Ultraviolet selective SiC based UV sensor

SG 01S

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
- TO-18 metal package with 0.054 mm^2 active chip area
- The chip is manufactured by Cree Research Inc., U.S.A.

Maximum Ratings

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

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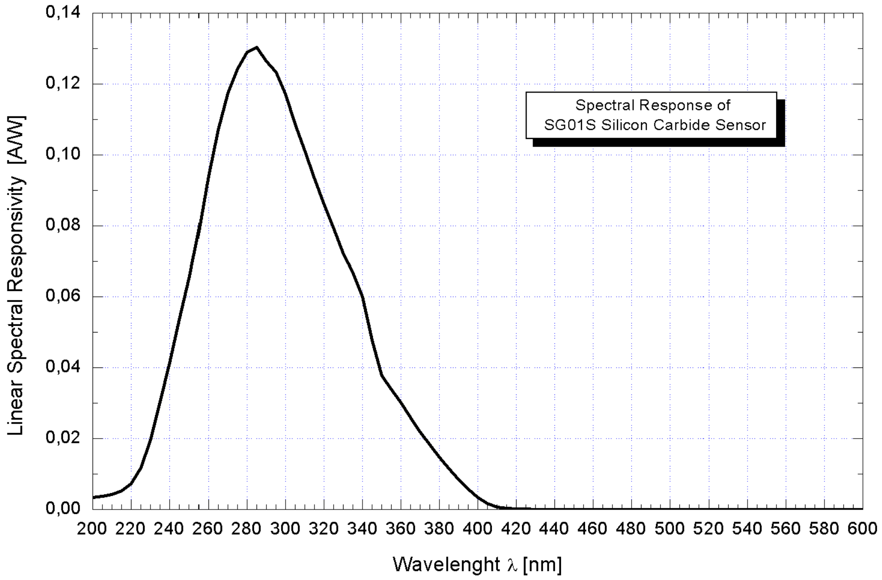
General Characteristics (T_a = 25 ℃)

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

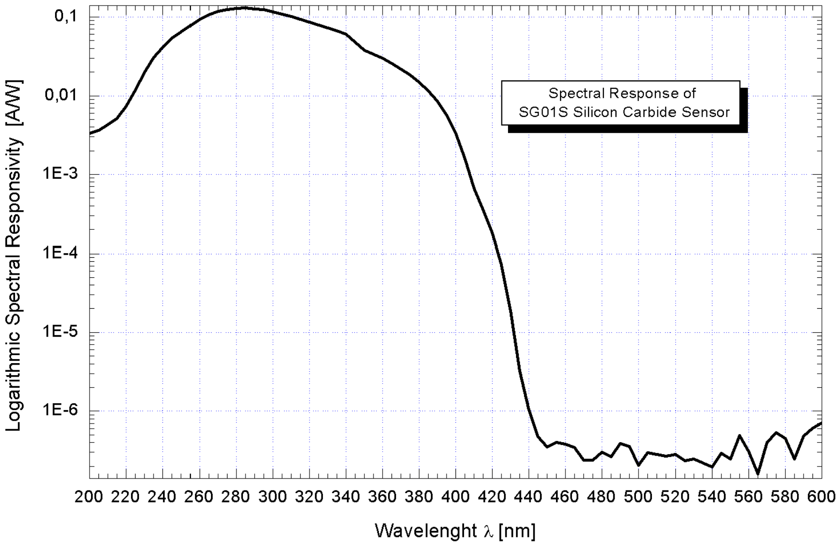
Spectral Characteristics (T_a = 25 ℃)

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

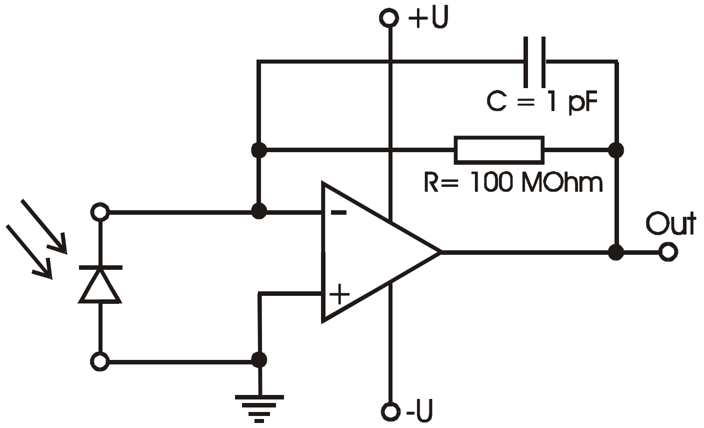
Linear Spectral Response



Logarithmic Spectral Response



Application Example



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