

## SiC-photodiode JEA5

**preliminary data sheet**

**characteristics :**

- ◆ large area monolithic SiC photodiode
- ◆ active area: 5 mm<sup>2</sup>
- ◆ spectral range: 215 ... 360 nm
- ◆ high UV-responsivity: 0,16 A/W
- ◆ hermetically sealed TO39-package
- ◆ components are ROHS and WEE conform

**applications :**

- ◆ UV-measurement only
- ◆ UV-source control
- ◆ flame detection



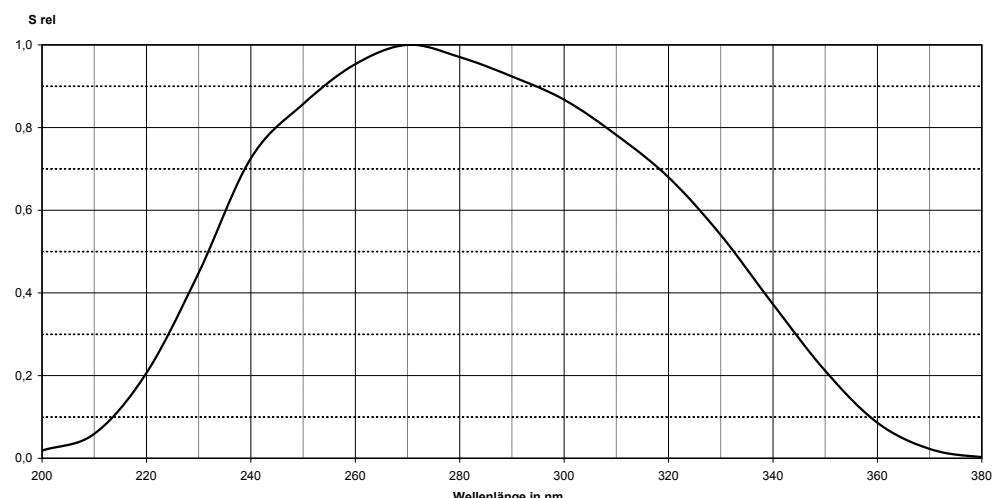
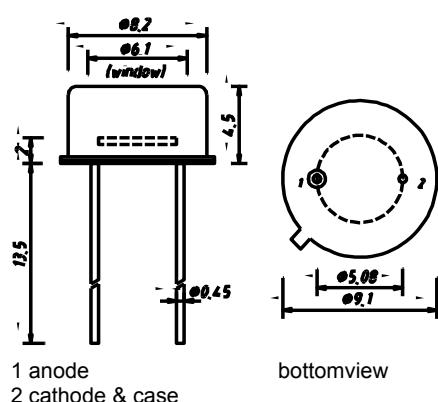
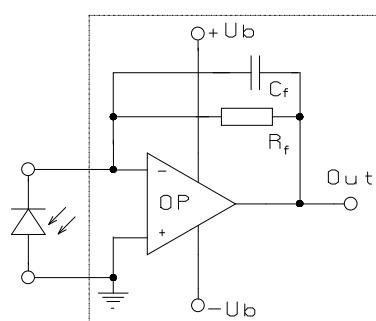
**maximum ratings :**

- ◆ reverse voltage 20 V
- ◆ operating temperature range - 40 °C ... 100 °C
- ◆ storage temperature range - 40 °C ... 125 °C
- ◆ soldering temperature (3s) 260 °C

**technical data :**

test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C , V<sub>R</sub> = 0 V

parameter	test condition	typical	unit
active area		Ø 2,525	mm
maximum of spectral responsivity	$\lambda_{\max} = 270 \text{ nm}$	0,16	A/W
spectral range $\lambda_{\min}$ $\lambda_{\max}$	$S = 0,1 \times S_{\max}$	215 360	nm
absolute spectral responsivity	$\lambda = 254 \text{ nm}$	0,14	A/W
dark current I <sub>R</sub>	E = 0 lx	500	fA
rise time t <sub>r</sub> of photocurrent	$R_L = 50 \Omega$ $\lambda = 254 \text{ nm}$ $I_p = 10 \mu\text{A}$	tbc	ns
capacitance	F = 1 MHz E = 0 lx	1.000	pF

**SiC-photodiode  
JEA5**
**relative spectral responsivity****Package dimensions****application example**

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 the input capacitance of the OP-amp.. the exact value of  $C_f$  depends on  $R_f$ , used OP-amp and capacitance of the circuit. A typical value is 1 pF.

The chart shows dependence of amplitude of the application circuit with OP-amp = AD795,  $R_f = 10 \text{ M}\Omega$  and  $C_f = 1 \text{ pF}$ .

