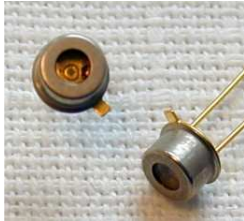


AG32S

UVB sensitive AlGaN based UV photodiode $A = 0,076 \text{ mm}^2$



General Features



Properties of the AG32S UV photodiode

- UVB sensitive photodiode
- Active Area $A = 0,076 \text{ mm}^2$
- TO18 metal housing
- 10mW/cm^2 peak radiation results a current of approx. 700 nA

About the material (Aluminium)Gallium Nitride (Al)GaN

(Al)GaN is a new semiconductor material for visible blind UV photodiodes. By modification of the Al – to - Ga stoichiometry it is possible to produce photodiodes with different spectral behaviour. This allows to offer Photodiodes sensible for broad band UV (UVA+UVB+UVC), for UVB-only and for UVC only without using a filter.

Specifications

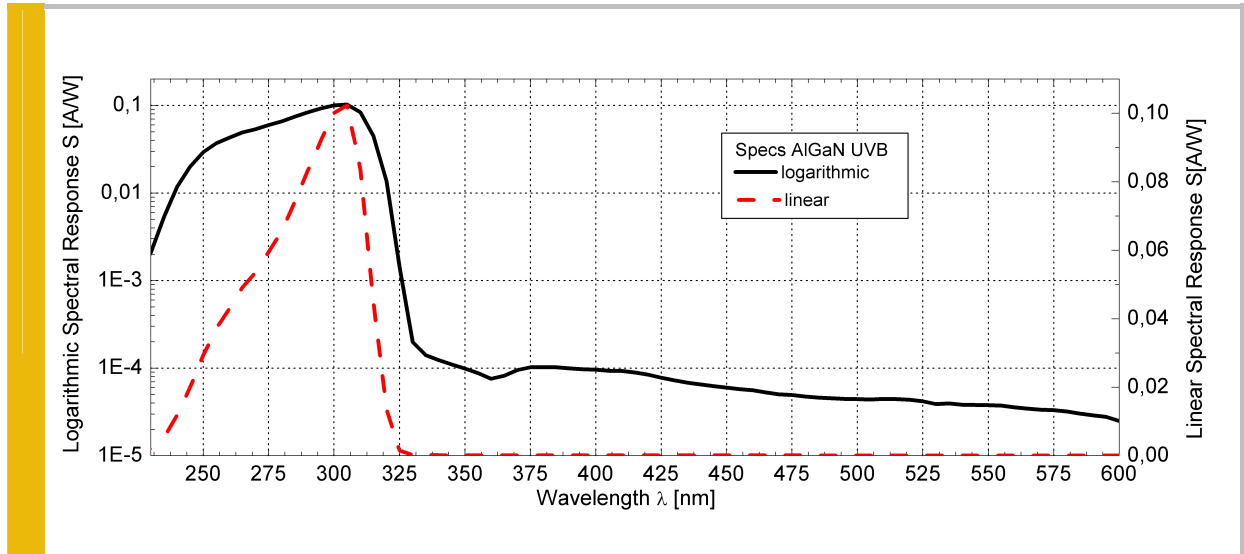
| Parameter | Symbol | Value | Unit |
|--|------------------------|-------------|------------------|
| Maximum Ratings | | | |
| Operating Temperature Range | T_{opt} | -25 ... +70 | °C |
| Storage Temperature Range | T_{stor} | 0 ... +100 | °C |
| Soldering Temperature (3s) | T_{sold} | 260 | °C |
| Reverse voltage | V_{Rmax} | 5 | V |
| General Characteristics (T=25°C) | | | |
| Active Area | A | 0,076 | mm^2 |
| Dark current (1V reverse bias) | I_{d} | 100 | fA |
| Capacitance | C | 24 | pF |
| Short circuit (10mW/cm^2 at peak) | I_0 | 700 | nA |
| Temperature coefficient | Tc | <-0,3 | %/K |
| Spectral Characteristics (T=25°C) | | | |
| Max. spectral sensitivity | S_{max} | 0,130 | AW^{-1} |
| Wavelength of max. spectral sens. | λ_{max} | 310 | nm |
| Sensitivity range ($S=0,1 \cdot S_{\text{max}}$) | - | 240 ... 320 | nm |
| Visible blindness ($S_{\text{max}} / S_{>400\text{nm}}$) | VB | 10^3 | - |

