

UVC-selective SiC based UV sensor

SIC01L-5-C



Features

- UVC Photodiode with large photoactive area
- Optimally suited for weak UVC intensities
- Silicon Carbide based chip for extreme irradiation hardness
- Spectral response in accordance with DVGW W 294
- TO-39 metal package with $1.0 \times 1.0 \text{ mm}^2$ SiC chip
- The chip is made by Cree Research Inc., U.S.A.
- Radiation-hard UVC interference filter is made in Germany

Eigenschaften

- UVC Photodiode mit großer photoaktiver Fläche
- Optimale Eignung für Messung schwacher UVC-Strahlung
- Siliziumcarbid-Chip garantiert extreme Strahlungsfestigkeit
- Spektrale Empfindlichkeit in Übereinstimmung mit DVGW W 294
- TO-39 Metallgehäuse mit $1.0 \times 1.0 \text{ mm}^2$ SiC chip
- Chiphersteller: Cree Research Inc., U.S.A.
- Der strahlungsharte Interferenzfilter wird in Deutschland hergestellt

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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	0.96	mm ²
Dark current at 1 V reverse bias	I_d	5	fA
Capacitance	C	200	pF
Short circuit current for 1 mW/cm ² @ 254 nm	I_0	ca. 520	nA

Spectral Characteristics

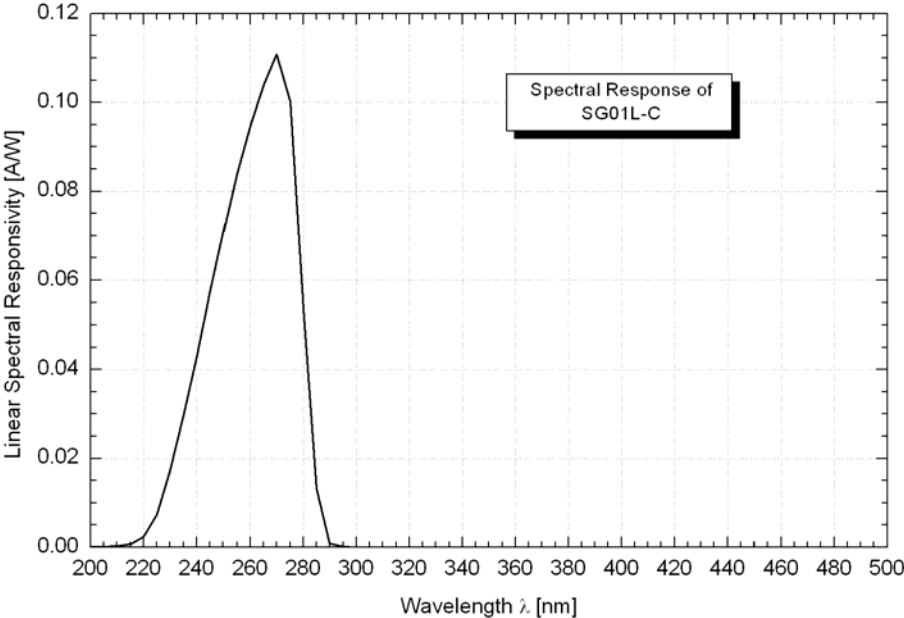
($T_a = 25\text{ °C}$)

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

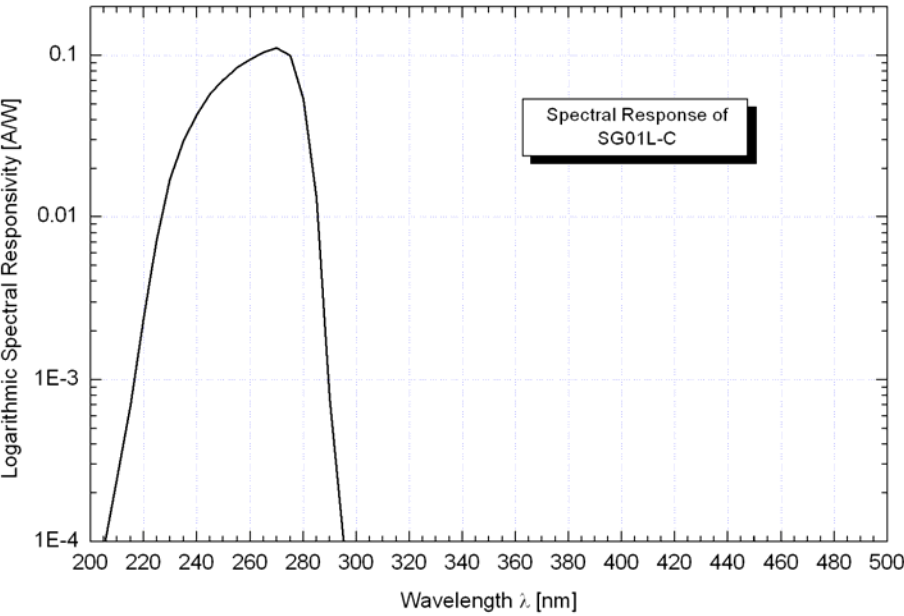
Linear Spectral Response

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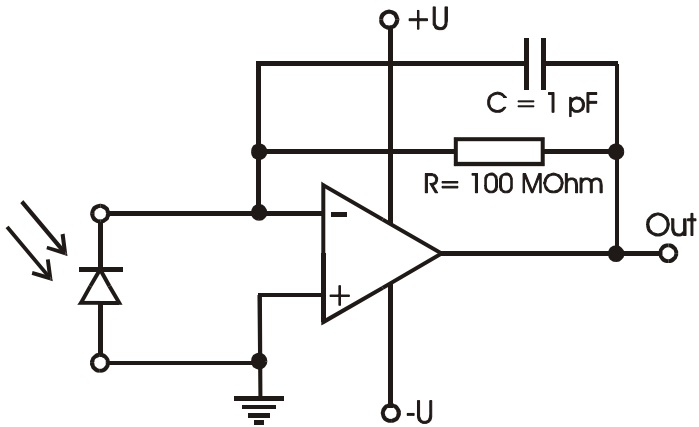
Logarithmic Spectral Response



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Application Example



Pin Layout

