



SiC - photodiode JEA0,1L



preliminary data sheet

- characteristics :
- ◆ spectral range 210 ... 380 nm
 - ◆ active area 0,2 mm²
 - ◆ high UV - response 0,18 A/W
 - ◆ TO 39-package
 - ◆ cap with lenscap
 - ◆ 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	- 40 °C ... 125	°C
storage temperature range	-40 °C ... 125	°C
soldering temperature (3s)	260	°C

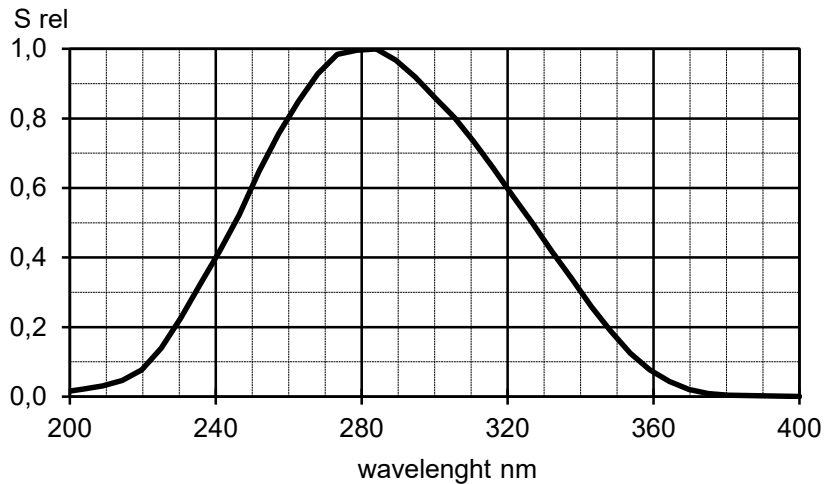
technical data :

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

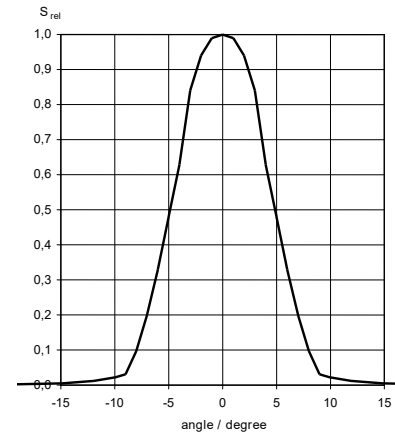
parameters	test conditions	min.	typ.	max.	unit
active area ¹⁾			2,75		mm ²
spectral range		205		355	nm
maximum of spectral responsivity	$\lambda_{\max} = 265\text{ nm}$		0,18		A/W
absolute spectral responsivity	$\lambda = 254\text{ nm}$		0,16		A/W
short current (sunlight)	bright sun cloudy		200 80		nA
dark current I_R	$V_R = 1\text{ V}$		10		fA
capacitance			30		pF

¹⁾ effective active area because of focusing of light by the lens

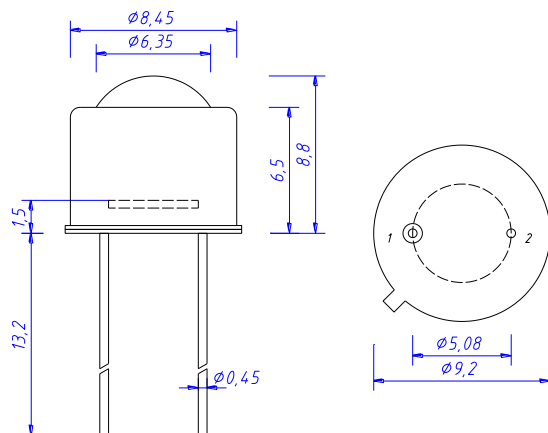
relative spectral response



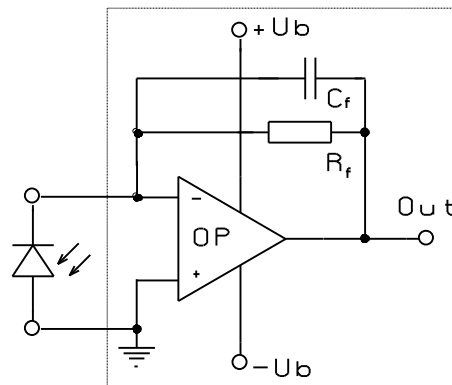
response characteristic



package dimensions



application example



- 1 anode
- 2 cathode & case

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 AD795, $R_f = 50 \text{ M}\Omega$ and $C_f = 0.5 \text{ pF}$.

