# UV Sensor User Manual 

## 1. Features

| Boost convertor chip | SGM8521 |
| :---: | :---: |
| Operating voltage | $3.0 \mathrm{~V}-5.5 \mathrm{~V}$ |
| Output type | TTL level output |
| Responsive <br> wavelength | $200 \mathrm{~nm}-370 \mathrm{~nm}$ |
| Dimensions | 21.0 mm 13.0 mm |
| Fixing hole size | 2.0 mm |

Operating principle:
This module has an UV sensor, GUVA, which is a ideal device for detecting the amount of UV ray without wavelength filter, since it is UV ray sensitive only. In other word, the wavelengths of $365 \mathrm{~nm}(\mathrm{UV}-\mathrm{A})$ and $320 \mathrm{~nm}(\mathrm{UV}-\mathrm{B})$ are the cut-off thresholds of GUVA.

## 2. Applications

This module can be applied to UV ray detecting system, outdoors UV monitoring device, sterilizing lamp and etc.
3. Interfaces

| Pin No. | Symbol | Descriptions |
| :---: | :---: | :--- |
| 1 | AOUT | Analog output |
| 2 | GND | Power ground |
| 3 | VCC | Positive power <br> supply (3.0V-5.5V) |

4. How to use

We will illustrate the usage of the module with an example of UV ray testing by connecting a development board.
(1) Download the relative codes to the development board.
(2) Connect the module to the development board via a serial wire, then, power up the development board and start the serial debugging software. Here is the configuration of the connection between the module and the development board.

| Port | STM32 MUC pin |
| :---: | :---: |
| AOUT | GPIOA.6 |
| GND | GND |
| VCC | $3.3 V$ |


| Port | Arduino pin |
| :---: | :---: |
| AOUT | A0 |
| GND | GND |
| VCC | 5 V |

Here is the configuration of the serial port

| Baud rate | 115200 |
| :---: | :---: |
| Data bits | 8 |
| Stop bit | 1 |
| Parity bit | None |

(3) Turn on a currency detector and illuminate its UV ray to the UV sensor. You will find that the serial port outputs relative data from the test.

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