



## Grove - Ultimate RGB LED Ring

SKU 104020173

Grove - Ultimate RGB LED Ring is a cost-effective full color LED ring with 42 chainable and programmable WS2813 mini LEDs.

"I don't dance,  
but here I am.  
Spinning you around and around in circles"

42 diamond-like full-color WS2813 Mini LEDs are placed around a 117 mm diameter ring, my friends, let's dance with those shining LED rings.

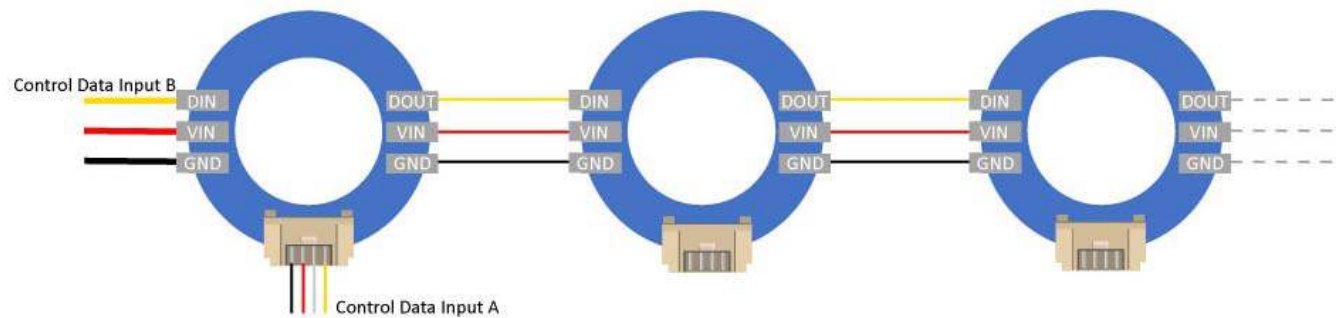
We've already released the Grove - RGB LED Ring (20 - WS2813 Mini), now the Grove - RGB LED Ring family has welcomed three new members:

- Grove - RGB LED Ring (16-WS2813 Mini)
- Grove - RGB LED Ring (24-WS2813 Mini)
- Grove - Ultimate RGB LED Ring

Look at this super guy, it is the biggest LED ring we have made so far, and it will definitely shine in your project.

The WS2813B-Mini intelligent control LED is an upgraded version of WS2812B, the control circuit and RGB chip are integrated into a package of 3535 components. With the help of the build-in control circuit, each LED is addressable. So you can control the lighting and color of specific LED lights as you like, creating endless lighting effects. A significant advantage of WS2813B-Mini compared to traditional LED is the support for signal break-point continuous transmission. This means that even if one or two LEDs are damaged, the entire LED ring will still work properly.

Each LED is chainable and we also keep the chainable pads on the back of the LED rings, so you can cascade several LED rings to make it even cooler. Since all those Grove - RGB LED Rings are based on WS2813 Mini, you can also connect the rings of different diameters together.



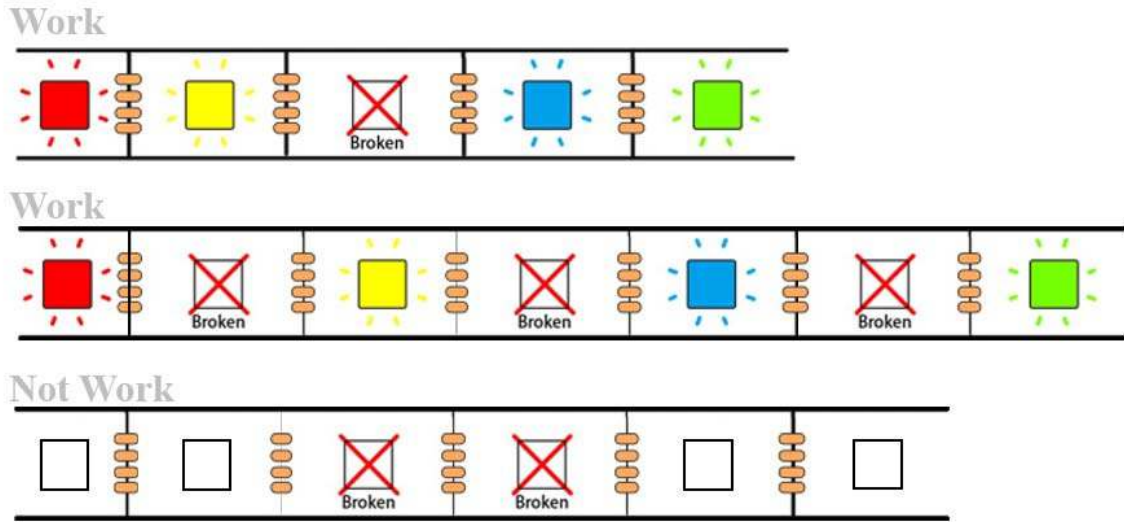
*When multiple light rings are connected together, the control signal can be input from the Grove SIG pin or from the DIN input. However, Grove VCC has insufficient power supply and needs to input power from VIN.*

