

# SiC - Photodiode JEC 0.3\*



- characteristics :
- ◆ SiC-Photodiode with integrated filter
  - ◆ \* filter option for UV-C, UV-BC, UV-B and UV-A
  - ◆ active area 0.022 mm<sup>2</sup>
  - ◆ TO 5-package

- applications :
- ◆ UV-measurement only
  - ◆ control of sterilization lamps
  - ◆ flame detection
  - ◆ sun measurement

maximum ratings:

reverse voltage	20 V
operating temperature range	- 25 °C ... 70 °C
storage temperature range	-40 °C ... 100 °C
welding temperature (3s)	260 °C

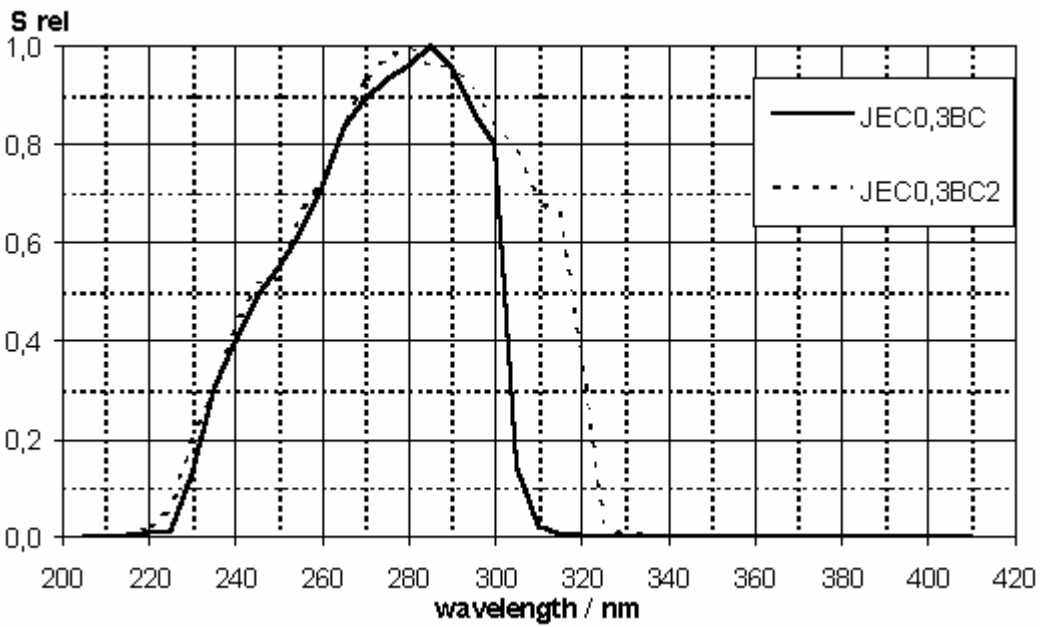
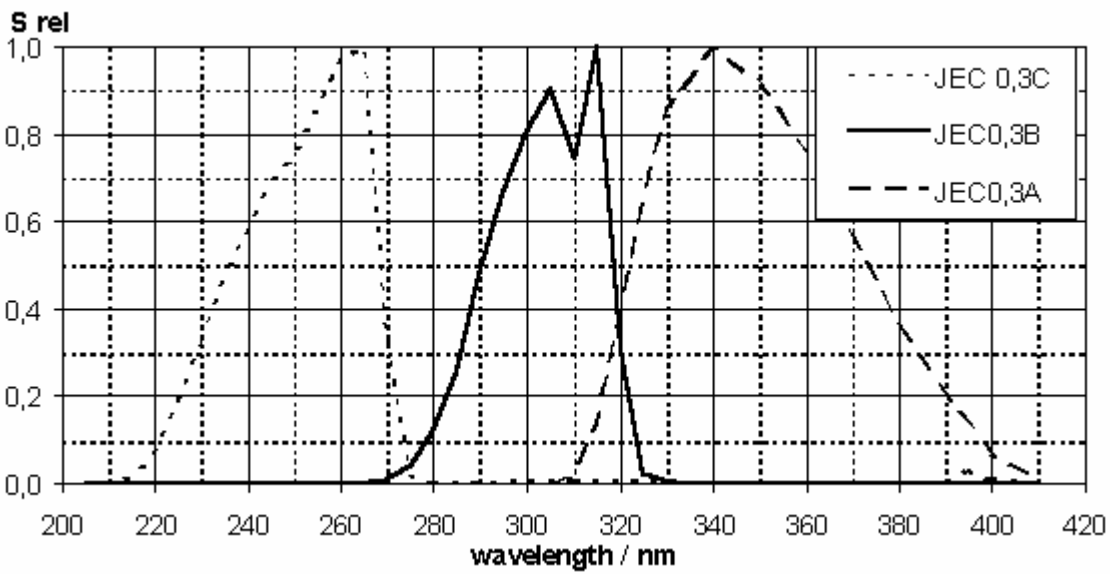
technical data :

