



### **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 mm<sup>2</sup> active chip area
- The chip is made by Cree Research Inc., U.S.A.
- Radiation-hard UVC interference filter is made in Germany

### **Maximum Ratings**

Parameter	Symbol	Value	Unit
Operating temperature range	T <sub>opt</sub>	-25 ... +80	°C
Reverse voltage	V <sub>Rmax</sub>	20	V

# UVC selective SiC based UV sensor



## SG01S-C

### General Characteristics

( $T_a = 25\text{ °C}$ )

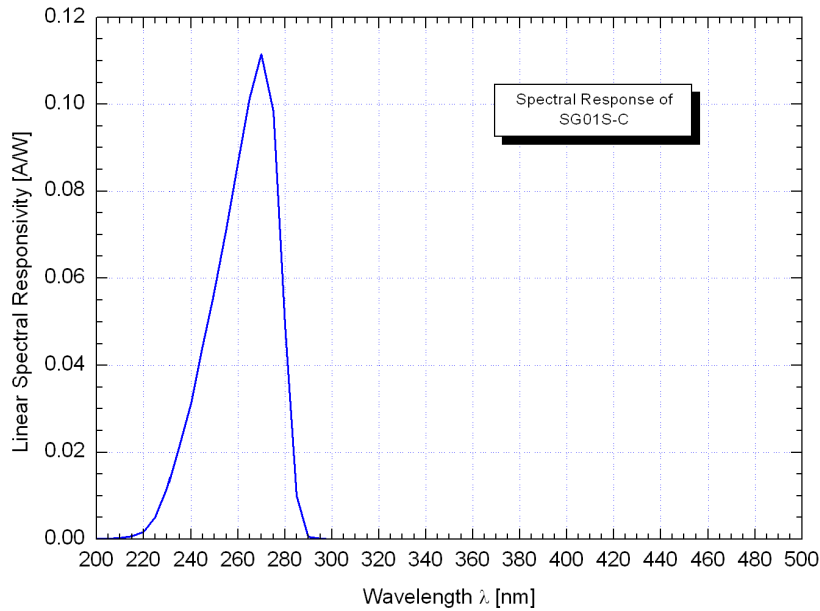
Parameter	Symbol	Value	Unit
Filter aperture	D	3.6	mm
Active area	A	0.054	mm <sup>2</sup>
Dark current at 1 V reverse bias	$I_d$	1	fA
Capacitance	C	21	pF
Short circuit current for 10 mW/cm <sup>2</sup> @ 254 nm	$I_0$	ca. 350	nA

### Spectral Characteristics

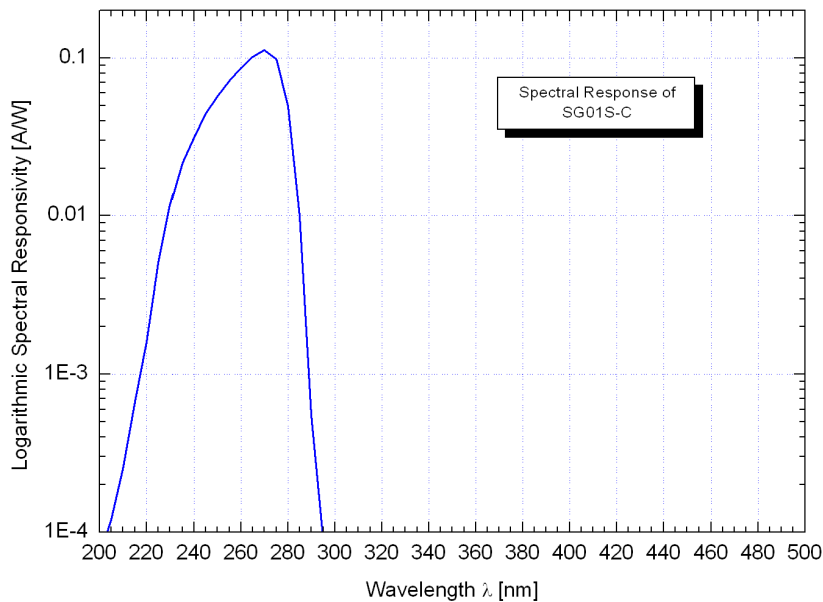
( $T_a = 25\text{ °C}$ )

Parameter	Symbol	Value	Unit
Max. spectral sensitivity	$S_{max}$	0.11	A W <sup>-1</sup>
Wavelength of max. spectral sensitivity	$\lambda_{Smax}$	270	nm
Range of spectral sensitivity ( $S=0.1*S_{max}$ )	-	230 - 285	nm

### Linear Spectral Response

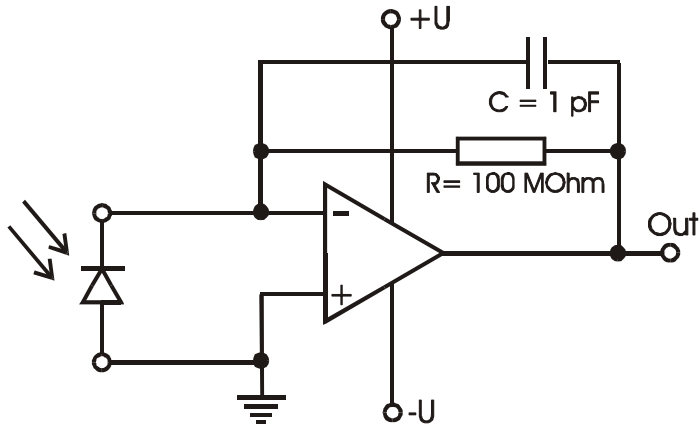


### Logarithmic Spectral Response



## SG01S-C

### Application Example



### Pin Layout

