

SiC - photodiode JEC 0,3-4SHT/ JEC 0,3-4SSHT



- characteristics :**
- ◆ spectral range 210 ... 380 nm
 - ◆ active arrea 0,22 mm²
 - ◆ high UV-responsivity 0,13 A/W
 - ◆ TO 18-package
 - ◆ suitable for operating temperatures up to 150 °C
 - ◆ components are in conformity with RoHS and WEEE

- applications :**
- ◆ UV-measurements only
 - ◆ UV-source control
 - ◆ flame detection

maximum ratings:

| | | |
|-----------------------------|------------------|----|
| reverse voltage | 20 | V |
| operating temperature range | - 25 °C ... +150 | °C |
| storage temperature range | -25 °C ... +150 | °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 | | | 0,5 x 0,5 | | 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 | $V_R = 1\text{ V}$ | | 5 | | fA |
| capacitance | | | 80 | | pF |

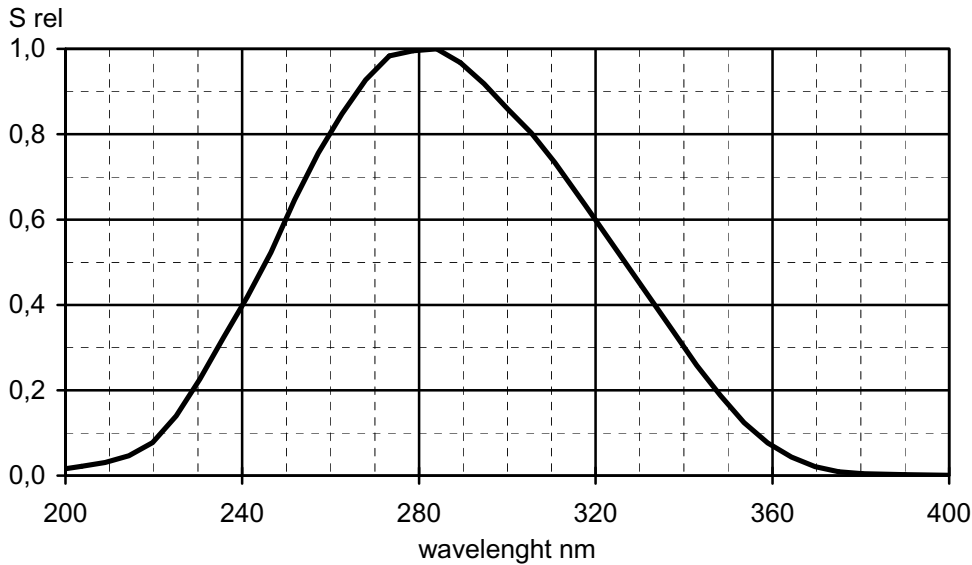
rev. 2 (03/2009)

For more information:

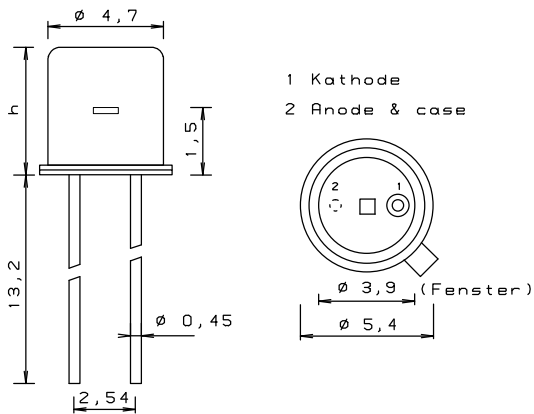
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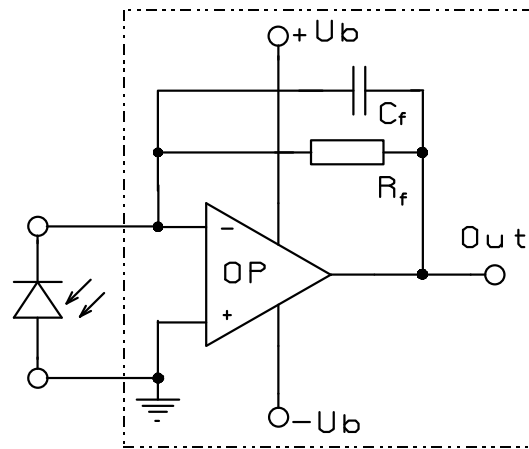
relative spectral responsivity



package dimensions



application example



JEC 0,3-4SHT h = 5,2 mm
 JEC 0,3-4SSHT 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 $C_f = 0.5 \text{ pF}$.

