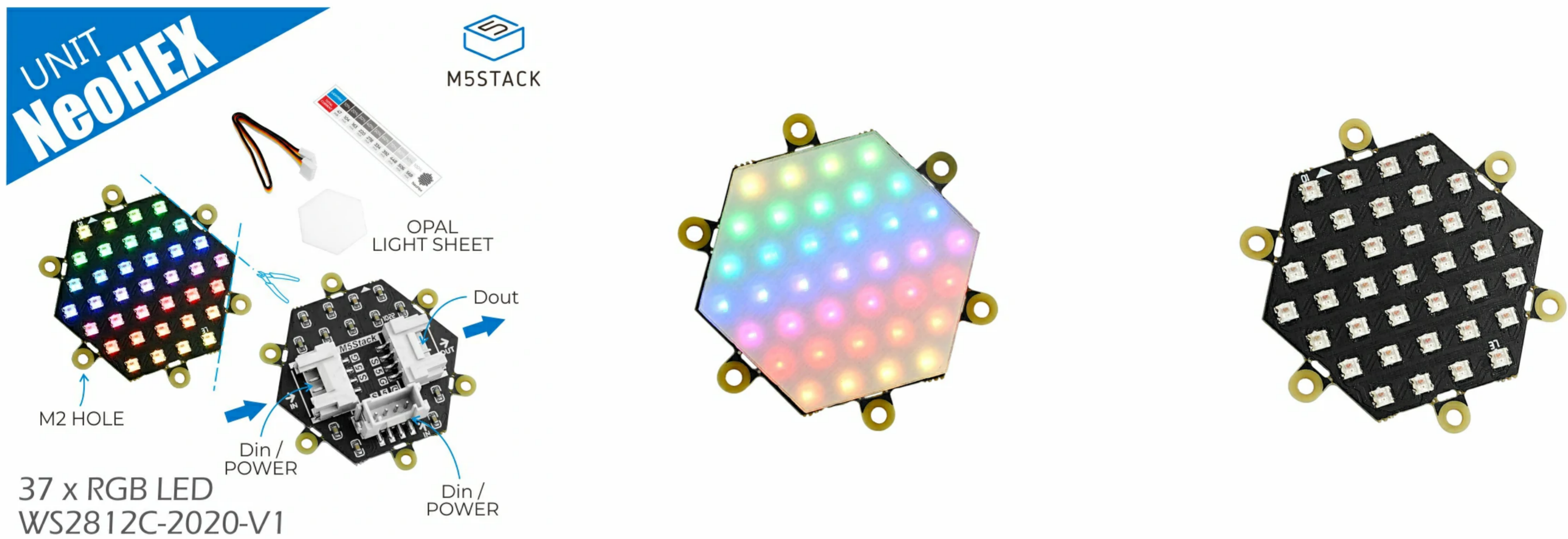


# Unit NeoHEX

SKU:A045-B



## Description

**NeoHEX** is a hexagonal board with 37 RGB LED flexible beads and will be sure to 'WOW' plenty. Use single BUS control, and support multiple boards connecting. Two sets of different angle input connectors are provided for independent power supply + signal control. External structure with fixing ears for easy installation. With its opal light sheet, the diffusion creates a gentle glow and provides innovative solutions to transform your living spaces into unique pieces of functional art.

## Product Features

- WS2812C-2020-V1
- Number of LEDs: 37
- Support multiple boards connection
- 6x fixing ears (removable)
- Comes with opal light sheet
- Single pixel support 256 levels of brightness display, can be combined for 16777216 kinds of full color display

## Included

- 1x NeoHEX Unit
- 1x Opal light sheet
- 1x Power Consumption Reference Card

- 1x HY2.0-4P cable (20cm)

