



	<b>SiC-Photodiode</b> <b>JEA0,25L JEAC0,25L</b>
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preliminary data sheet**characteristics :**

- ◆ low cost SiC-Photodiode with lense cap
- ◆ active area: 0,25 mm<sup>2</sup>
- ◆ spectral range: 205 ... 355 nm
- ◆ high UV-responsivity: 0,18 A/W
- ◆ hermetically sealed TO-package
- ◆ option for isolated assembly of photodiode
- ◆ HT-option for extended working temperature range 150°C
- ◆ RoHS, REACH and WEEE conform

**applications :**

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

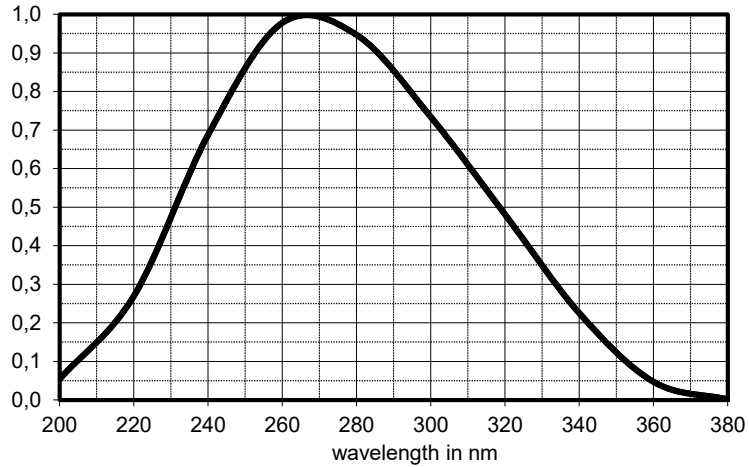
**absolute maximum ratings :**

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

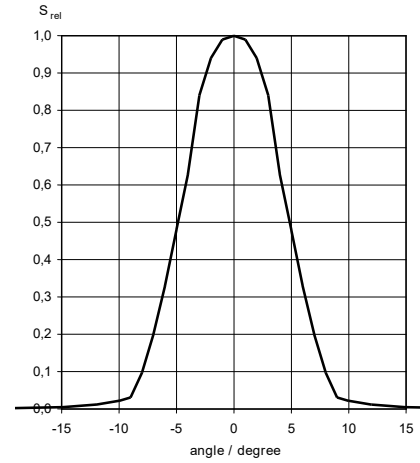
**technical data :**test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C , V<sub>R</sub> = 0 V

parameter	Test - conditions	JEA0,25L	JEAC0,25L	unit
active area		0,55 x 0,55		mm <sup>2</sup>
spectral range	S = 0,1 x S <sub>max</sub>	205		nm
$\lambda_{min}$ $\lambda_{max}$		355		nm
maximum of spectral responsivity		265		nm
maximum sensitivity S <sub>max</sub>	$\lambda = 265 \text{ nm}$	0,18		A/W
absolute sensitivity S <sub>254nm</sub>	$\lambda = 254 \text{ nm}$	0,16		A/W
dark current I <sub>R</sub>	V <sub>R</sub> = 1 V	25		fA
junction capacitance C	f = 10 kHz	75		pF

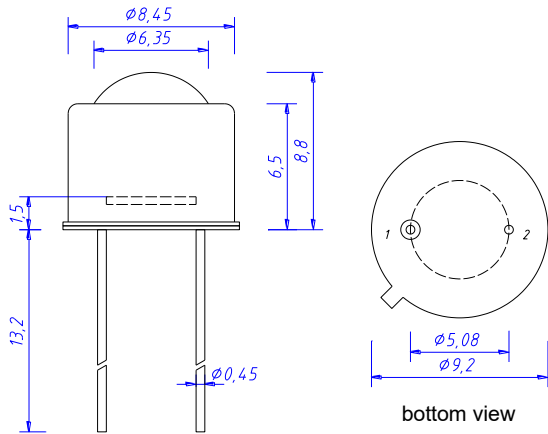
**relative spectral sensitivity**



**relative angular response**



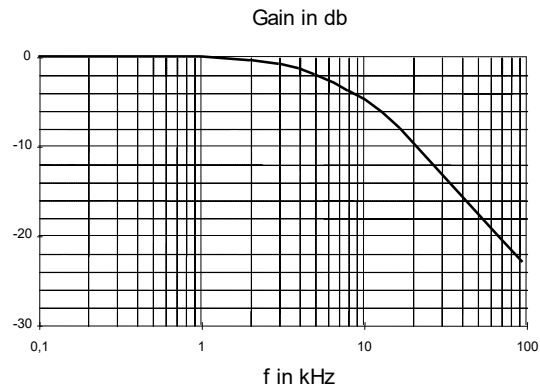
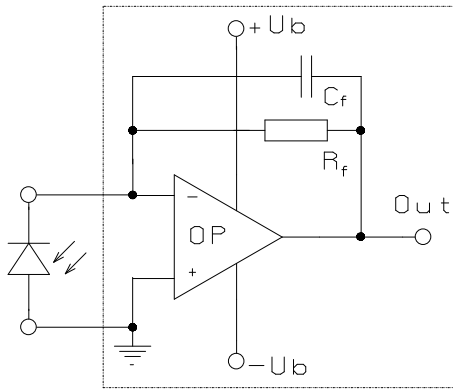
**package dimensions**



JEA 0,25L: 1 Anode  
2 Cathode+Case

JEAC 0,25L: 1 = Cathode  
2 = Anode + Case

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