



## UV-B Sensor GUVB-T21GD-U

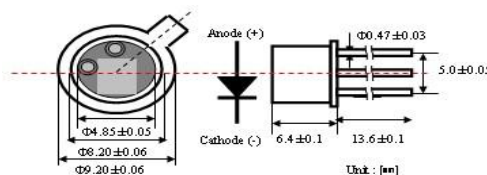


- Features**
- Aluminium Gallium Nitride Based Material
  - Schottky-type Photodiode
  - Photovoltaic Mode Operation
  - Good Visible Blindness
  - High Responsivity & Low Dark Current



- Applications**
- UV-B Lamp Monitoring
  - UV-B LED Monitoring

### Outline Diagrams and Dimensions



### Absolute Maximum Ratings

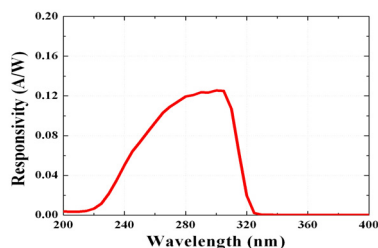
| Parameter                  | Symbol        | Min.  | Max.    | Unit         | Remark         |
|----------------------------|---------------|-------|---------|--------------|----------------|
| Storage Temperature        | $T_{st}$      | -40   | 90      | °C           |                |
| Operating Temperature      | $T_{op}$      | -30   | 85      | °C           |                |
| Reverse Voltage            | $V_{r, max.}$ |       | 3       | V            |                |
| Forward Current            | $I_{f, max.}$ |       | 1       | mA           |                |
| Optical Source Power Range | $P_{opt}$     | 0.001 | 100,000 | $\mu W/cm^2$ | UVB Lamp       |
| Soldering Temperature      | $T_{sol}$     |       | 260     | °C           | within 10 sec. |

※Notice: apply to us in the case that Optical Source Power is over 100,000 $\mu W/cm^2$ .

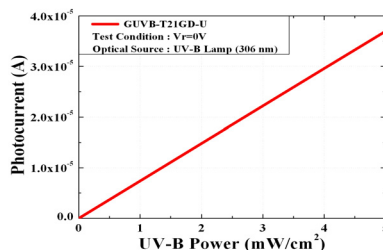
### Characteristics (at 25°C)

| Parameter                | Symbol    | Min. | Typ.  | Max. | Unit            | Test Conditions               |
|--------------------------|-----------|------|-------|------|-----------------|-------------------------------|
| Dark Current             | $I_d$     |      |       | 90   | nA              | $V_r = 0.1 V$                 |
| Photo Current            | $I_{ph}$  |      | 7.4   |      | $\mu A$         | UVB Lamp, 1mW/cm <sup>2</sup> |
| Temperature Coefficient  | $I_{tc}$  |      | 0.1   |      | %/°C            | UVB Lamp                      |
| Responsivity             | R         |      | 0.13  |      | A/W             | $\lambda = 306 nm, V_r = 0 V$ |
| Spectral Detection Range | $\lambda$ | 220  |       | 320  | nm              | 10% of R                      |
| Active area              |           |      | 6.894 |      | 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.