

# UV-A Sensor

## GUVV-T13GD-L



**Features**

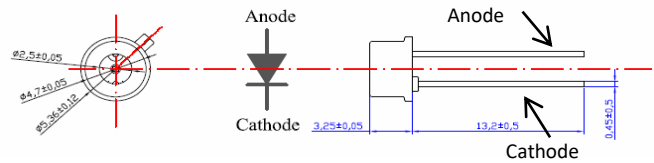
- Indium Gallium Nitride Based Material
- Schottky-type Photodiode
- Photovoltaic Mode Operation
- High Responsivity & Low Dark Current



**Applications**

- Full UV Band Monitoring
- UV-A Lamp Monitoring
- 365,385nm UV LED Monitoring

### Outline Diagrams and Dimensions



### Absolute Maximum Ratings

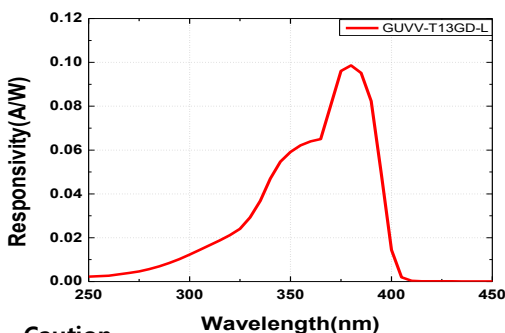
| Parameter                  | Symbol        | Min. | Max. | Unit               | Remark         |
|----------------------------|---------------|------|------|--------------------|----------------|
| Storage Temperature        | $T_{st}$      | -40  | 90   | °C                 |                |
| Operating Temperature      | $T_{op}$      | -30  | 85   | °C                 |                |
| Reverse Voltage            | $V_{r, max.}$ |      | 5    | V                  |                |
| Forward Current            | $I_{f, max.}$ |      | 1    | mA                 |                |
| Optical Source Power Range | $P_{opt}$     | 0.01 | 100  | mW/cm <sup>2</sup> | UVA Lamp       |
| Soldering Temperature      | $T_{sol}$     |      | 260  | °C                 | within 10 sec. |

※Notice: apply to us in the case that Optical Source Power is over 100mW/cm<sup>2</sup>.

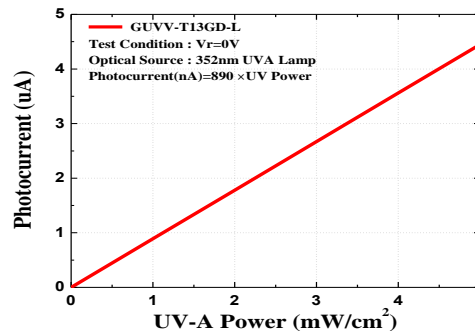
### Characteristics (at 25°C)

| Parameter                | Symbol    | Min. | Typ.  | Max. | Unit            | Test Conditions                             |
|--------------------------|-----------|------|-------|------|-----------------|---|
| Dark Current             | $I_d$     |      |       | 20   | nA              | $V_r = 1\text{ V}$                          |
| Photo Current            | $I_{ph}$  | 801  | 890   | 979  | nA              | UVA Lamp, 1mW/cm <sup>2</sup>               |
| Temperature Coefficient  | $I_{tc}$  |      | -0.03 |      | %/°C            | UVA Lamp                                    |
| Responsivity             | R         |      | 0.098 |      | A/W             | $\lambda = 380\text{ nm}, V_r = 0\text{ V}$ |
| Spectral Detection Range | $\lambda$ | 295  |       | 400  | nm              | 10% of R                                    |
| Active area              |           |      | 1.024 |      | mm <sup>2</sup> |   |

### Responsivity Curve



### Photocurrent along UV Power



### Caution

ESD can damage the device hence please avoid ESD. Insulate the cap of TO-CAN or it can cause malfunction of the device.