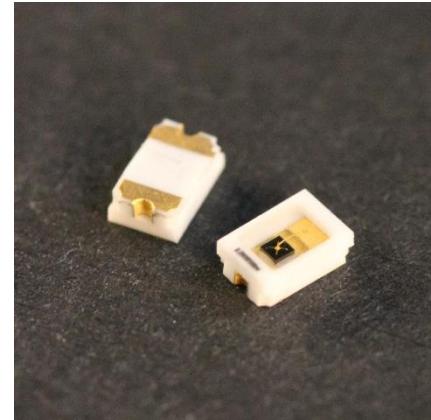


**ifw** optronics

## SiC-Photodiode JEA0,25SMD

preliminary data sheet**charakteristic :**

- ◆ active area: 0,25 mm<sup>2</sup>
- ◆ spectral range: 205 ... 355 nm
- ◆ high UV-responsivity: 0,18 A/W
- ◆ ceramic SMD housing
- ◆ RoHS, REACH and WEEE conform

**applications :**

- ◆ optical measurements in UV-range
- ◆ control of sterilization lamps
- ◆ flame control

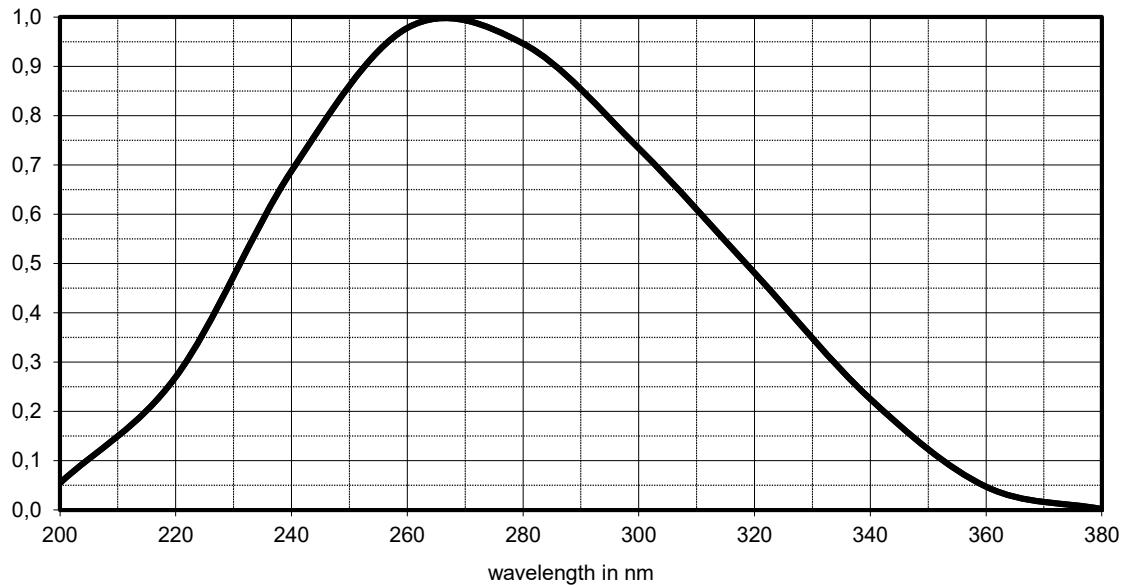
**absolute maximum ratings :**

◆ reverse voltage	10 V
◆ operating temperature range	- 40 °C ... 125 °C
◆ storage temperature range	- 40 °C ... 125 °C
◆ soldering temperature (3s)	260 °C

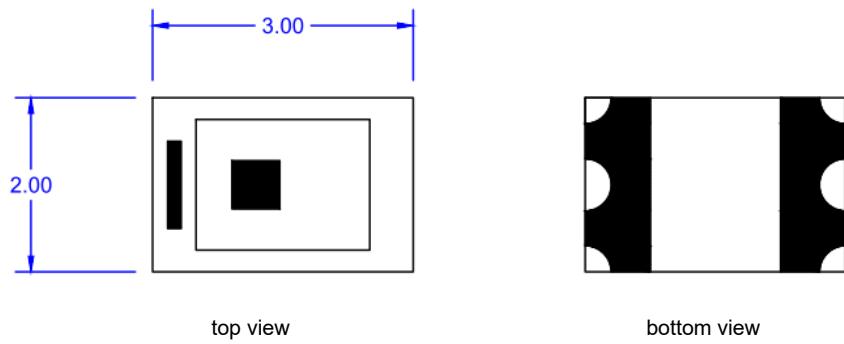
**technical data :**test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C , V<sub>R</sub> = 0 V

Parameter	Mess- bedingungen	Messwerte	Einheit
active area		0,55x0,55	mm <sup>2</sup>
spectral range λ <sub>min</sub> λ <sub>max</sub>	S = 0,1 x S <sub>max</sub>	210 355	nm nm
wavelenght of peak response		265	nm
peak response S <sub>max</sub>	λ = 265 nm	0,18	A/W
spectral response S <sub>254nm</sub>	λ = 254 nm	0,16	A/W
dark current I <sub>R</sub>	V <sub>R</sub> = 1 V	10	fA
junction capacitance C	f = 10 kHz	75	pF
field of view (FOV)		±70°	Grad
weight		0,03	Gramm

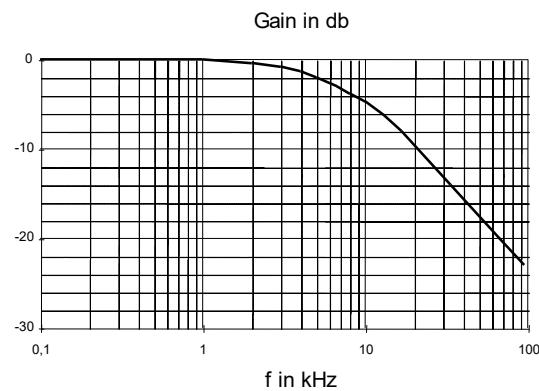
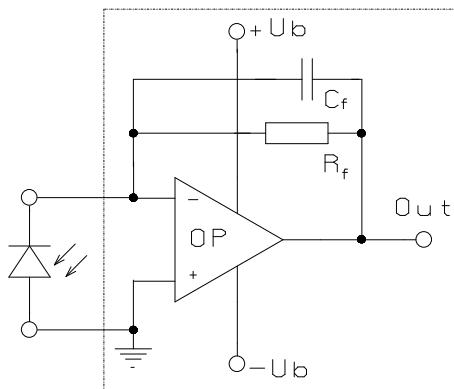
**relativ spectral responsivity**



**package dimensions SMD ceramik (in mm)**



**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 1pF.

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