

SiC-photodiode JEA5

Characteristics :

- ◆ large area monolithic SiC photodiode
- ◆ active area: 5 mm²
- ◆ circular sensor area
- ◆ spectral range: 215 ... 360 nm
- ◆ high UV-responsivity: 0,16 A/W
- ◆ hermetically sealed TO39-package
- ◆ components are ROHS, REACH and WEEE conform

Applications :

- ◆ UV-measurement only
- ◆ UV-source control
- ◆ flame detection



Maximum Ratings :

- ◆ reverse voltage 20 V
- ◆ operating temperature range - 40 °C ... 100 °C
- ◆ storage temperature range - 40 °C ... 125 °C
- ◆ soldering temperature (3s) 260 °C

Technical Data :

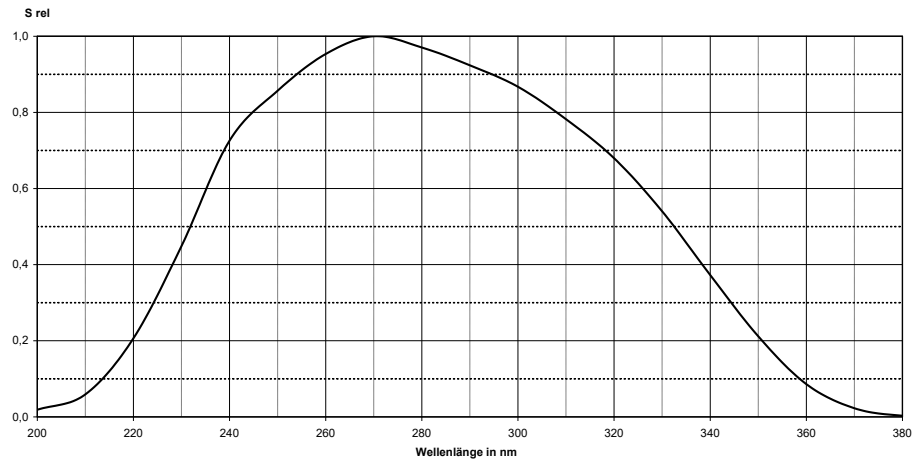
test conditions, as not otherwise specified: T_A = 25 °C , V_R = 0 V

parameter	test condition	typical	unit
active area		Ø 2,525	mm
maximum of spectral responsivity	λ _{max} = 270 nm	0,16	A/W
spectral range	S = 0,1 x S _{max}		
λ _{min}		215	nm
λ _{max}		360	
absolute spectral responsivity	λ = 254 nm	0,14	A/W
dark current I _R	E = 0 lx	500	fA
rise time t _r of photocurrent	R _L = 50 Ω λ = 254 nm I _p = 10 μA	tbc	ns
capacitance	F = 1 MHz E = 0 lx	1.000	pF

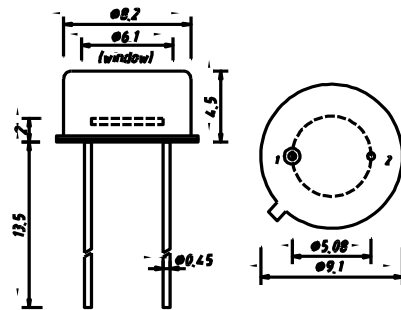
rev. 2 (04/2017)

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Relative Spectral Responsivity



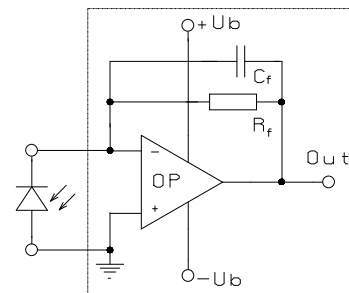
Package Dimensions



1 anode
2 cathode & case

bottomview

Application Example



The application example shows a typical circuit. R_f is responsible for the gain of the circuit. C_f compensates the reverse junction capacitance of the photodiode and the input capacitance of the OP-amp. the exact value of C_f depends on R_f , used OP-amp and capacitance of the circuit. A typical value is 1 pF.

The chart shows dependence of amplitude of the application circuit with OP-amp = AD795, $R_f = 10 \text{ M}\Omega$ and $C_f = 1 \text{ pF}$.