On top of that, with the on-board Grove connector and cable, all these wonderful things only need to be plugged and unplugged.

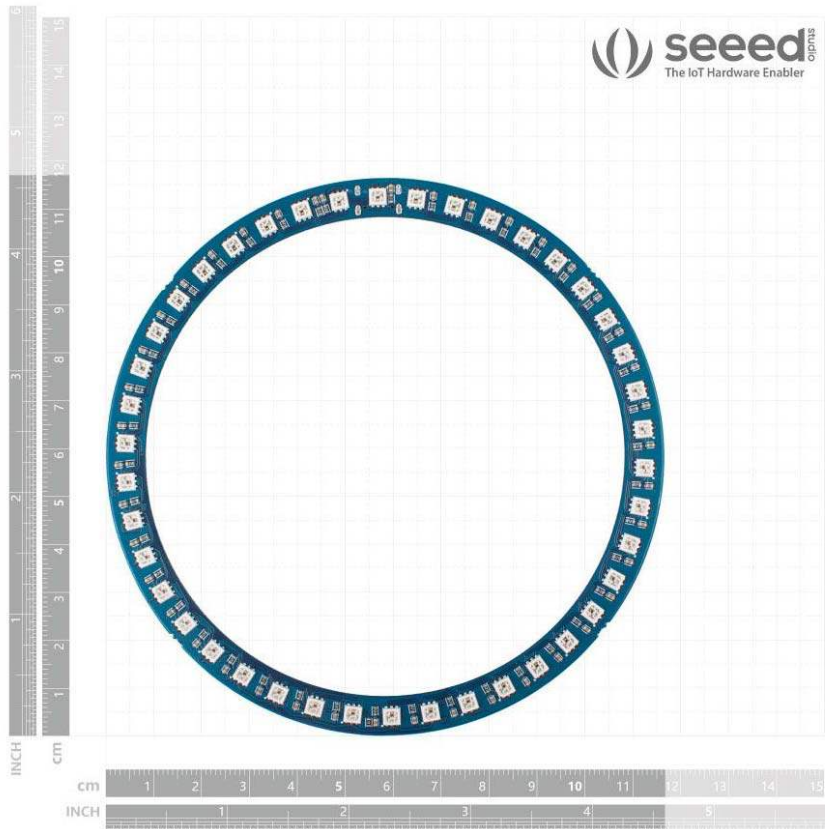
## Features

- 256 gray levels,  $256 \times 256 \times 256 = 16777216$  full-color display
- Built-in control circuit in a 3535 components
- Chainable, can be cascaded with multiple LED rings
- Support 5V/3.3V power in, support 5V/3.3V control data level.
- Dual-signal wires, signal break-point continuous transmission

