

# SiC - photodiode JEC 0.3S/JEC 0.3SS



- characteristics :
- ◆ spectral range 210 ... 380 nm
  - ◆ active area 0.22 mm<sup>2</sup>
  - ◆ high UV-responsivity 0.13 A/W
  - ◆ TO 18-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:  $\gamma_a = 25\text{ °C}$ ,  $V_R = 0\text{V}$

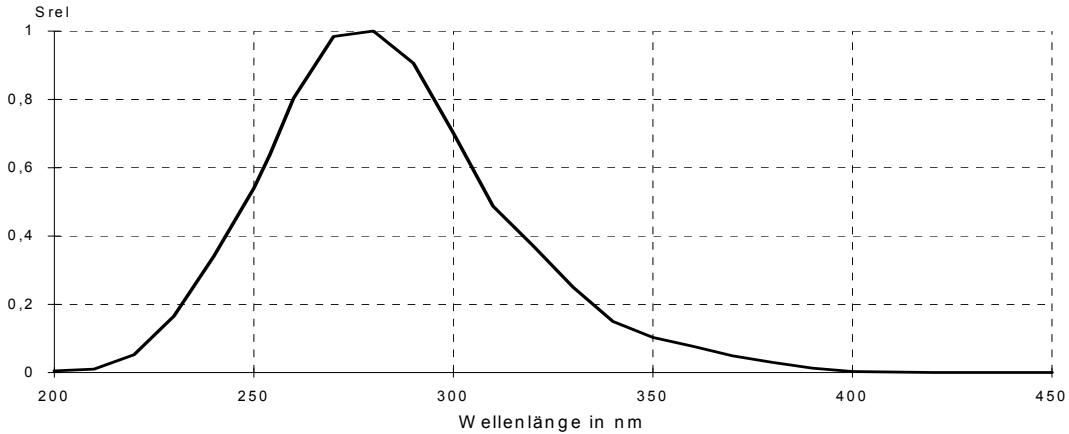
parameter	test condition	min.	typ.	max.	unit
active area			0.5 x 0.5		mm <sup>2</sup>
spectral range		210		380	nm
maximum of spectral responsivity	$\lambda_{\text{max}} = 275\text{ nm}$		0.13		A/W
absolute spectral responsivity	$\lambda = 254\text{ nm}$		0.11		A/W
dark current $I_R$	$V_R = 1\text{ V}$		1		fA
capacitance			80		pF

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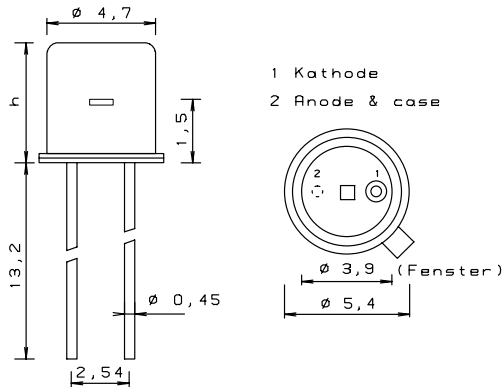
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# JEC 0.3S/JEC 0.3SS

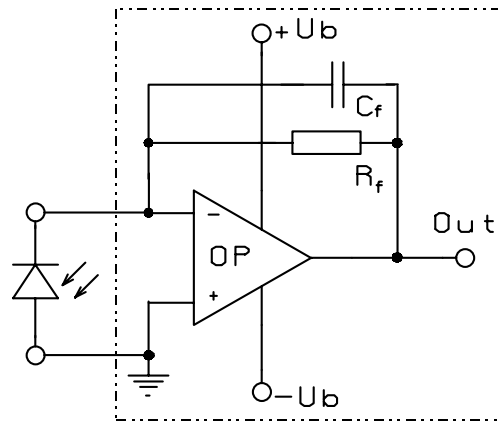
## relative spectral responsivity



## package dimensions



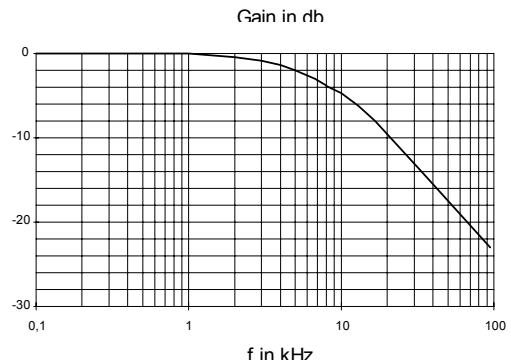
## application example



JEC 0.3S    h = 5.2 mm  
JEC 0.3SS    h = 3.7 mm

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