

Features

- UVC Photodiode with small photoactive area
- Optimally suited for detection and control of strong UVC radiation
- Silicon Carbide based chip for extreme irradiation hardness
- Spectral Response in accordance with DVGW W 294
- TO-39 metal package with 0.054 mm² active chip area
- The chip is made by Cree Research Inc., U.S.A.
- Radiation-hard UVC interference filter is made in Germany

Eigenschaften

- UVC Photodiode mit kleiner photoaktiver Fläche
- Optimale Eignung für Messung starker UVC-Strahlung
- Siliziumcarbide-Chip garantiert extreme Strahlungsfestigkeit
- Spektrale Empfindlichkeit in Übereinstimmung mit DVGW W 294
- TO-39 Metallgehäuse mit 0,054 mm² aktiver Chipfläche
- Chiphersteller: Cree Research Inc., U.S.A.
- Der strahlungsharte Interferenzfilter wird in Deutschland hergestellt

UVC-selective SiC based UV sensor



SG01S-C

Maximum Ratings

| Parameter | Symbol | Value | Unit |
|-----------------------------|------------|-------------|------|
| Operating temperature range | T_{opt} | -25 ... +80 | °C |
| Reverse voltage | V_{Rmax} | 20 | V |

General Characteristics

($T_a = 25\text{ °C}$)

| Parameter | Symbol | Value | Unit |
|---|--------|---------|-----------------|
| Filter aperture | D | 3.6 | mm |
| Active area | A | 0.054 | mm ² |
| Dark current at 1 V reverse bias | I_d | 1 | fA |
| Capacitance | C | 21 | pF |
| Short circuit current for 10 mW/cm ² @ 254 nm | I_0 | ca. 350 | nA |

Spectral Characteristics

($T_a = 25\text{ °C}$)

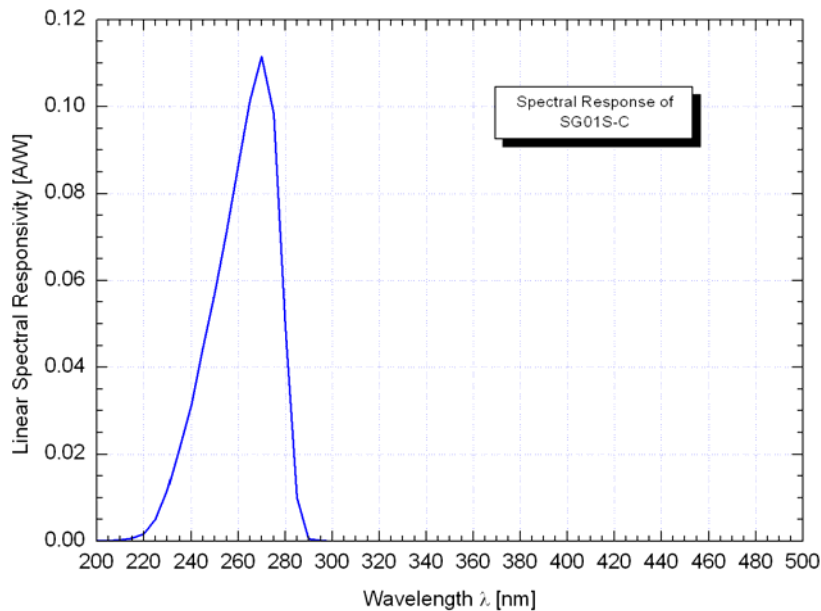
UVC-selective SiC based UV sensor



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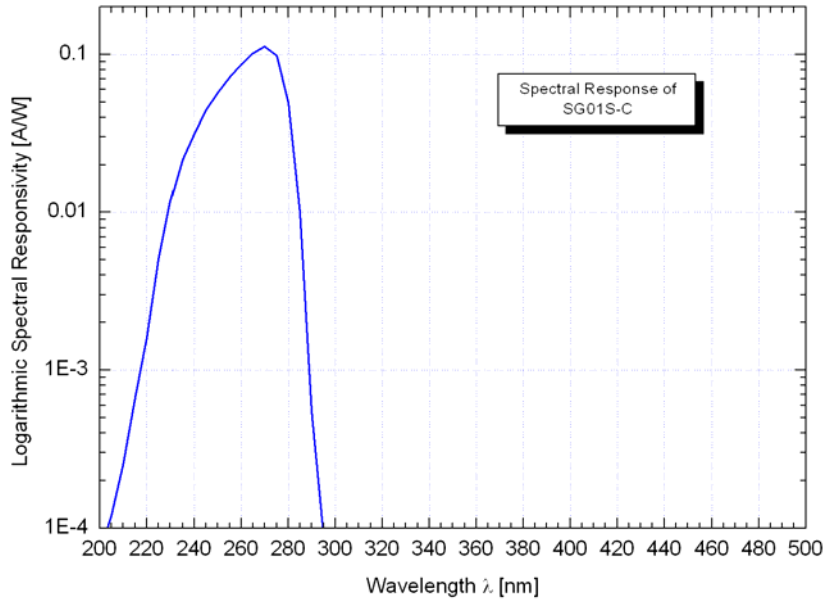
| Parameter | Symbol | Value | Unit |
|--|------------------|-----------|------------|
| Max. spectral sensitivity | S_{max} | 0.11 | $A W^{-1}$ |
| Wavelength of max. spectral sensitivity | λ_{Smax} | 270 | nm |
| Range of spectral sensitivity ($S=0.1*S_{max}$) | - | 230 - 285 | nm |