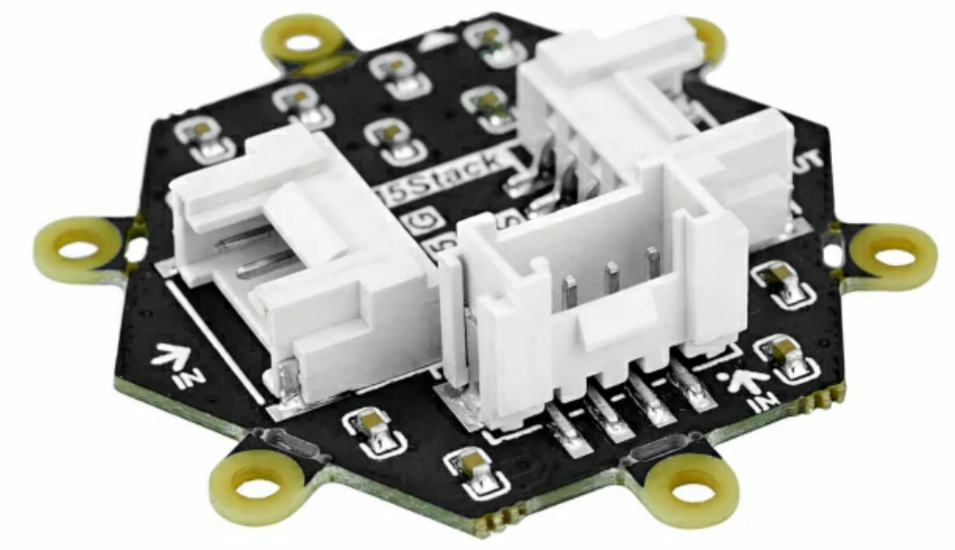
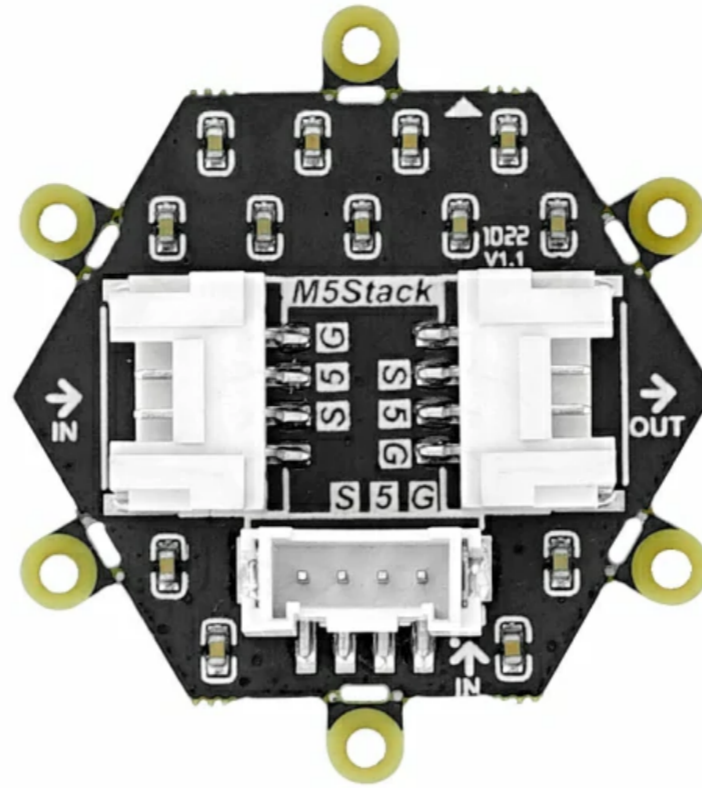
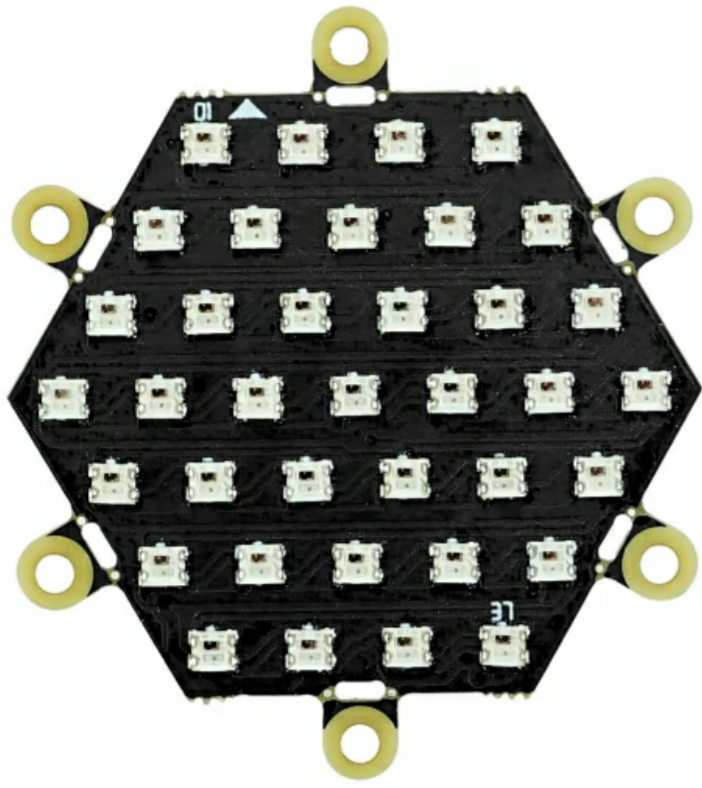
# Applications

- Lighting decoration

# Specifications

| Specification           | Parameters   |
|-------------------------|--|
| LED Bead Model          | WS2812C-2020-V1  |
| Number of light beads   | 37   |
| Voltage supply          | 3.7 ~ 5.3V   |
| Logic input level       | -0.3V ~ VDD+0.7  |
| Output/output interface | HY2.0-4P interface: 2x input (signal, power), 1x output (extension)  |
| Refresh Rate            | 30 frames (1024 cascades)  |
| Power consumption       | Actual measurement of power consumption (37 lights are fully lit, brightness 100%):<br>Red Light: DC5V@207mA<br>Green Light: DC5V@109mA<br>Blue Light: DC5V@208mA<br>White light: DC5V@568mA |
| Adjustable brightness   | Level 256  |
| Support Colors          | 16777216 kinds of colors   |
| Fixing hole diameter    | 2mm  |
| Net Weight              | 3.7g   |

|              |            |
|--------------|------------|
| Gross Weight | Parameters |
| Product Size | 40*36*7mm  |
| Package Size | 93*138mm   |



