

# SiC - photodiode JEC 0,3 E



- characteristics :**
- ◆ SiC-photodiode with integrated special filter
  - ◆ response approximately (CIE 87)
  - ◆ optimized for solar application
  - ◆ hermetically sealed package
  - ◆ components are in conformity with RoHS and WEEE

- applications :**
- ◆ UV-measurement only
  - ◆ measurement of erythema efficient UV-part on natural sunlight

**absolute maximum ratings :**

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

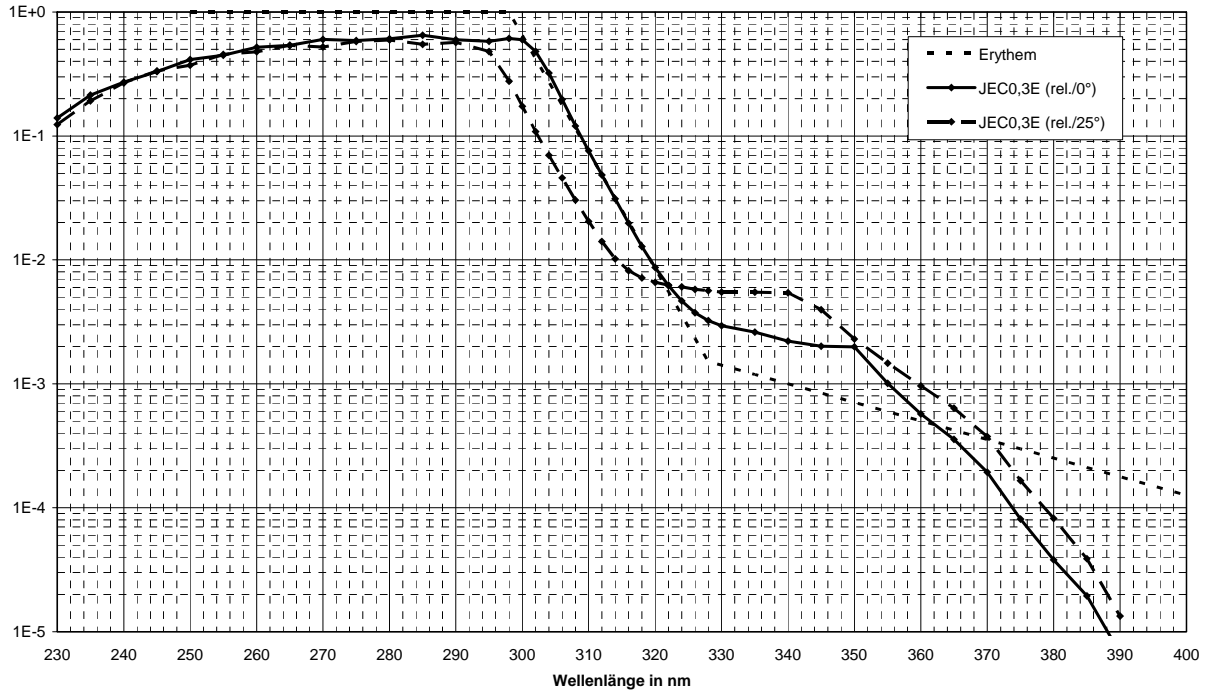
**technical data :**

common test conditions if not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_R = 0\text{ V}$

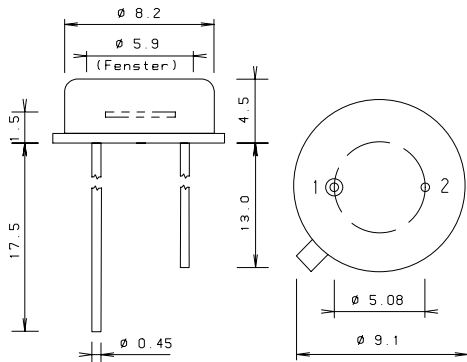
parameters	test condition	min.	typ.	max.	unit
active area			0,22		mm <sup>2</sup>
chipsize			0,5x0,5		mm <sup>2</sup>
max. spectral responsivity	$S = S_{\max}$	0,075	0,1	0,13	A/W
absolute spectralresponsivity	$\lambda = 312\text{ nm}$		0,008		A/W
Dark current $I_R$	$V_R = 1\text{ V}$		10		fA
capacitance			80		pF

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## relative spectrale responsivity

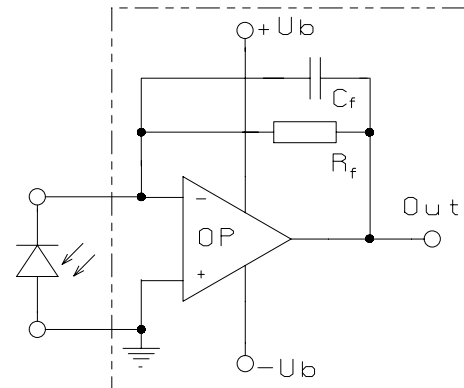


## package dimension



- 1 Kathode
- 2 Anode & Case

## application example



The application example shows a typical electrical application circuit.

$R_f$  determines responsivity of the circuit, typical values are 100 MOhm to 1 GOhm.

$C_f$  works as compensation of junction capacity of the photodiode and input capacity of the OP-amplifier.

Exact value of  $C_f$  depends on  $R_f$ , used OP-Amp as well as the parasitic capacities of the electrical circuit, typical value is 1 pF at minimum. For static measurements (UVI)  $C_f$  can be chosen much higher (1nF), so an additional effective suppression of noise of the amplifier can be achieved..

