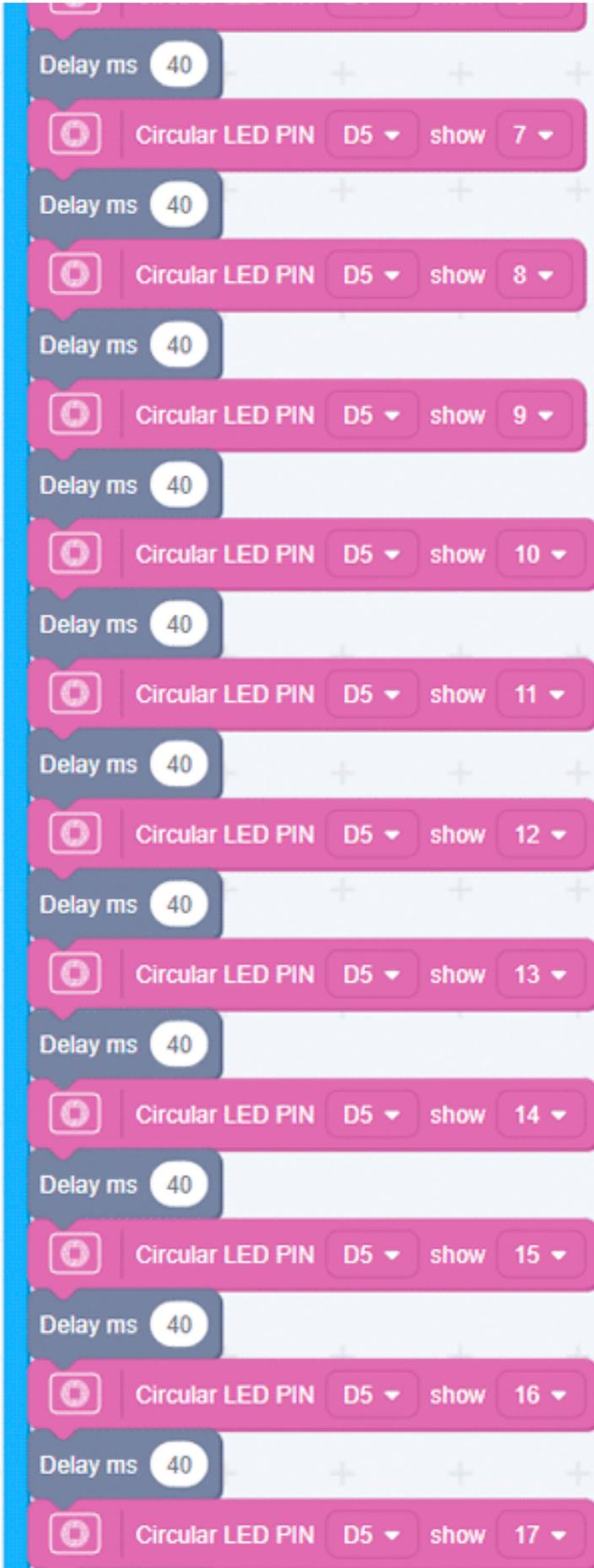
**Step 1.** Open [Codecraft](https://ide.chmakered.com/) [https://ide.chmakered.com/], add Arduino support, and drag a main procedure to working area.