Linear Spectral Response



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Logarithmic Spectral Response

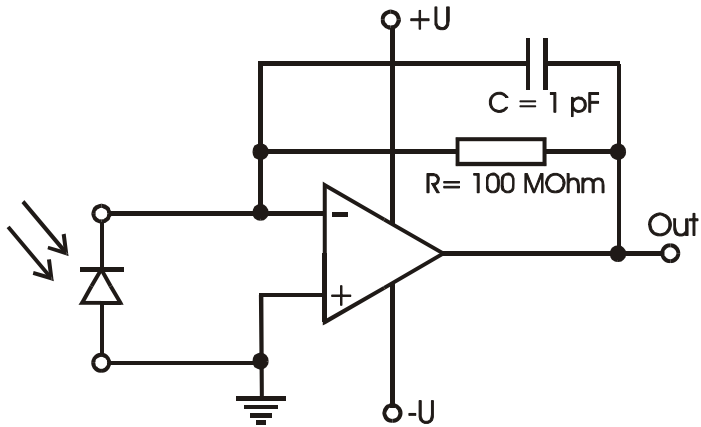


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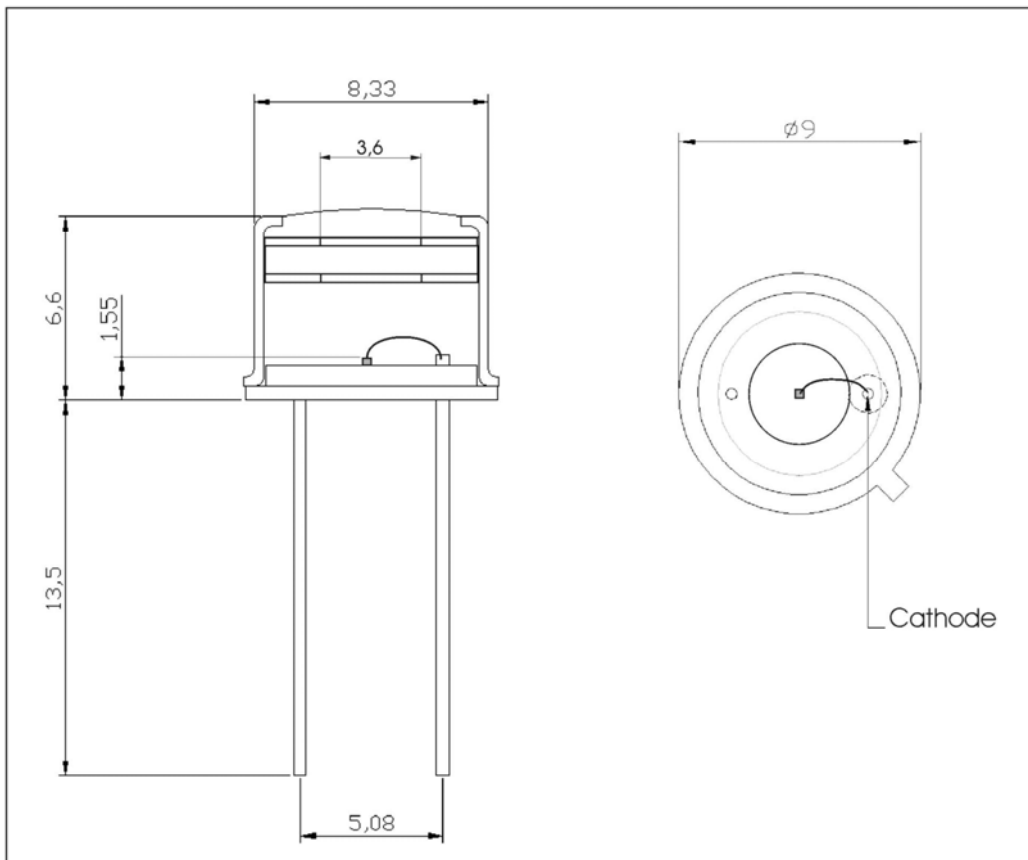


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Application Example



Pin Layout



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