

SG01-TANDEM-XL

UV-IR photodiode

GENERAL FEATURES

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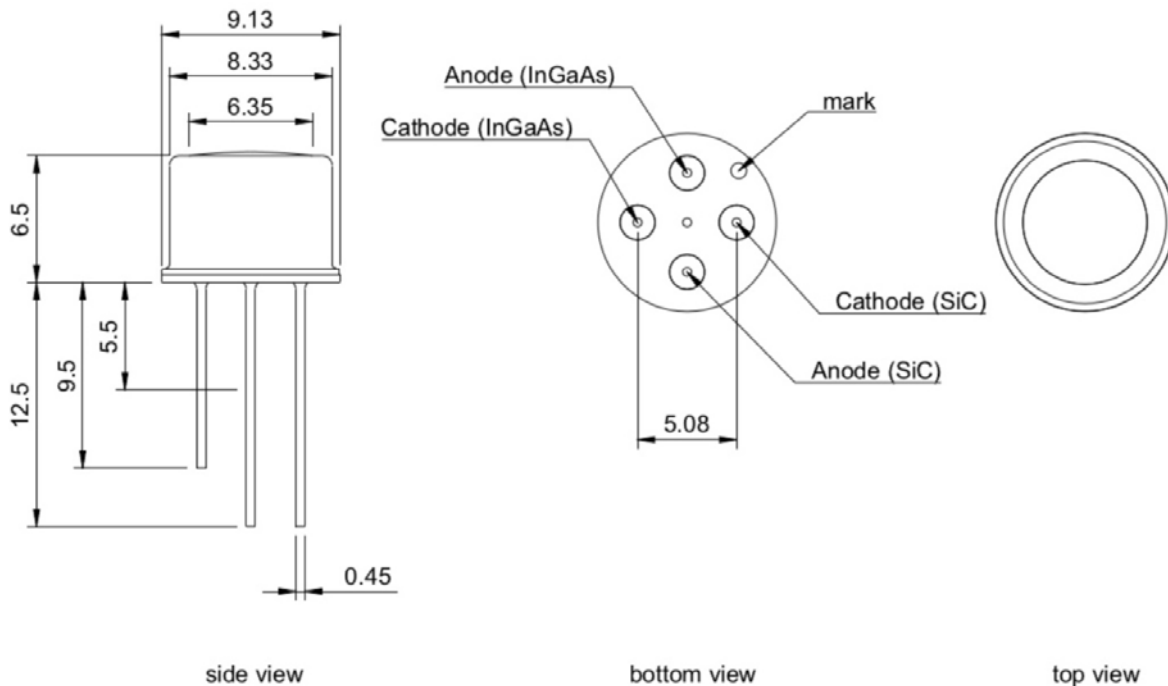


picture for illustration purpose only

Properties of the SG01-TANDEM-XL UV-IR photodiode

- Dual chip UV-IR photodiode
- Active area SiC UV chip = 7.60 mm^2
- Active area InGaAs IR chip = 7.07 mm^2
- TO5 hermetically sealed metal housing,
4 isolated pins and 1 case pin

DRAWINGS



SG01-TANDEM-XL

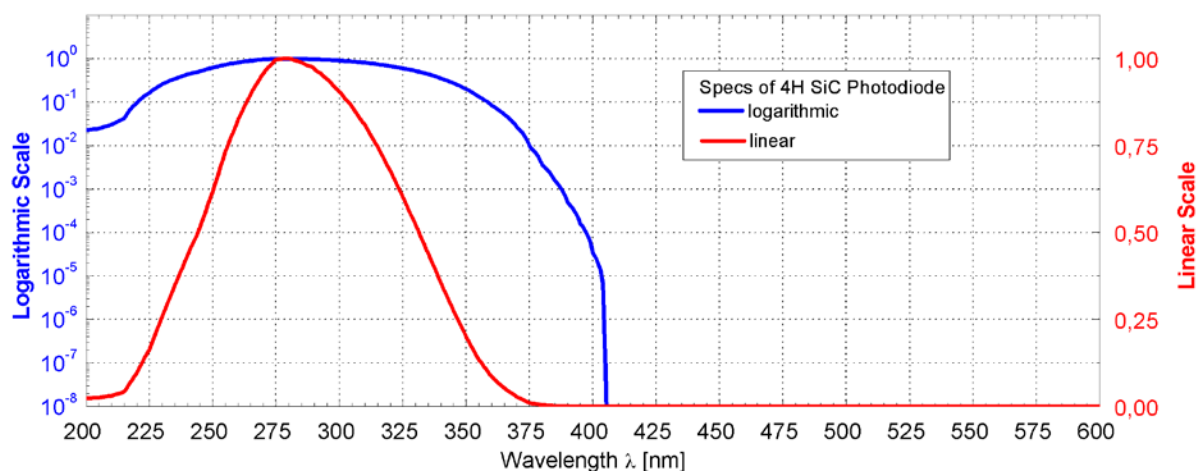
UV-IR photodiode

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SPECIFICATIONS SiC CHIP

Parameter	Symbol	Value	Unit
Spectral Characteristics			
Typical Responsivity at Peak Wavelength	$S_{\max}$	0.130	AW^{-1}
Wavelength of max. Spectral Responsivity	$\lambda_{\max}$	280	nm
Responsivity Range ($S=0.1 \cdot S_{\max}$)	–	221 ... 358	nm
Visible Blindness ($S_{\max}/S_{>405\text{nm}}$)	VB	$> 10^{10}$	–
General Characteristics (T=25°C)			
Active Area	A	7.60	mm^2
Dark Current (1V reverse bias)	I_d	25.3	fA
Capacitance	C	900	pF
Short Circuit ($10\mu\text{W}/\text{cm}^2$ at peak)	I_o	122	nA
Temperature Coefficient	T_c	< 0.1	%/K
Maximum Ratings			
Operating Temperature	T_{opt}	-55 ... +110	°C
Storage Temperature	T_{stor}	-55 ... +110	°C
Soldering Temperature (3s)	T_{sold}	260	°C
Reverse Voltage	V_{Rmax}	20	V

NORMALIZED SPECTRAL RESPONSIVITY OF THE SiC CHIP



SG01-TANDEM-XL

UV-IR photodiode

SPECIFICATIONS InGaAs CHIP WITH RG850 FILTER

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Parameter	Symbol	Value	Unit
Spectral Characteristics			
Typical Responsivity at Peak Wavelength	$S_{\max}$	1.00	AW^{-1}
Wavelength of max. Spectral Responsivity	$\lambda_{\max}$	1550	nm
Responsivity Range ($S=0.1 \cdot S_{\max}$)	-	835 ... 1730	nm
Capacitance at reverse voltage 5V and $f = 1\text{MHz}$	C	1550	pF
General Characteristics (T=25°C)			
Active area (3,00mm diameter)	A	7.07	mm^2
Shunt resistance (25°C)	R_{s_1}	12	$\text{M}\Omega$
Shunt resistance (60°C)	R_{s_2}	1	$\text{M}\Omega$
Dark current (5V reverse bias and 25°C)	I_d	10	nA
Maximum Ratings			
Operating temperature	T_{opt}	-40 ... +85	°C
Please note strongly rising dark current above $T=60^\circ\text{C}$.			
Storage temperature	T_{stor}	-40 ... +125	°C
Soldering temperature (5s)	T_{sold}	260	°C

NORMALIZED SPECTRAL RESPONSIVITY OF THE InGaAs CHIP WITH RG850 FILTER