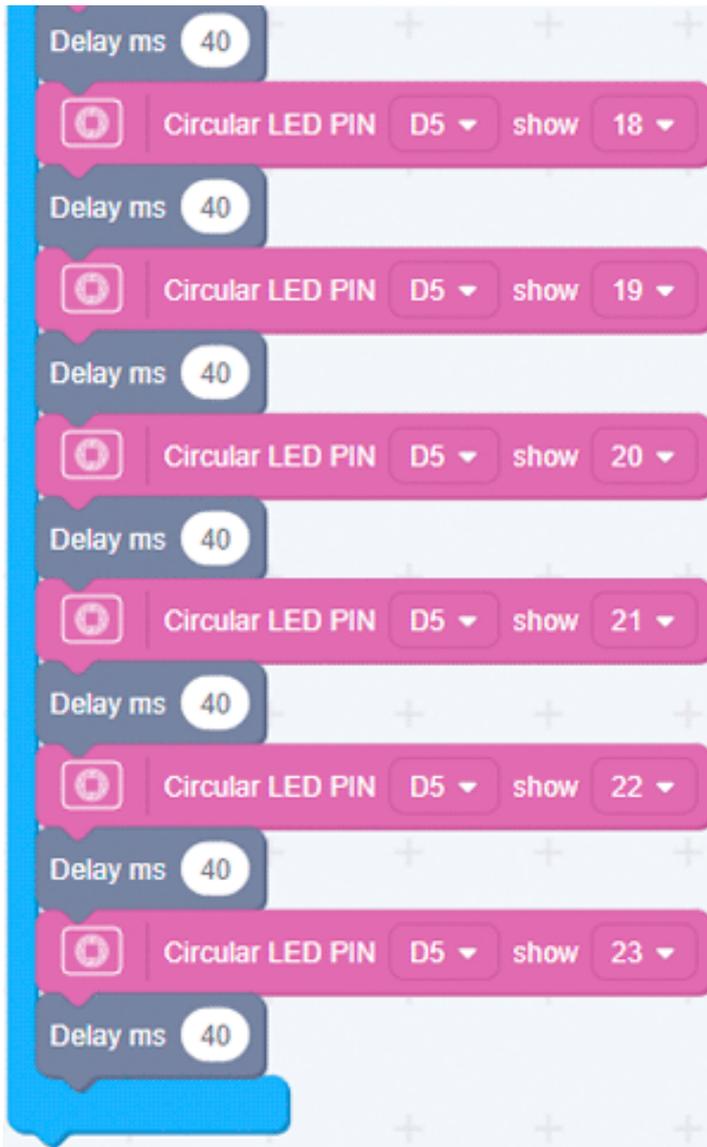
**Note**

If this is your first time using Codecraft, see also [Guide for Codecraft using Arduino](https://wiki.seeedstudio.com/Guide_for_Codecraft_using_Arduino/) [https://wiki.seeedstudio.com/Guide\_for\_Codecraft\_using\_Arduino/].

**Step 2.** Drag blocks as picture below or open the cdc file which can be downloaded at the end of this page.







Upload the program to your Arduino/Seeeduino.



### Success

When the code finishes uploaded, you will see the LED run in the circular.

## Schematic Online Viewer



## Source

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- [CircularLED Library](https://github.com/Seeed-Studio/Grove_LED_Bar) [https://github.com/Seeed-Studio/Grove\_LED\_Bar]
- [Grove Circular LED schematics PDF File](https://files.seeedstudio.com/wiki/Grove-Circular_LED/res/Circular_LED_v0.9b.pdf) [https://files.seeedstudio.com/wiki/Grove-Circular\_LED/res/Circular\_LED\_v0.9b.pdf]

- [Grove-circular LED eagle files](#)  
[[https://files.seeedstudio.com/wiki/Grove-Circular\\_LED/res/Grove-circular\\_LED\\_eagle\\_files.zip](https://files.seeedstudio.com/wiki/Grove-Circular_LED/res/Grove-circular_LED_eagle_files.zip)]
- [Codecraft CDC File](#) [[https://files.seeedstudio.com/wiki/Grove-Circular\\_LED/res/Grove\\_Circular\\_LED\\_CDC\\_File.zip](https://files.seeedstudio.com/wiki/Grove-Circular_LED/res/Grove_Circular_LED_CDC_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=newproducts](https://www.seeedstudio.com/act-4.html?utm_source=wiki&utm_medium=wikibanner&utm_campaign=newproducts)]