

Ultraviolet selective SiC based UV sensor

with large TO5 housing for broad incident angle



SG01S-5



Features

- Broad Band UVA-UVB-UVC Photodiode
- Optimally suited for UVC high radiation control
- Silicon Carbide based chip for extreme irradiation hardness
- Intrinsic visible blindness due to wide-bandgap semiconductor material
- TO5 metal package with 0,054 mm² active chip area
- The chip is manufactured by Cree Research Inc., U.S.A.

Eigenschaften

- Breitband UVA-UVB-UVC Photodiode
- Optimale Eignung für Messung starker UVC-Strahlung
- Siliziumcarbide-Chip garantiert extreme Strahlungsfestigkeit
- hohe intrinsische Unempfindlichkeit gegenüber dem sichtbaren Licht durch Halbleitermaterial mit hoher Bandlücke
- TO5 Metallgehäuse mit 0,054 mm² aktiver Chipfläche
- Chiphersteller: Cree Research Inc., U.S.A.

Ultraviolet selective SiC based UV sensor

with large TO5 housing for broad incident angle



SG01S-5

Maximum Ratings

Parameter	Symbol	Value	Unit
Operating temperature range	T_{opt}	-25 ... +70	°C
Reverse voltage	V_{Rmax}	20	V

General Characteristics ($T_a = 25\text{ °C}$)

Parameter	Symbol	Value	Unit
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 at bright sun	I_0	ca. 70	nA

Spectral Characteristics ($T_a = 25\text{ °C}$)

Parameter	Symbol	Value	Unit
Max. spectral sensitivity	S_{max}	0,13	A W ⁻¹
Wavelength of max. spectral sensitivity	λ_{Smax}	285	nm
Range of spectral sensitivity ($S=0.1*S_{max}$)	-	210 - 380	nm

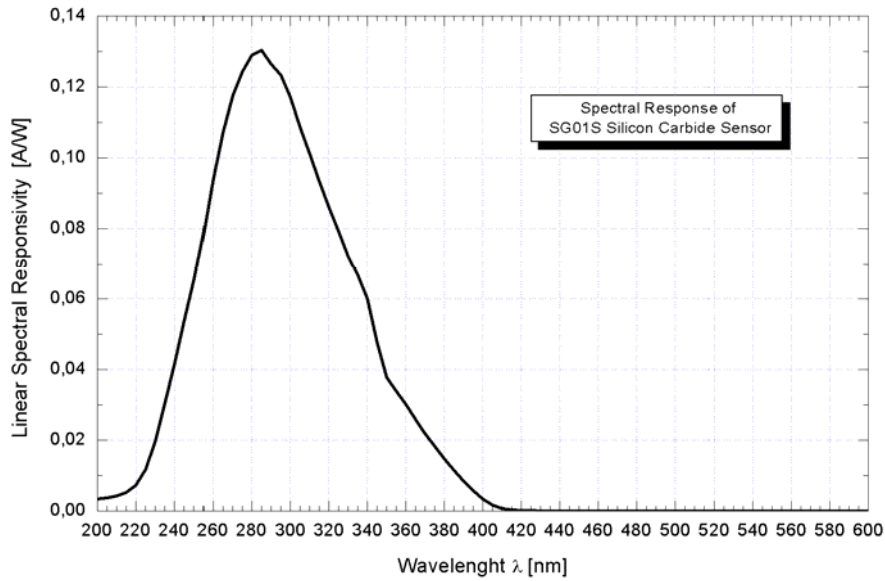
Ultraviolet selective SiC based UV sensor

with large TO5 housing for broad incident angle

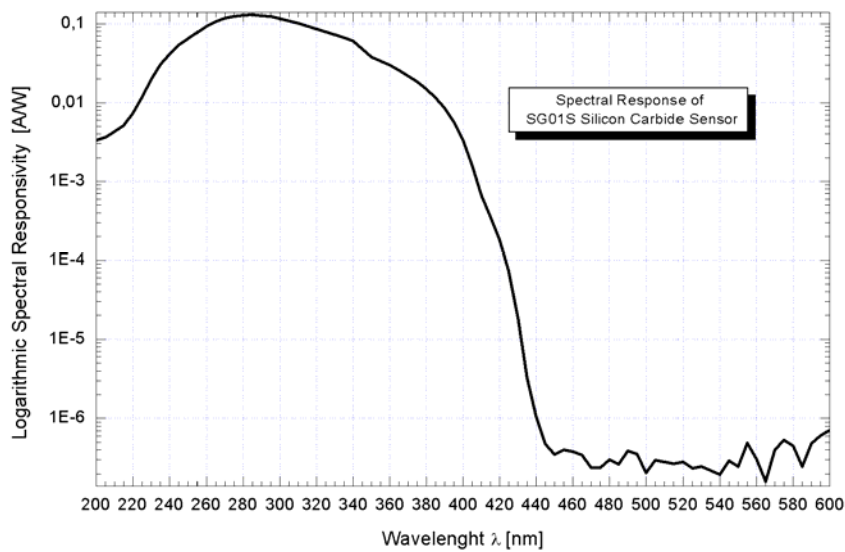


SG01S-5

Linear Spectral Response



Logarithmic Spectral Response



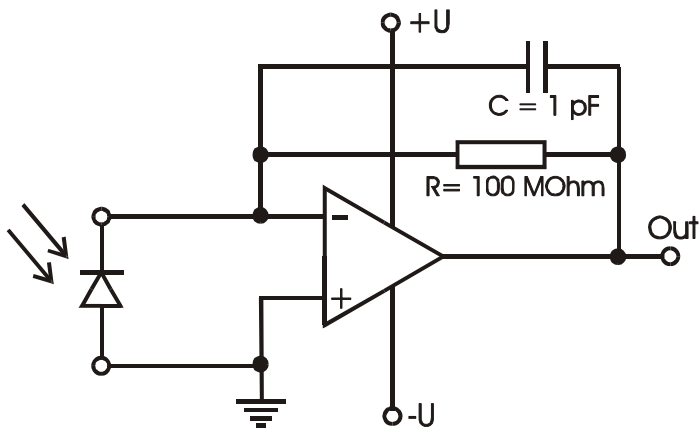
Ultraviolet selective SiC based UV sensor

with large TO5 housing for broad incident angle



SG01S-5

Application Example



Ultraviolet selective SiC based UV sensor

with large TO5 housing for broad incident angle



SG01S-5

Pin Layout