## Brightness/Power consumption reference

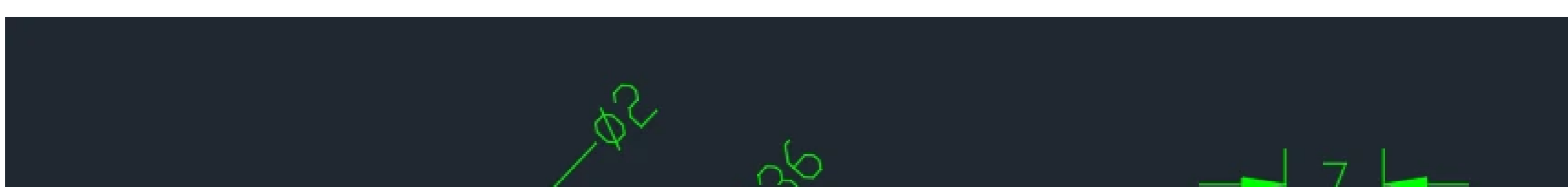
| LIGHTING      | 10%   | 20%    | 30%    | 40%    | 50%    | 60%    | 70%    | 80%    | 90%    | 100%   |   |
|---------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| TOTAL CURRENT | 47 mA | 104 mA | 163 mA | 220 mA | 278 mA | 334 mA | 392 mA | 448 mA | 506 mA | 568 mA | <br>NeoHex |

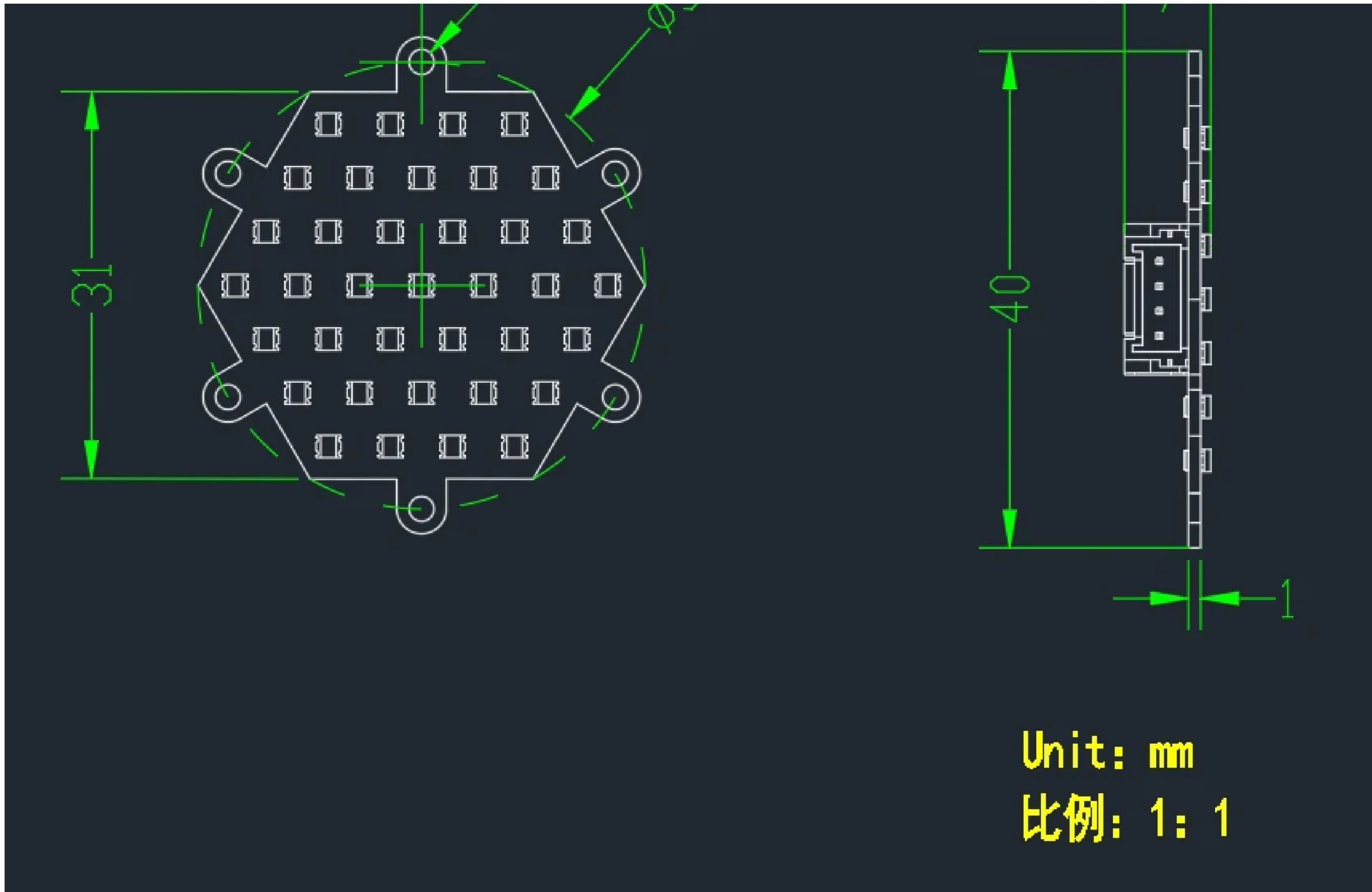
## Drive conditions

Different M5 main control in the USB power supply conditions of the light board drive for reference.

