



SiC - photodiode JEC 0,1 ID



- characteristics :**
- ◆ spectral range 210 ... 380 nm
 - ◆ active SiC- chip area 0,055 mm²
 - ◆ 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: $\gamma_a = 25 \text{ °C}$, $V_R = 0V$

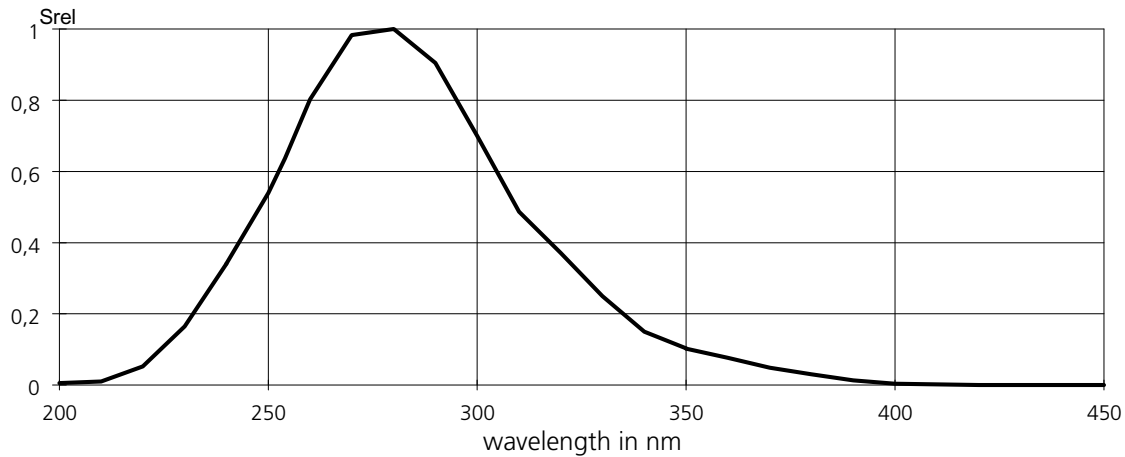
parameter	test condition	min.	typ.	max.	unit
sensitive area (diffusor)			16		mm ²
spectral range		210		380	nm
maximum of spectral responsivity *	$\lambda_{max} = 275 \text{ nm}$		0,25		mA/W
absolute spectral responsivity *	$\lambda = 254 \text{ nm}$		0,18		mA/W
dark current I_R	$V_R = 1 \text{ V}$		1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

(* based on sensitive area of diffusor)

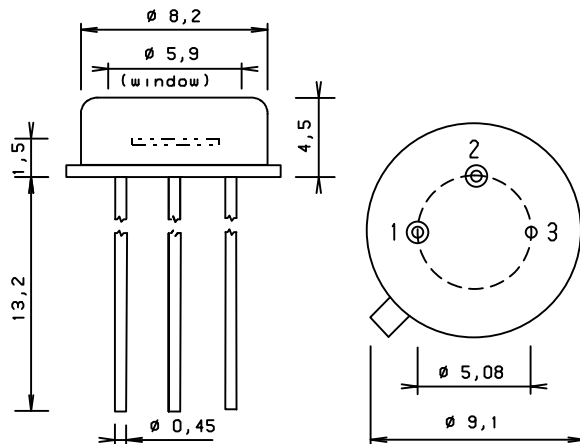


DATA SHEET

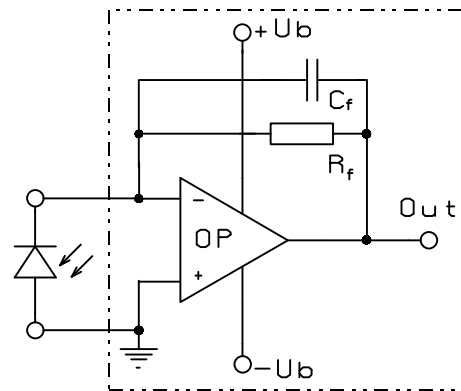
relative spectral responsivity



package dimensions



application example



- 1 kathode
- 2 anode
- 3 case

The application example shows a typical circuit. 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, $R_f = 50 \text{ M}\Omega$ and $C_f = 0.5 \text{ pF}$.

