

# SiC - photodiode JEC 0.1



- characteristics :
- ◆ spectral range 210 ... 380 nm
  - ◆ active area 0.055 mm<sup>2</sup>
  - ◆ high UV - response 0.13 A/W
  - ◆ TO 39-package

- applications :
- ◆ UV-measurement only
  - ◆ UV-source control (for instance in sterilizers)
  - ◆ flame detection

maximum ratings:

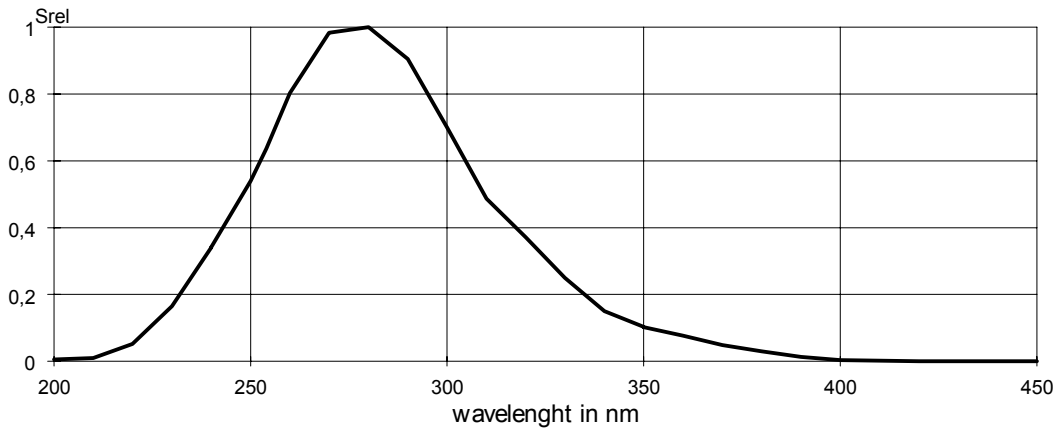
maximum reverse voltage	20 V
operating temperature range	- 25 °C ... 70°C
storage temperature range	- 40 °C ... 100°C
soldering temperature (3s)	260 °C

technical data :

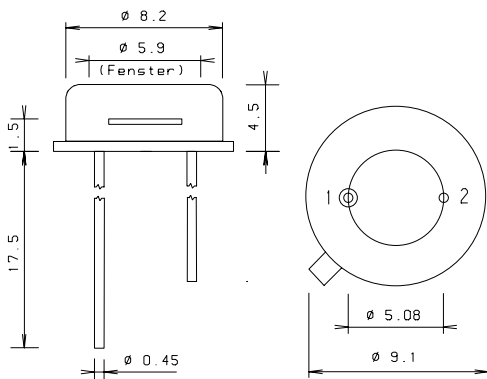
test conditions, as not otherwise specified:  $\gamma_a = 25\text{ °C}$ ,  $V_R = 0V$

parameters	test conditions	min.	typ.	max.	unit
active area			0.25 x 0.25		mm <sup>2</sup>
spectral range		210		380	nm
maximum of spectral responsivity	$\lambda_{max} = 275\text{ nm}$		0.13		A/W
absolute spectral responsivity	$\lambda = 254\text{ nm}$		0.11		A/W
dark current $I_R$	$V_R = 1\text{ V}$		1		fA
short current (Sonnenlicht)	bright sun		50		$\mu\text{A}$
	cloudy		20		
capacitance			21		pF

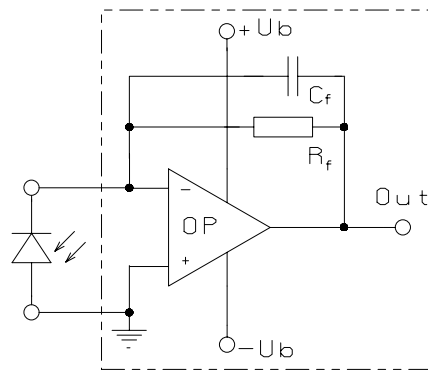
## relative spectral response



## package dimensions



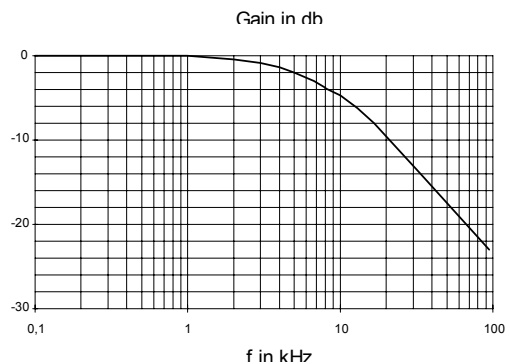
## application example



- 1 Kathode
- 2 Anode & 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  $C_f = 0.5 \text{ pF}$ .



**For more information & quotations, please contact:**  
**ELECTRO OPTICAL COMPONENTS, Inc.**, 5460 Skylane Blvd., Santa Rosa, CA 95403  
 Email: [info@eoc-inc.com](mailto:info@eoc-inc.com) • Web site: [www.eoc-inc.com](http://www.eoc-inc.com)  
 Tel: 707-568-1642, Fax: 707-568-1652