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SiC - photodiode JEC 0,1 ID

characteristics :

- spectral range 210 ... 380 nm
- active SiC- chip area 0,055 mm^2
- integrated diffusor
- sensor isolated to package
- TO 39-package

applications :

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

maximum ratings:

reverse voltage	20	V
operating temperature range	- 25 °C ... 70	°C
storage temperature range	-40 °C ... 100	°C
soldering temperature (3s)	260	°C

technical data:

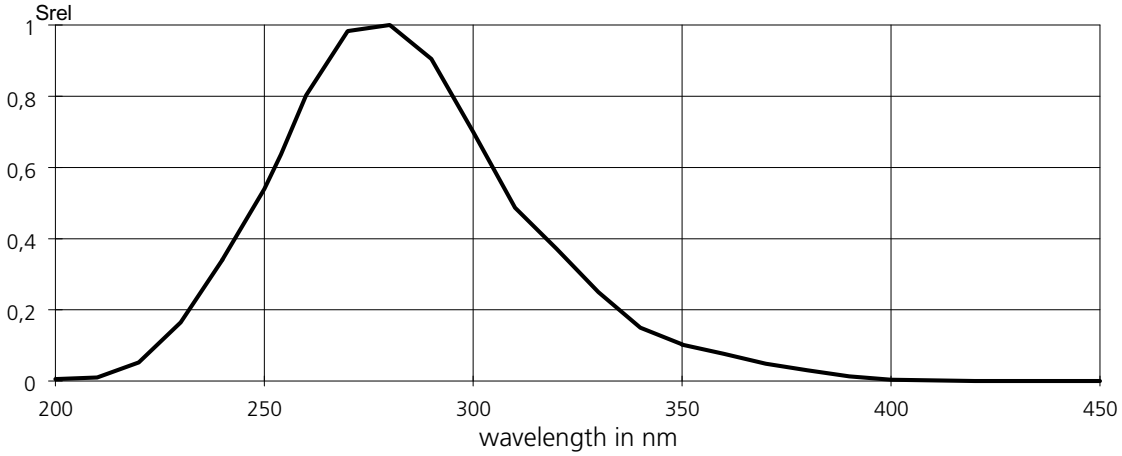
test conditions, as not otherwise specified: γ_a = 25 °C, V_R = 0V

parameter	test condition	min.	typ.	max.	unit
sensitive area (diffusor)			16		mm^2
spectral range		210		380	nm
maximum of spectral responsivity *	λ_{max} = 275 nm		0,25		mA/W
absolute spectral responsivity *	λ = 254 nm		0,18		mA/W
dark current I_R	V_R = 1 V		1		fA
short current (sun light)	bright sun cloudy		50 20		nA
capacitance			21		pF

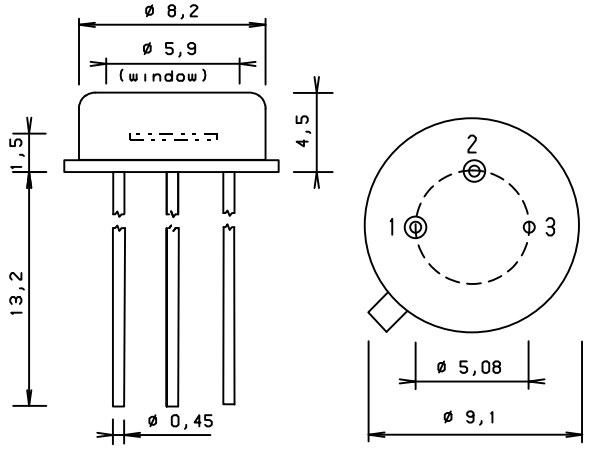
(* based on sensitive area of diffusor

DATA SHEET

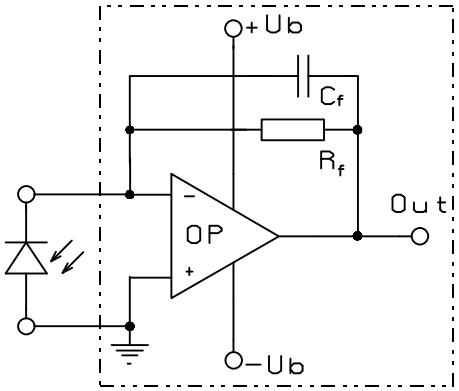
relative spectral responsivity



package dimensions



application example



1 kathode
2 anode
3 case

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

The diagram shows dependence of amplitude of the application circuit with OPA 111, R_f = 50 MΩ and C_f = 0.5 pF.