- Actual drive conditions:
  - ATOM: White light brightness is 82% normal drive (>Unable to light up at 86%)
  - CORE: White light brightness is 100% normal drive
  - CORE2: White light brightness is 100% normal drive
  - M5StickC: White light brightness is 86% normal drive (>Unable to light up at 90%)
  - M5StickCPlus: White light brightness 78% normal drive (>Unable to light up at 86%)

## Structure Diagram



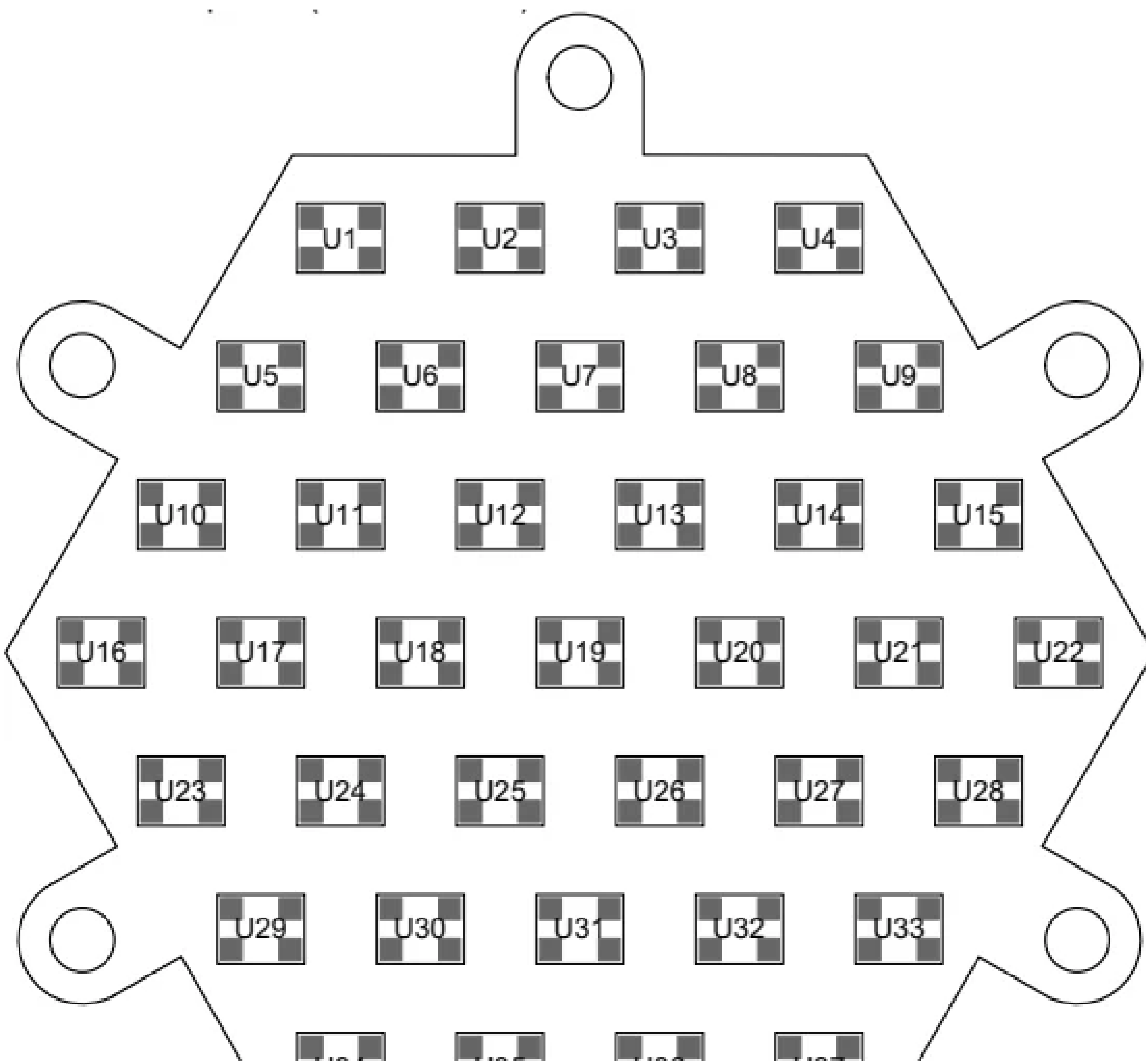


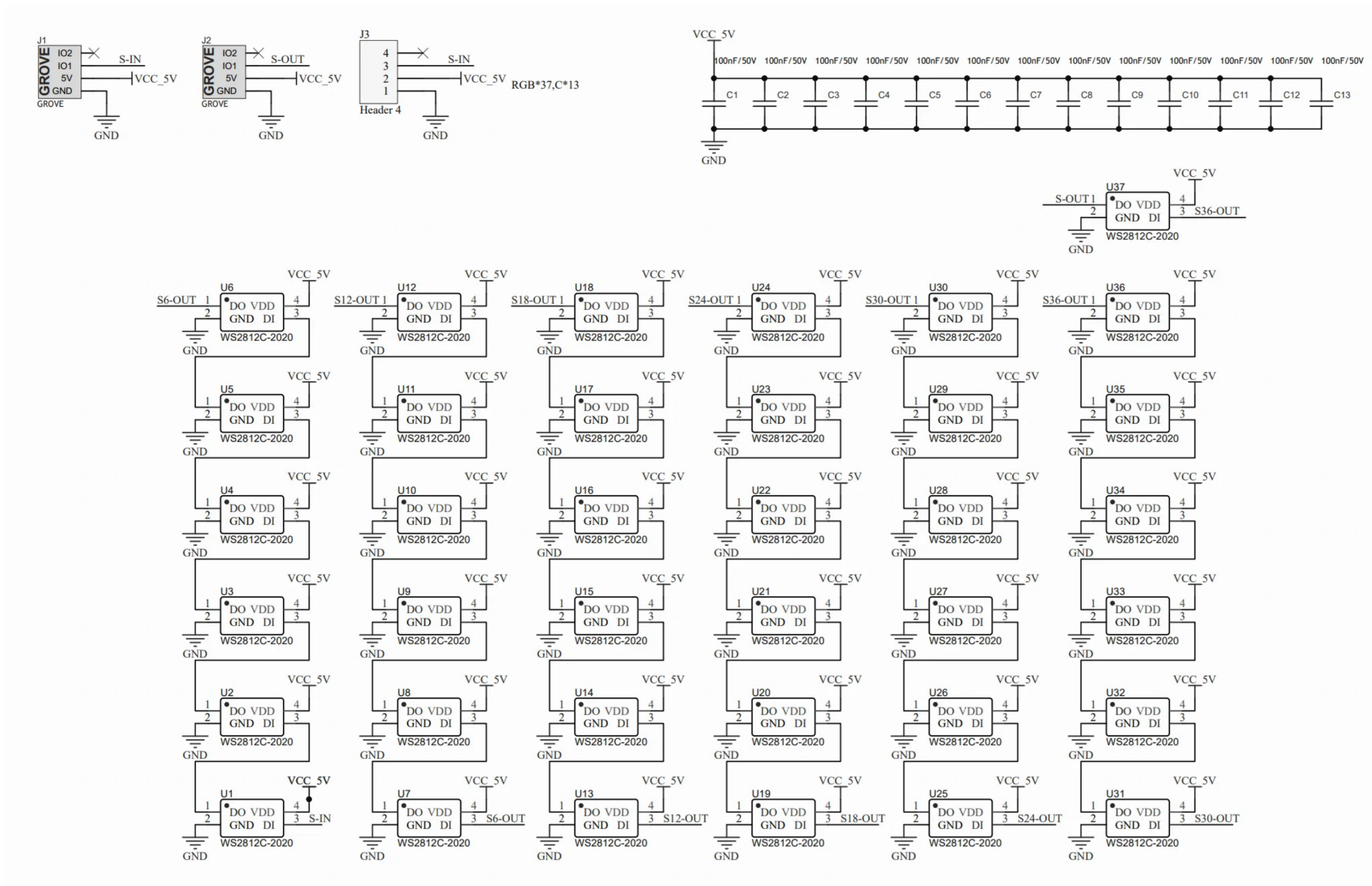
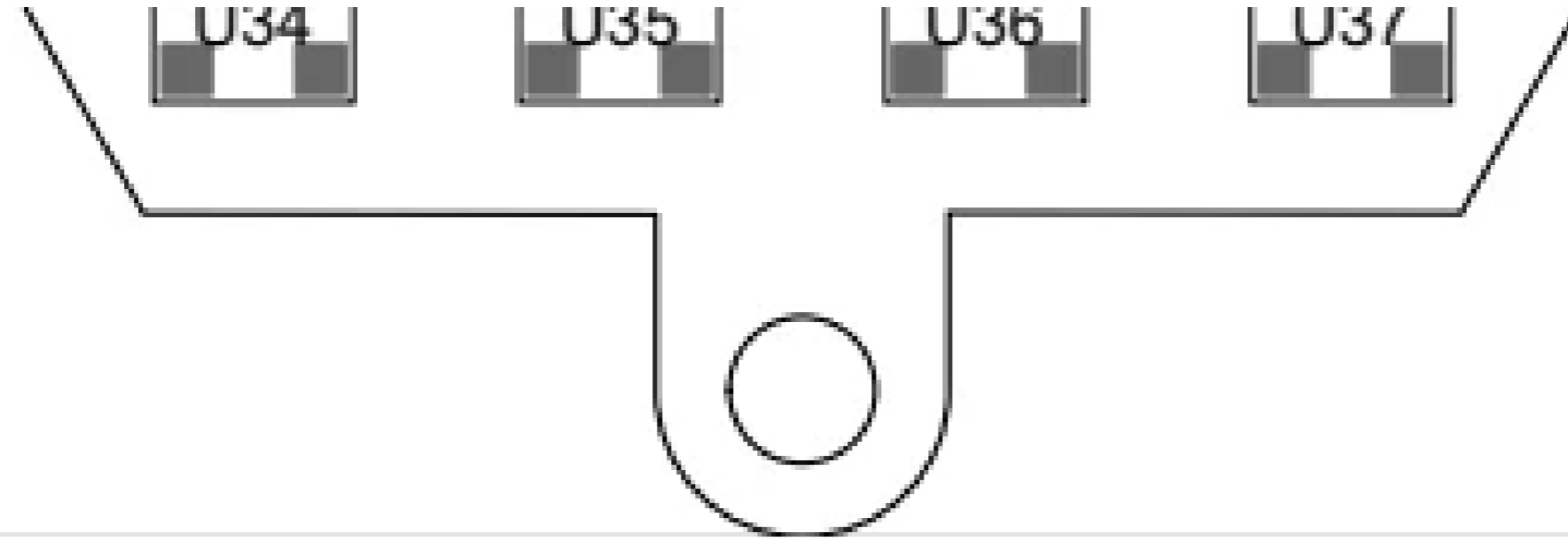
## Pin Mapping

