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# SiC - photodiode JEC 0,1I

**ifw**

**characteristics :**
- spectral range            210 ... 380      nm
- active area                    0,055     mm$^2$
- high UV - response            0,13      A/W
- TO 39-package
- photodiode isolated to package
- components are in conformity with RoHS and WEEE

**applications :**
- UV-measurement only
- UV-source control (for instance in sterilizers)
- flamedetection

**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:  $\gamma_a = 25$ °C, $V_R = 0V$

| parameters | test conditions | min. | typ. | max. | unit |
|---|---|---|---|---|---|
| active area | | | 0,25 x 0,25 | | mm$^2$ |
| spectral range | | 210 | | 380 | nm |
| maximum of spectral responsivity | $\lambda_{max} = 275$ nm | | 0,13 | | A/W |
| absolute spectral responsivity | $\lambda = 254$ nm | | 0,11 | | A/W |
| dark current $I_R$ | $V_R = 1$ V | | 1 | | fA |
| short current (sunlight) | bright sun   cloudy | | 50   20 | | µA |
| capacitance | | | 21 | | pF |

**D A T A   S H E E T**

## relative spectral response



wavelenght in nm
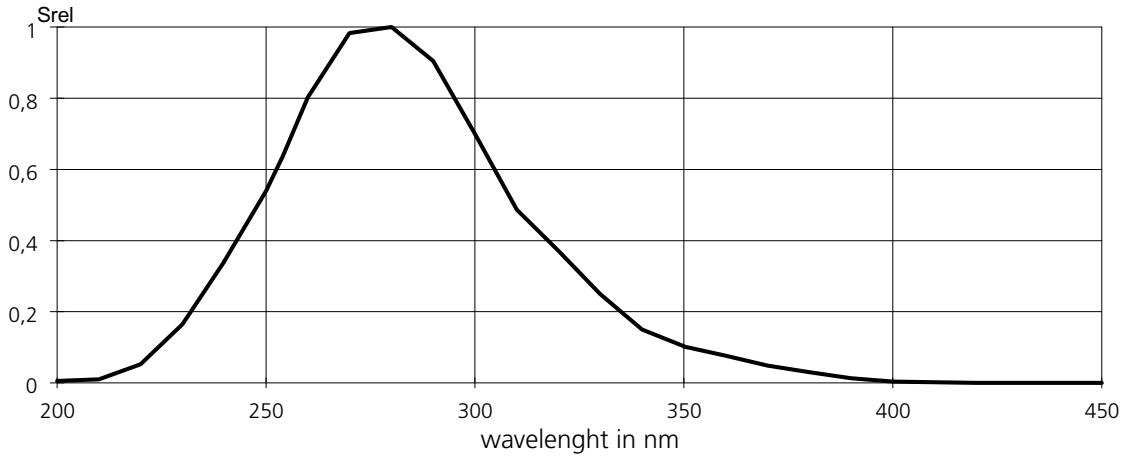
## package dimensions
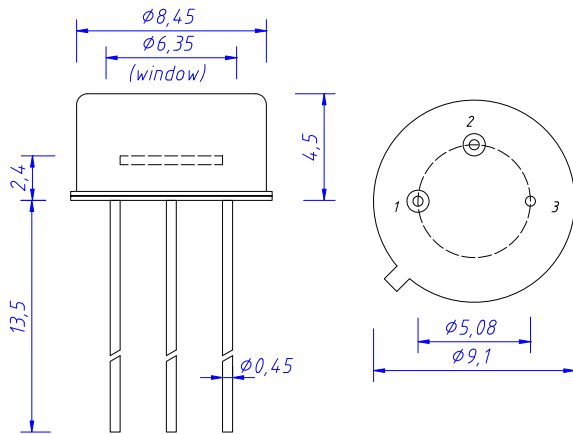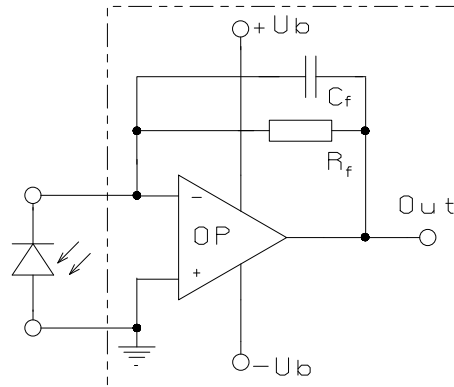


1 kathode
2 anode
3 case

## appplication example



The application example shows a typical circut.. $R_f$ 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, $R_f = 50$ MΩ and $C_f = 0.5$ pF.



Gain in db

f in kHz