AG32S

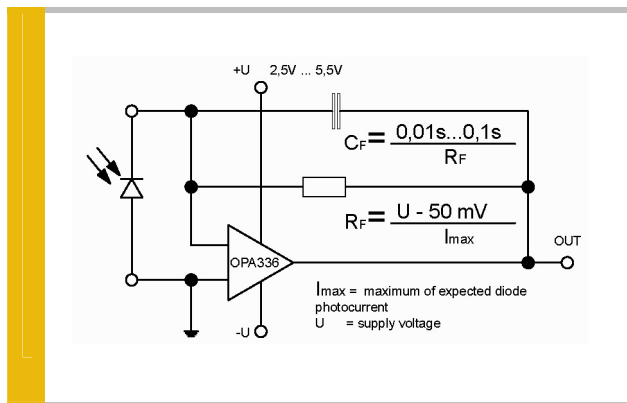
UVB sensitive AlGaN based UV photodiode $A = 0,076 \text{ mm}^2$



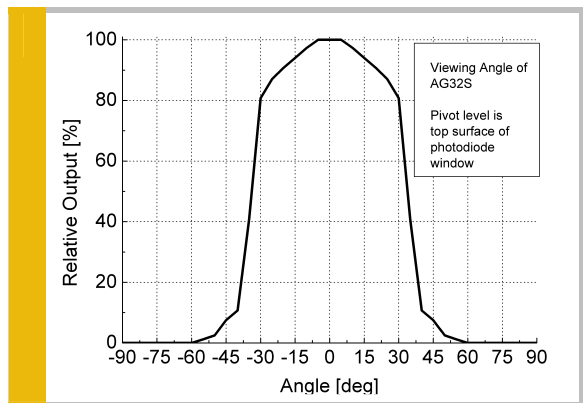
Spectral Response



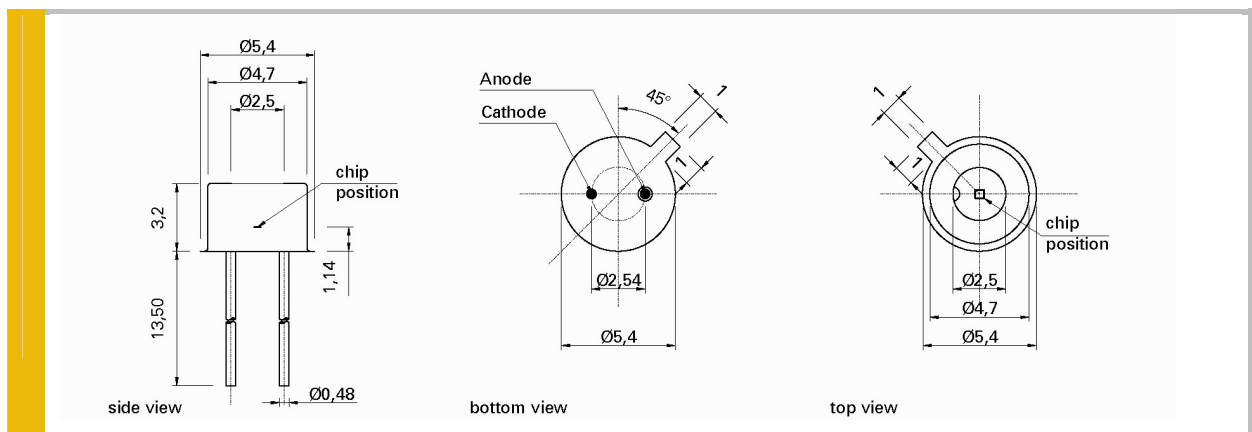
Circuit



Viewing Angle



Drawing



Application Note for Photodiodes



Application Note

For correct reading of the photodiode the current (and NOT the voltage) must be analyzed. This requires a short circuiting of the photodiode. Usual approaches are using a **Picoamperemeter** such as Keithley 617 or a **transimpedance amplifier** circuit as shown on page 2 of this datasheet. Please contact us in case of questions.

The below listed modules help you to get the best measurement information from your photodiode.

Internal & external Photodiode Amplifiers

(EUR 99,- to EUR 149,-)



- stable and reliable photodiode amplification
- TOCON-Series = photodiodes with integrated amplifier
- BOARD-Series = external photodiode amplifiers
- further information: www.sglux.com/tocon or www.sglux.com/boards

UV probes with built in amplifier

(EUR 195,- to EUR 329,-)



- different housings e.g. with cosine response, water pressure proof or Sapphire windows
- different electronic outputs available (voltage, current, USB)
- further information: www.sglux.com/probes

UV Intensity / Dose Monitor / Controller "SENSOR MONITOR"

(EUR 390,- to EUR 785,-)



- two channel photodiode or sensor input
- three user programmable relay outputs
- programmable display, USB/TTY/RS232 data transmission
- further information: www.sglux.com/monitor

UV Radiation Controller "RADIKON"

(EUR 290,-)



- Industrial DIN rail radiation controller module
- works with mV and nA....mA sensor output signals
- further information: www.sglux.com/radikon