

**Characteristics :**

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

**Applications :**

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

**Maximum Ratings :**

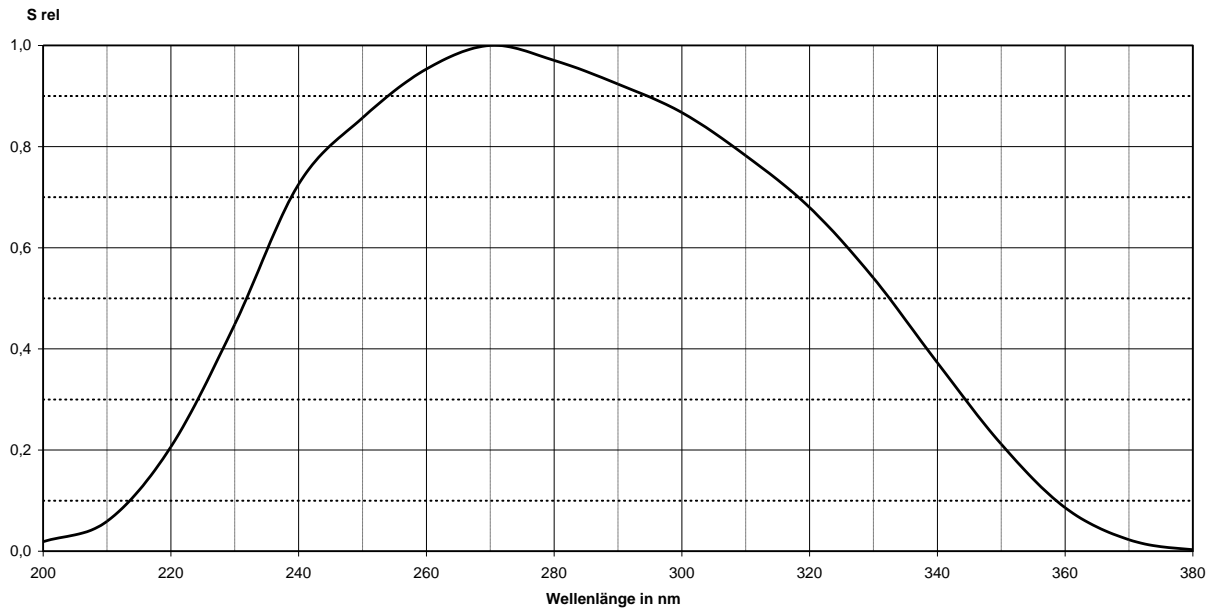
- ◆ reverse voltage 20 V
- ◆ operating temperature range - 40 °C ... 100 °C
- ◆ storage temperature range - 40 °C ... 125 °C
- ◆ soldering temperature (3s) 260 °C

**Technical Data :**

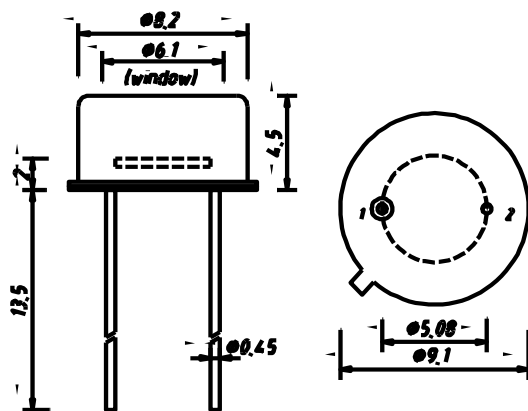
test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$  ,  $V_R = 0\text{ V}$

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	$S = 0,1 \times S_{\max}$		
$\lambda_{\min}$		215	nm
$\lambda_{\max}$		360	
absolute spectral responsivity	$\lambda = 254\text{ nm}$	0,14	A/W
dark current $I_R$	$E = 0\text{ lx}$	500	fA
rise time $t_r$ of photocurrent	$R_L = 50\ \Omega$ $\lambda = 254\text{ nm}$ $I_P = 10\ \mu\text{A}$	tbc	ns
capacitance	$F = 1\text{ MHz}$ $E = 0\text{ lx}$	1.000	pF

## Relative Spectral Responsivity



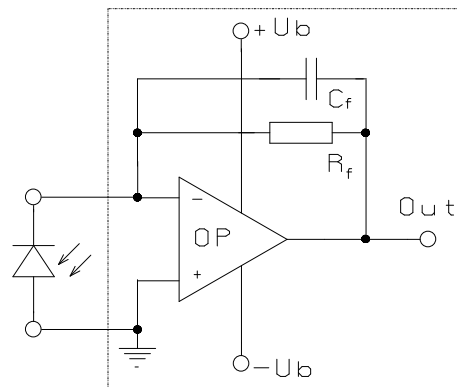
## Package Dimensions



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  $C_f = 1 \text{ pF}$ .

