

Unit Puzzle

SKU: U193



Description

Unit Puzzle is a multi-color light control unit consisting of an 8x8 RGB array made up of 64 WS2812E RGB LEDs. Each LED is separated by a **grid** structure to prevent interference between adjacent lights, ensuring the light effect is clearer and purer. The product features two onboard Grove connectors—one for **input** signal and the other for **output**, with a connecting piece included for linking multiple **Puzzle** units to extend the lighting display area. The output Grove connector also includes an **IO** port for connecting other M5 devices, such as Unit Angle or other sensors with **Port B** interfaces, enabling more interactive control functions. Unit-Puzzle is compact, easy to install, and features an M2 mounting hole on the bottom for secure fixing. The product dimensions are just 24*24*15mm. This product is suitable for applications such as smart lighting, decorative displays, and interactive installations.

LED Brightness

Continuous high brightness may cause damage; it is recommended to use 10% brightness to reduce heat and power consumption.

Product Features

- 8x8 WS2812 RGB LED matrix
- Grid isolation design
- Dual Grove connectors (for cascading expansion)
- 2x LEGO-compatible holes
- Programming platforms: Arduino, UIFlow, ESP-IDF, etc.

Included

- 1x Unit-Puzzle
- 1x HY2.0-4P Cable (20CM)
- 1x Expansion Connector
- 1x Brightness Parameter Sticker

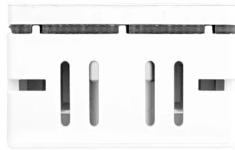
Applications

- Smart lighting
- Decorative displays
- Interactive installations

Specifications

Specification	Parameter
RGB LED Type	WS2812E-1313 @ 8x8 matrix
LED Quantity	64 LEDs (8x8 matrix)
Single LED Power	Approx. 6mW (brightness 8%, white)
Standby Current	DC 5V @ 14.27mA
Operating Current	DC 5V @ 93.99mA (brightness 8%, white)
Supply Voltage	DC 5V
Interface Type	2 Grove connectors (for data and expansion)
Supported Colors	16.7 million colors
Control Method	Supports serial data control (single wire control)
Operating Temperature	0-40°C
Product Dimensions	24*24*15mm
Packaging Dimensions	136*92*17mm
Product Weight	6.3g
Packaging Weight	12.5g