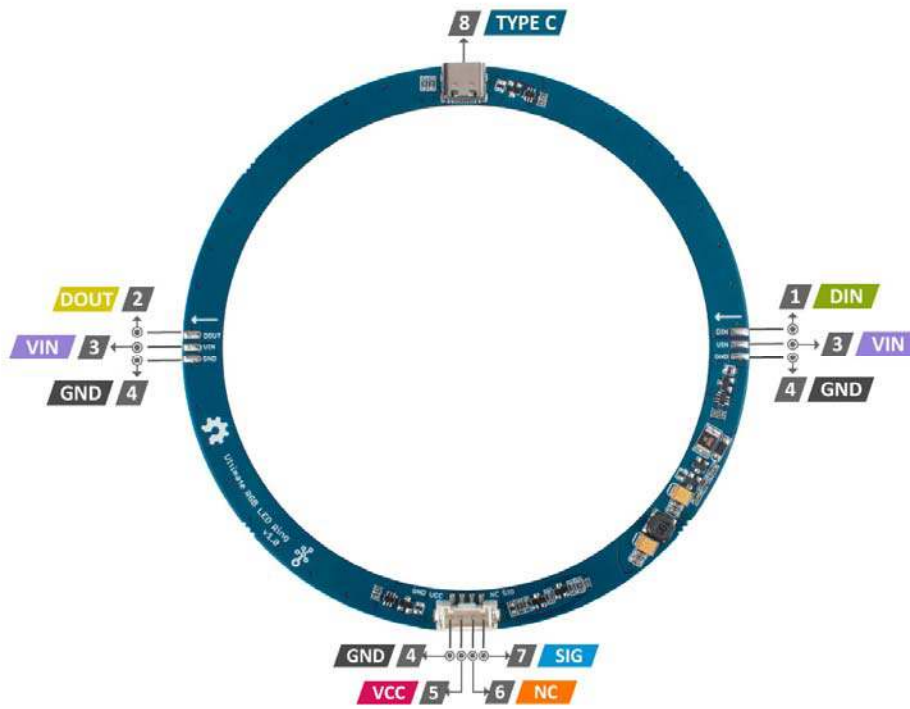
# Signal break-point continuous transmission



*As long as not two or more adjacent LEDs are broken, the remaining LEDs will be able to work normally*



## Hardware Overview

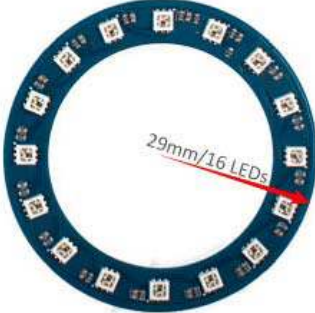
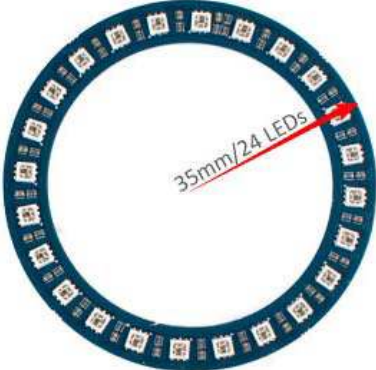
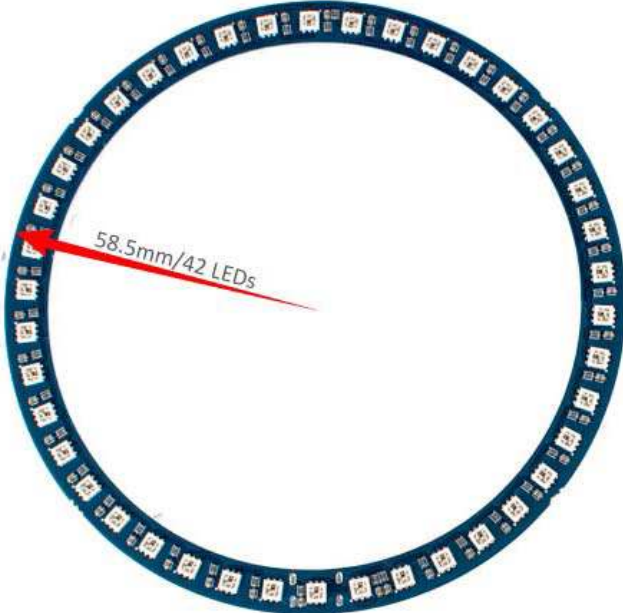


- 1** : Control data signal input\*<sup>1</sup>
- 2** : Control data signal output
- 3** : Power supply 5V/3.3V\*<sup>2</sup>
- 4** : Connected to the system GND
- 5** : Power supply from Grove 5V/3.3V\*<sup>2</sup>
- 6** : Not connected
- 7** : Control data signal input  
from Grove connector\*<sup>1</sup>
- 8** : USB type C - only for 5V power