◦ M5GO PORT-A

| M5Core(PORT A) | GPIO22 | GPIO21   | 5V | GND |
|----------------|--------|----------|----|-----|
| Unit NeoHEX    | /      | Data Pin | 5V | GND |

## Schematics





## Learn



### Simple Watch Device

Make a simple watch device using UIFlow.

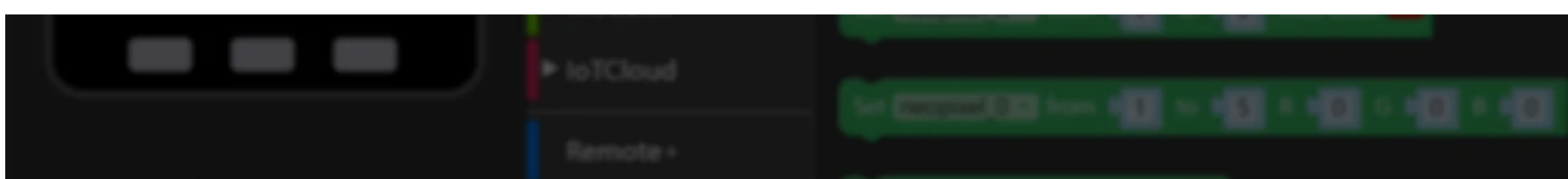
## Example

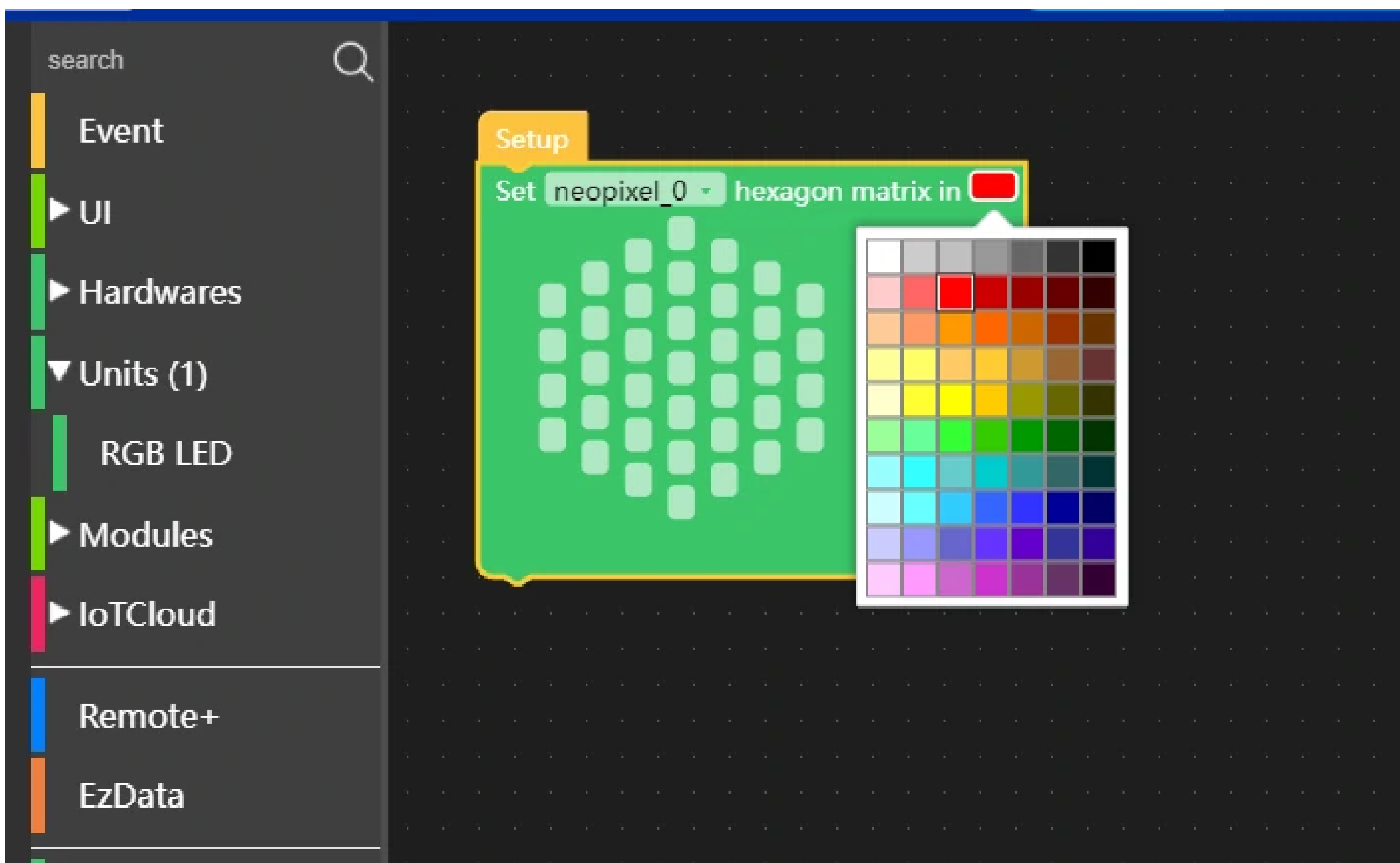
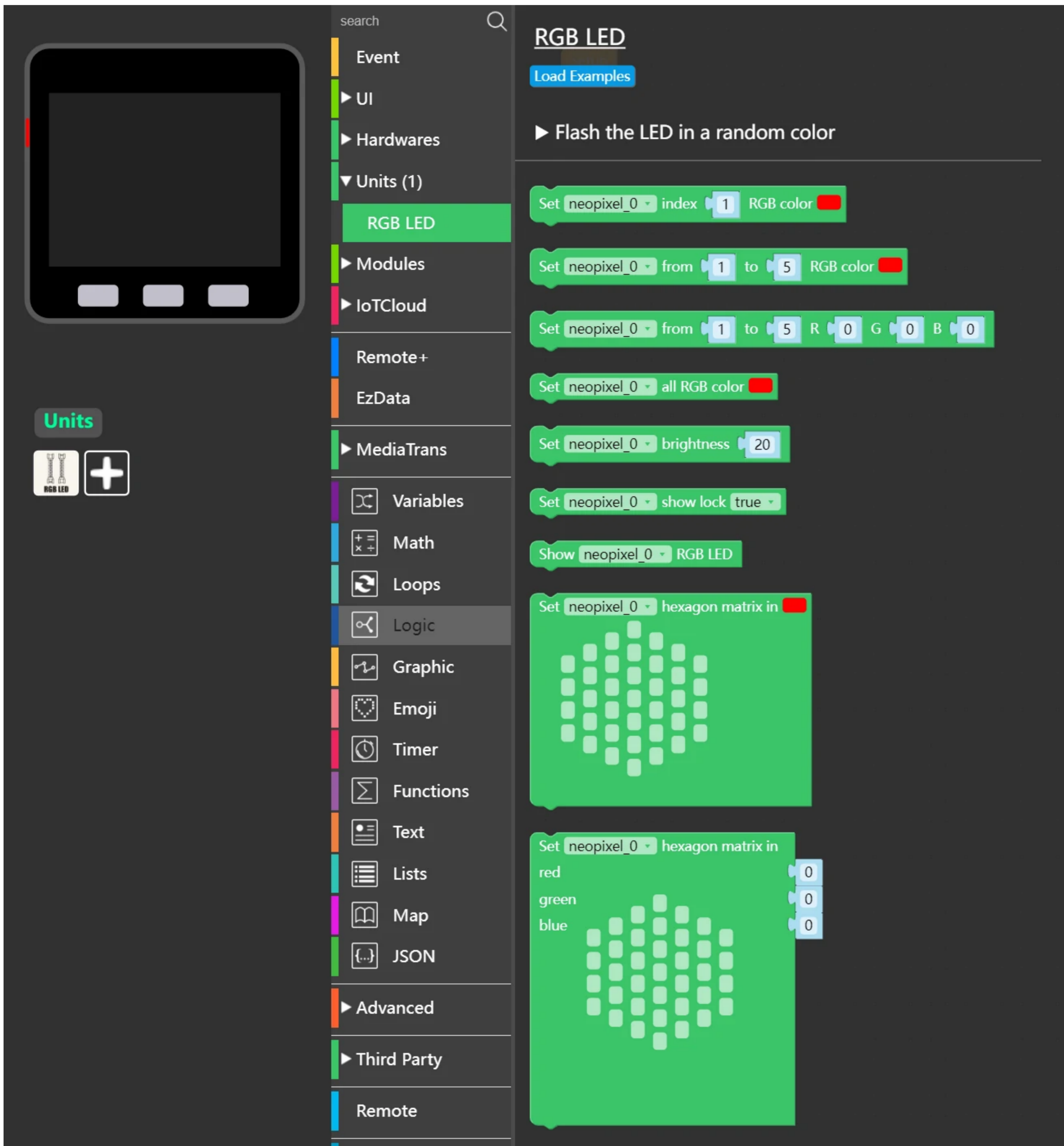
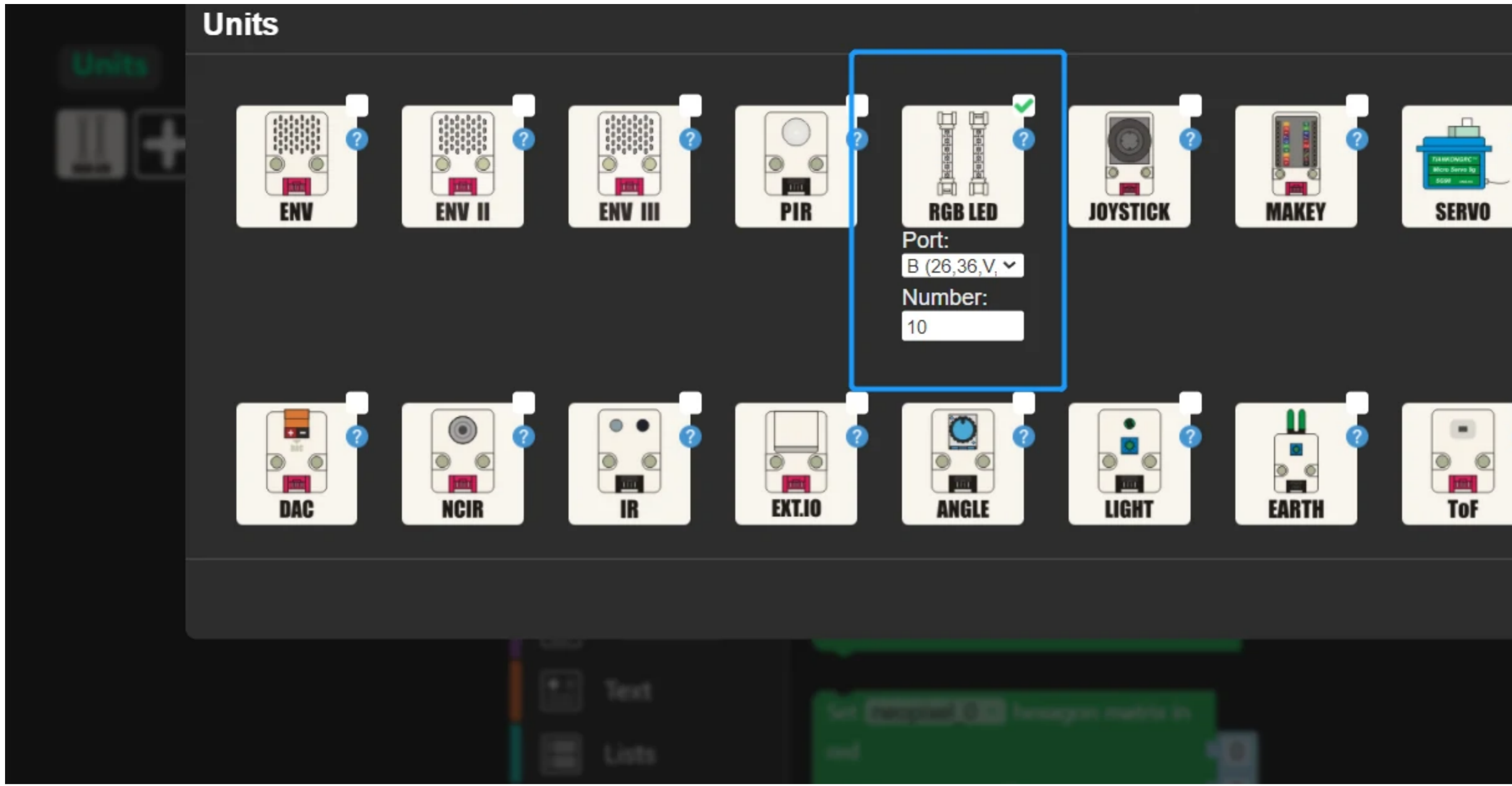
### Arduino

- [NeoHEX Example](#)
- [FastLED Library](#)
- [FastLED API Reference](#)

### UIFlow

- [UNIT NeoHEX UIFlow TEST](#)





Setup

Set neopixel0 neopixel hexagon matrix in



| FAQ