

<Preliminary>

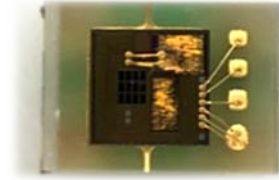
# Digital UV Sensor

## GUVB-C31SM



### Features

- Integrated GaN Sensors for UVB in a single package
- UV index measurement supported(1...>14)
- Programmable Gain and Integration time
- I2C slave interface up to 400KHz
- Power management modes
- Shutdown current : 0.8uA typical
- Supply voltage of 2.6V to 3.6V
- 2.0mm×2.3mm×1.4mm 4-pin OLGA package



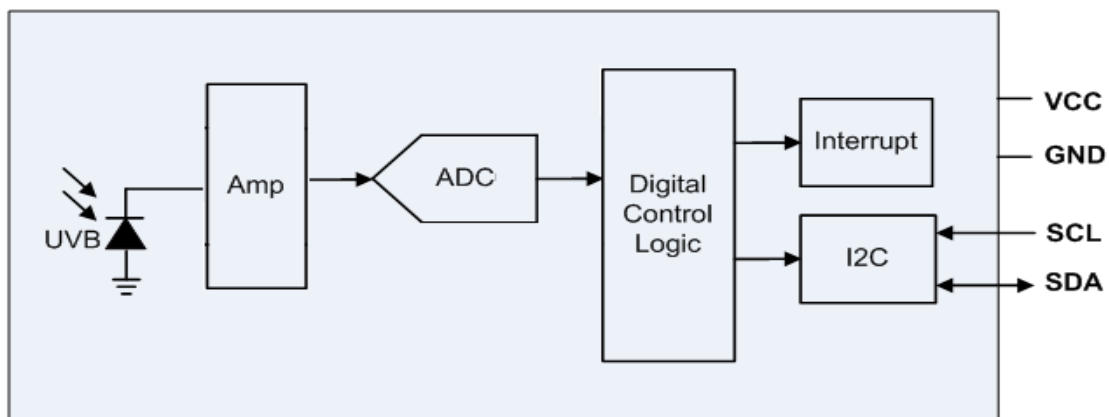
### Applications

Smartphone, Watch, Weather station,  
Bicycle Navigation, Gaming, Accessary

### General Description

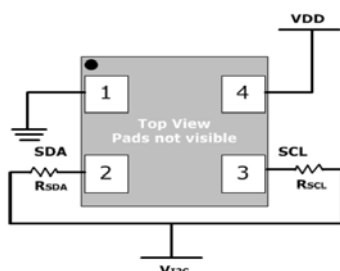
GUVB-C31SM supports integrated functions of an ultraviolet light sensor such that can be easily configured and used in user applications. This device has photodiodes, amplifiers, ADC, digital control logic and I2C interface circuit to measure the volumes of UVB.

The GUVB-C31SM can acquire the intensity of UVB, respectively and outputs digital count according to the each intensity. By using power management mode properly according to the work to be done, the power consumption can be reduced.



Functional Block Diagram

### Application Circuit



### Pin Description

| PinNo. | Pin Name | Description    |
|--------|----------|----------------|
| 1      | GND      | Ground         |
| 2      | SDA      | I2C data line  |
| 3      | SCL      | I2C clock line |
| 4      | VCC      | Supply Voltage |

**General Characteristics**

|                       |                               |
|-----------------------|-------------------------------|
| Package               | 2.0 × 2.3mm <sup>2</sup> OLGA |
| Operating Temperature | -30~+85°C                     |
| Soldering Temperature | 260°C(Peak Temp:10sec)        |

**Electrical Characteristics**

|                        |   |
|------------------------|---|
| Number of output       | 1 Channel(UVB)                                    |
| Output Resolution      | 16bits  |
| UV Index range         | 0~14  |
| Sensor conversion time | 0.39~800ms  |
| Configurable Gain      | ×1~×128   |
| Sleep mode control     | 2~256 times                                       |
| Power management       | 4modes :<br>normal, sleep, auto-shutdown,shutdown |
| I2C clock Frequency    | Up to 400KHz                                      |
| Operational current    | 100μA, typical                                    |
| Deep sleep current     | <1μA  |
| Supply voltage         | 2.2~3.6V  |

**Package Information**