Common test conditions, if not otherwise specified:  $\gamma_a = 25^\circ \text{C}$ ,  $V_R = 0\text{V}$

parameter	Test conditions	* - filter option					units	
		JEC 0.3	JEC 0.3BC	JEC0.3BC2	JEC 0.3B	JEC 0.3A		
name of component		JEC 0.3	JEC 0.3BC	JEC0.3BC2	JEC 0.3B	JEC 0.3A		
active area		0.5 x 0.5					mm <sup>2</sup>	
spectral range	$\lambda_{\min}$	S=0.1 · S <sub>max</sub>	220	230	225	280	335	nm
	$\lambda_{\max}$		275	305	320	325	395	
maximum of spectral responsivity $\lambda_p$	S = S <sub>max</sub>	265	285	280	315	340	nm	
absolute spectral responsivity	$\lambda = \lambda_p$	0.1	0.12	0.12	0.08	0.04	A/W	
dark current I <sub>D</sub>	V <sub>R</sub> = 1 V	5					fA	
capacitance		80					pF	
height of component H		4.5			6.8		mm	

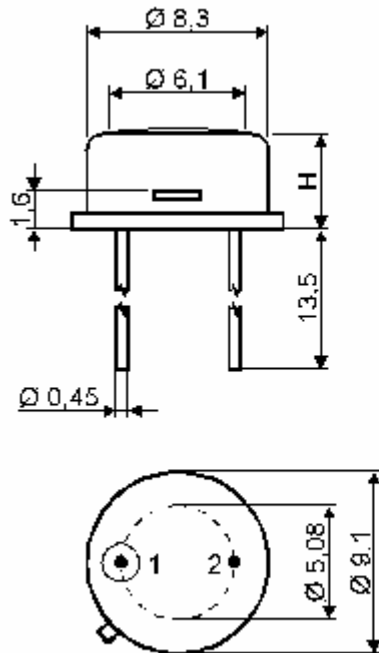
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relative spectral response



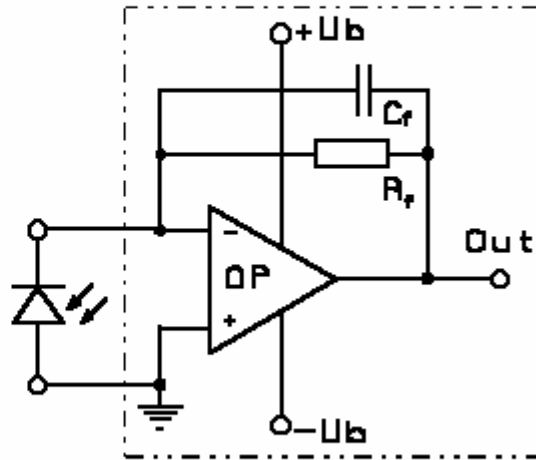
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package dimensions



1 Katode  
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 input capacitance of the OPA. The exact value of  $C_f$  depends on  $R_f$ , used OPA and capacitance of the circuit. A typical value is 1 pF.

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