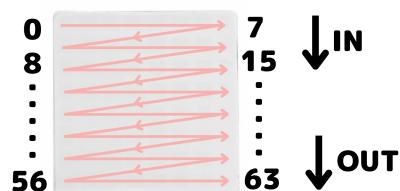
Related Links

- WS2812E

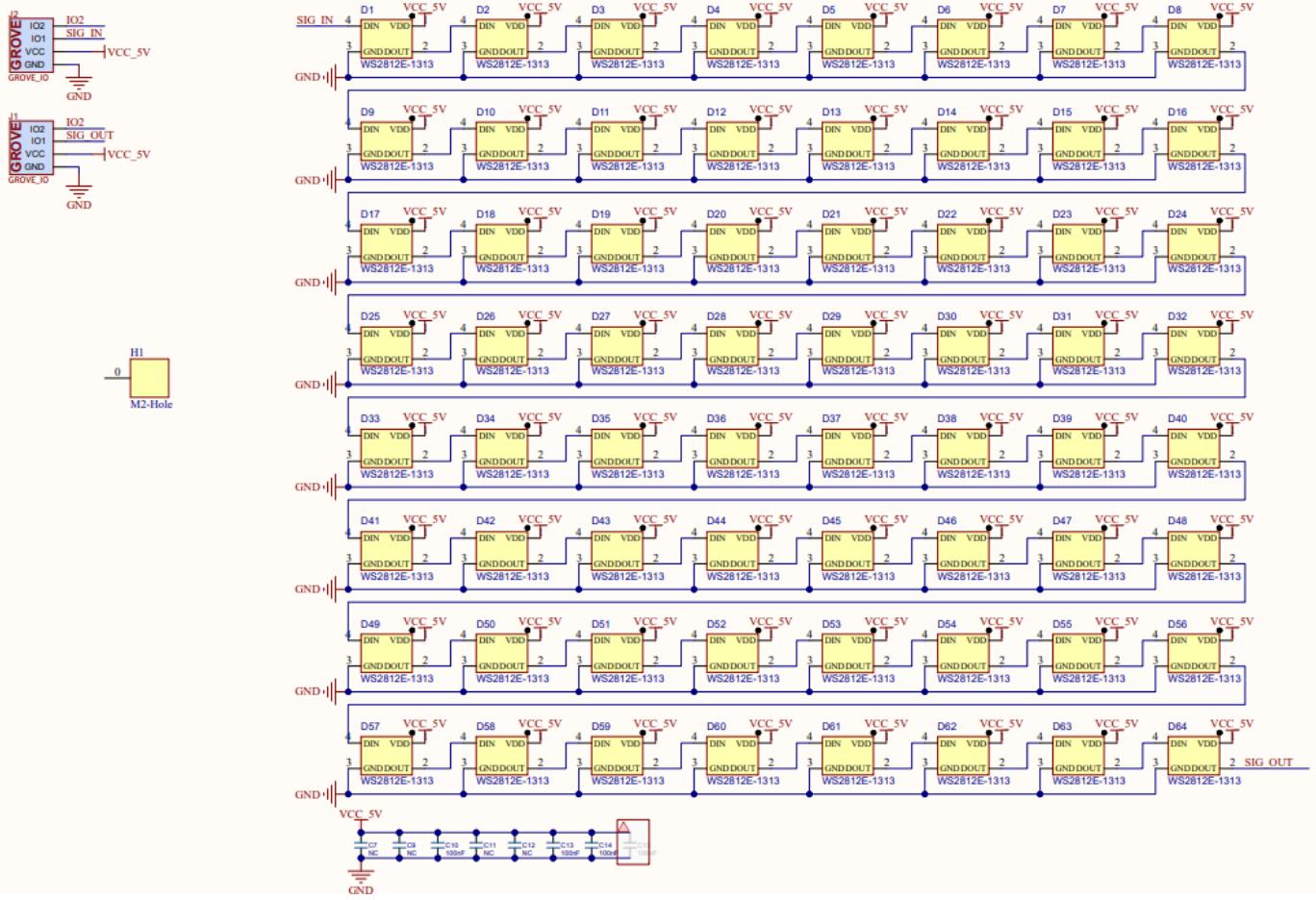
Brightness and Current Relationship



- RGB Arrangement Order



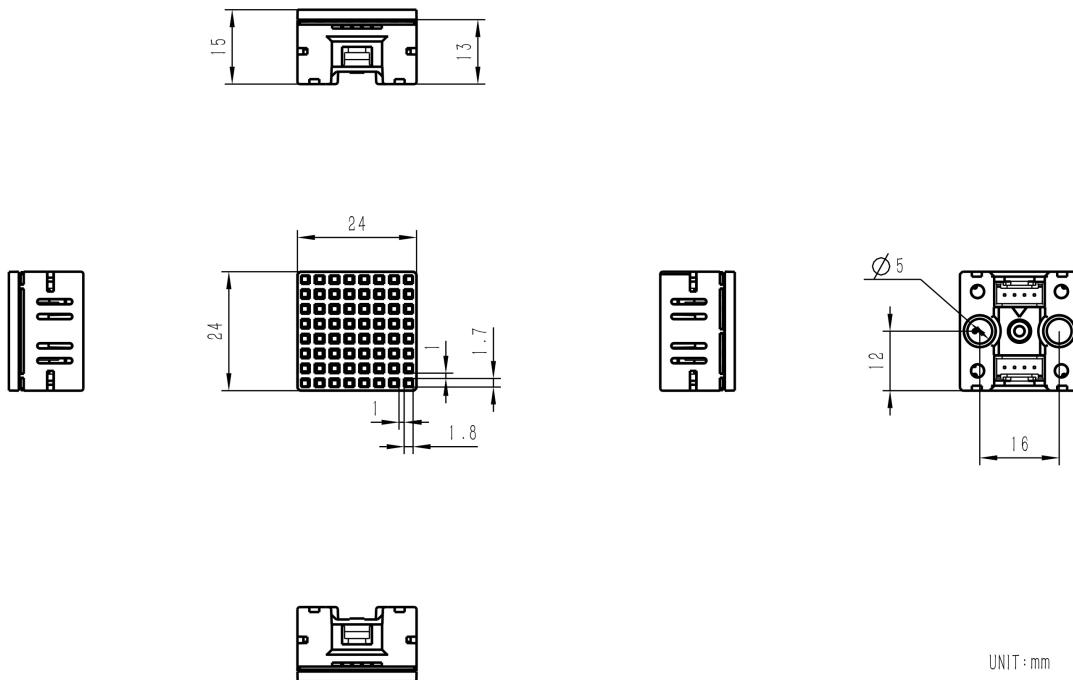
Schematic



PinMap

Unit-Puzzle	I02	SIG_IN	VCC_5V	GND
Core(PORT B)	GPIO36	GPIO26	5V	GND
Core2(PORT B)	GPIO36	GPIO26	5V	GND
CoreS3(PORT B)	GPIO8	GPIO9	5V	GND

Module Size



Example

Arduino

- [Adafruit Neopixel](#)
- [FastLED](#)

Video

- Unit-Puzzle Function Demo and Introduction

[puzzle_video.mp4](#)