### Note

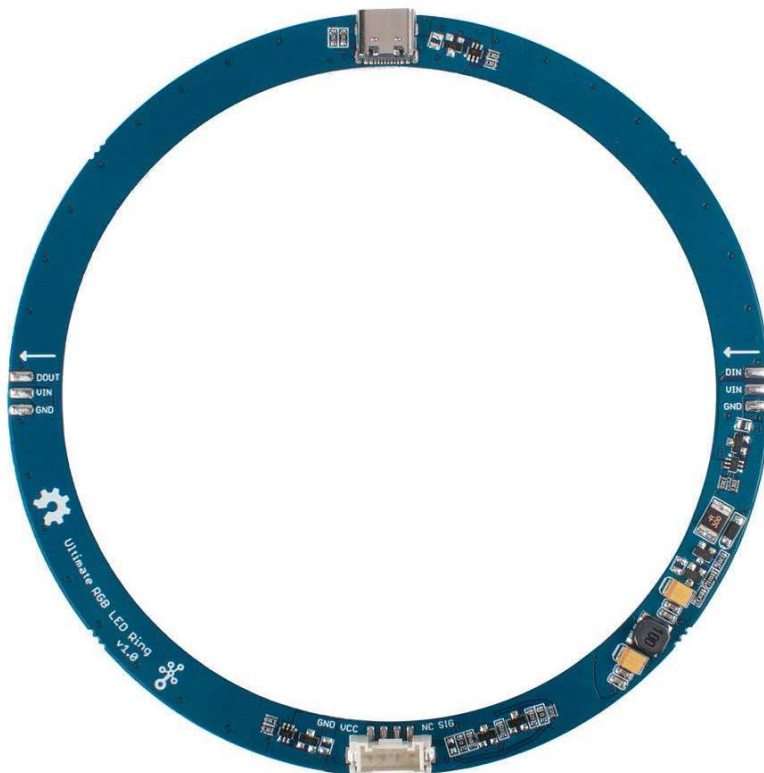
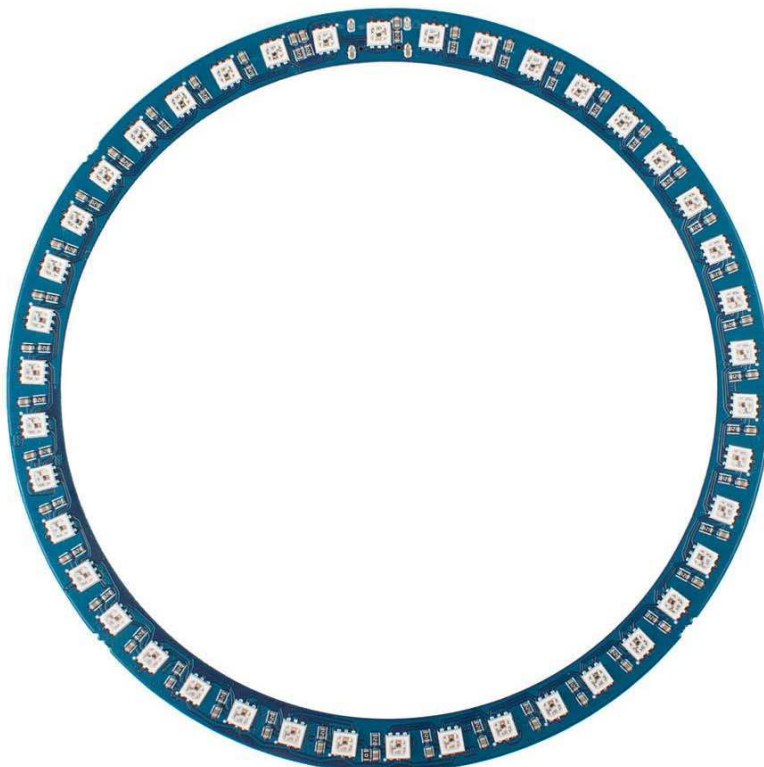
- 1- Actually, the control data signal inputs are connected. So please do not input different signals at the same time.
- 2- The three power ports are isolated, and the Grove VCC can only supply up to 400mA, so please use VIN or USB-Type C when multiple LED rings are cascaded. We recommend you to use 5V/2A adapter for USB-Type C port.

Dimension



ECCN/HTS

|        |            |
|--------|------------|
| ECCN   | EAR99      |
| HSCODE | 9405600000 |
| UPC    |            |



<https://www.seeedstudio.com/Grove-Ultimate-RGB-LED-Ring-p-4203.html/9-13-19>