

## preliminary data sheet

### characteristics :

- ◆ large area monolithic SiC photodiodes
- ◆ active aerea: 1,55 or 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 ... 100 °C
- ◆ soldering temperature (3s) 260 °C

### technical data :

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

parameter	test condition	JEC1,6	JEC5	unit
active area		1,25 x 1,25	Ø 2,525	mm <sup>2</sup>
maximum of spectral responsivity	$\lambda_{\max} = 270\text{ nm}$	0,16	0,16	A/W
spectral range	$S = 0,1 \times S_{\max}$			
$\lambda_{\min}$		215	215	nm
$\lambda_{\max}$		360	360	
absolute spectral responsivity	$\lambda = 254\text{ nm}$	0,14	0,14	A/W
dark current $I_R$	$E = 0\text{ lx}$	100	200	fA
rise time $t_r$ of photocurrent	$R_L = 50\ \Omega$ $\lambda = 254\text{ nm}$ $I_P = 10\ \mu\text{A}$	tbc	tbc	ns
capacitance	$F = 1\text{ MHz}$ $E = 0\text{ lx}$	250	1.000	pF



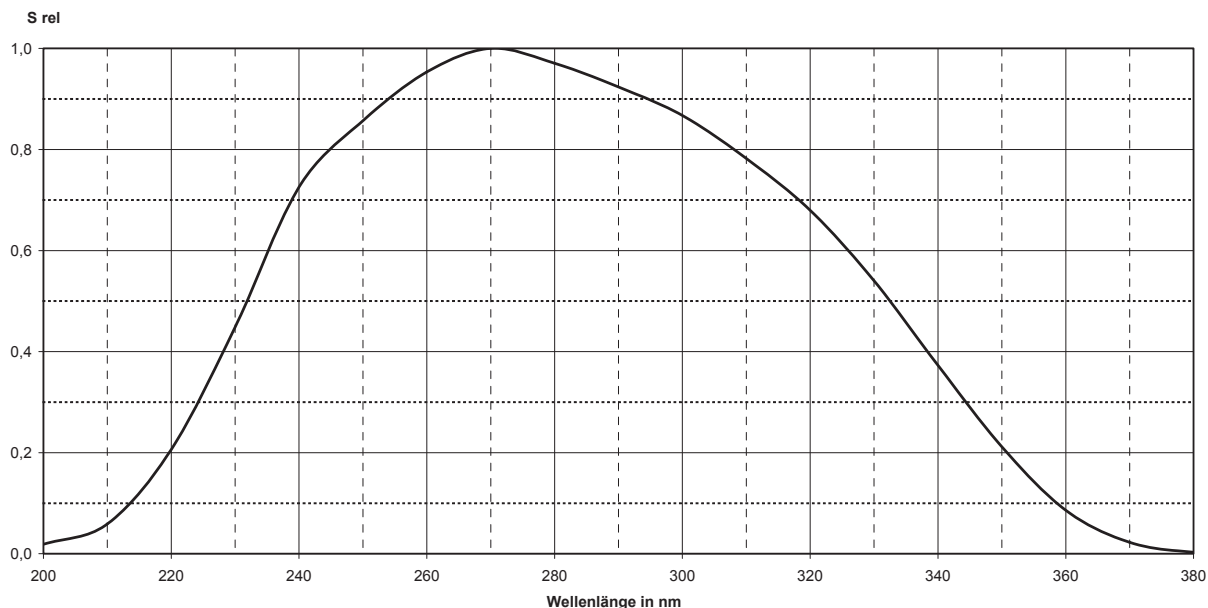
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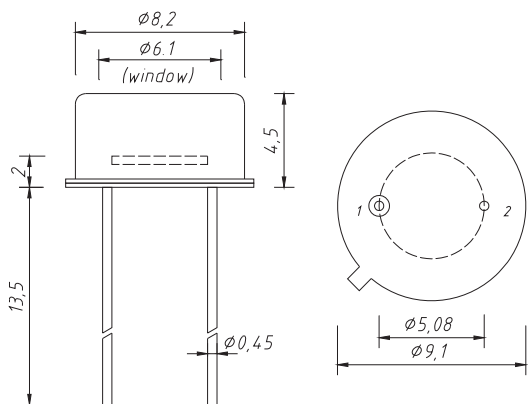
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### relative spectral responsivity



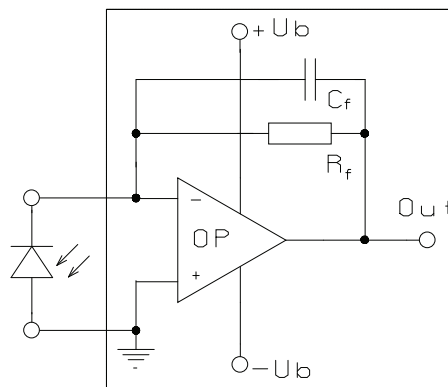
### Package dimensions



1 anode  
2 cathode & case

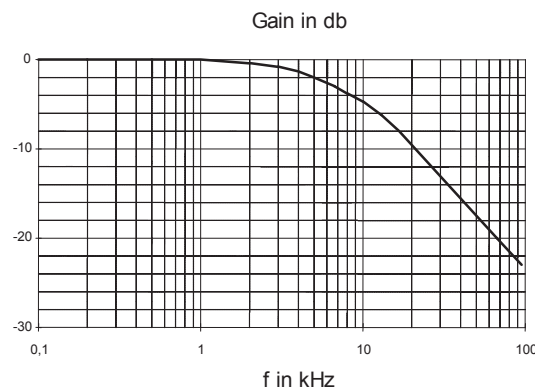
bottomview

### 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  $C_f = 1 \text{ pF}$ .



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