

SiC - photodiode JEC 0.1S/JEC 0.1SS



- characteristics :
- ◆ spectral range 210 ... 380 nm
 - ◆ active area 0.055 mm²
 - ◆ 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

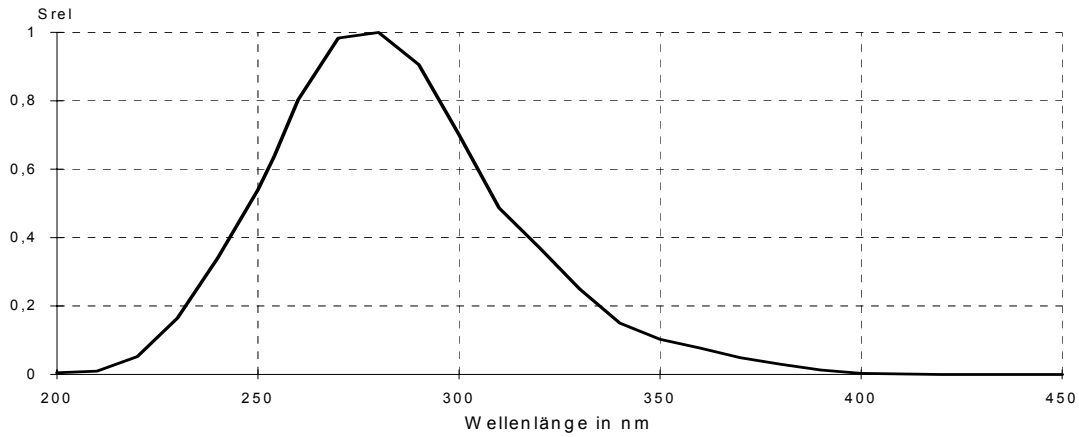
technical data:

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

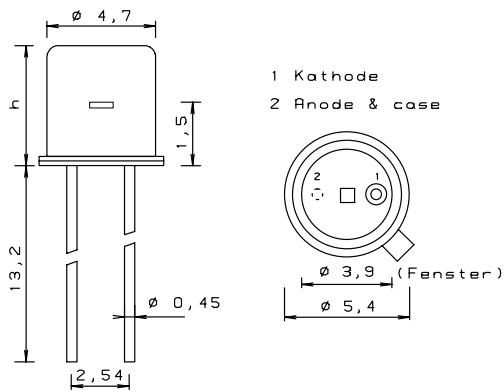
parameter	test condition	min.	typ.	max.	unit
active area			0.25 x 0.25		mm ²
spectral range		210		380	nm
maximum of spectral responsivity	$\lambda_{\max} = 275\text{ nm}$		0.13		A/W
absolute spectral responsivity	$\lambda = 254\text{ nm}$		0.11		A/W
dark current I_R	$V_R = 1\text{ V}$		1		fA
short current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

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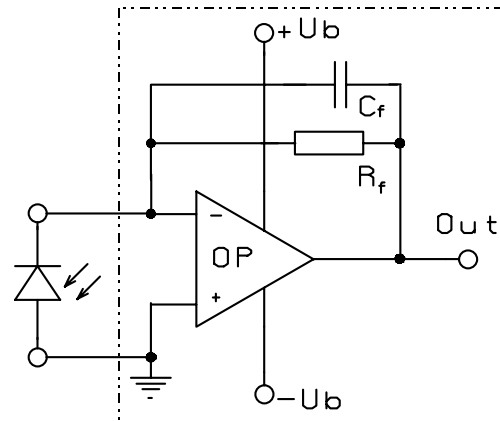
relative spectral responsivity



package dimensions



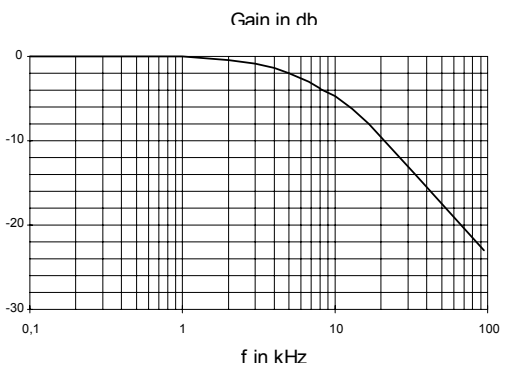
application example



JEC 0.1S $h = 5.2 \text{ mm}$
JEC 0.1SS $h = 3.7 \text{ mm}$

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:
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