

SiC - Photodiode JEC 1*



- characteristics :**
- ◆ SiC-Photodiode with integrated filter
 - ◆ *-filter option for UV-C, UV-BC, UV-B and UV-A
 - ◆ active area 1 mm²
 - ◆ TO 5-package
 - ◆ components are in conformity with RoHS and WEEE

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

absolute 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: $\gamma_a = 25\text{ °C}$, $V_R = 0V$

parameter	test-conditions	* - filter option					units
		JEC 1C	JEC 1BC	JEC 1BC2	JEC 1B	JEC 1A	
name of component		JEC 1C	JEC 1BC	JEC 1BC2	JEC 1B	JEC 1A	
active area		1 x 1					mm ²
spectral range	$S=0,1 \cdot S_{max}$						
λ_{min}		220	230	225	280	335	nm
λ_{max}		275	305	320	325	395	
maximum of spectral responsivity λ_p	$S = S_{max}$	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_D	$V_R = 1\text{ V}$	2					fA
capacitance		195					pF
height of component H		4,5			6,8		mm

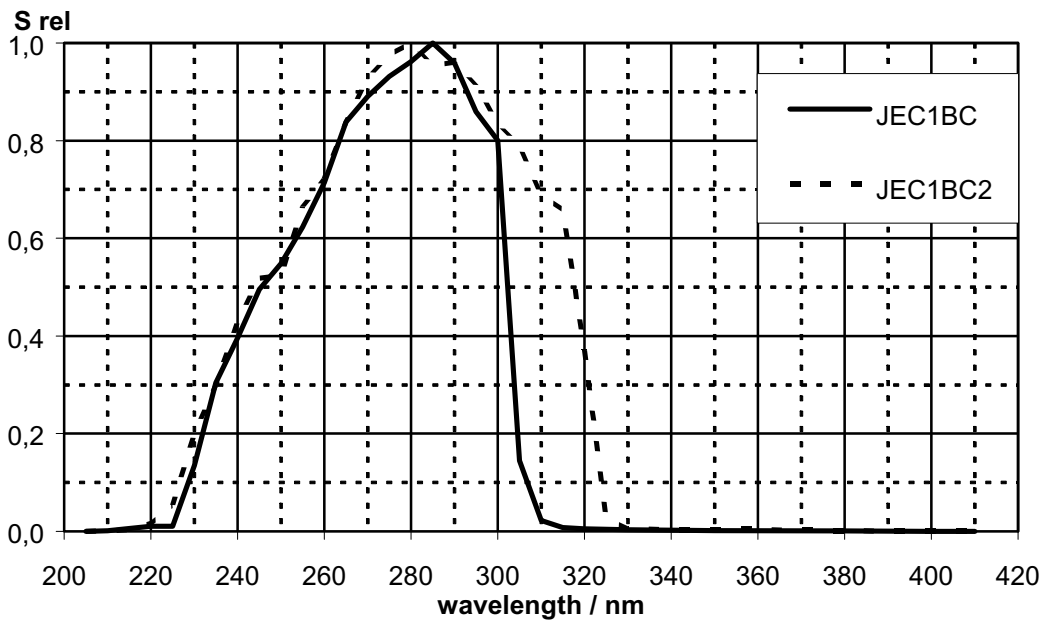
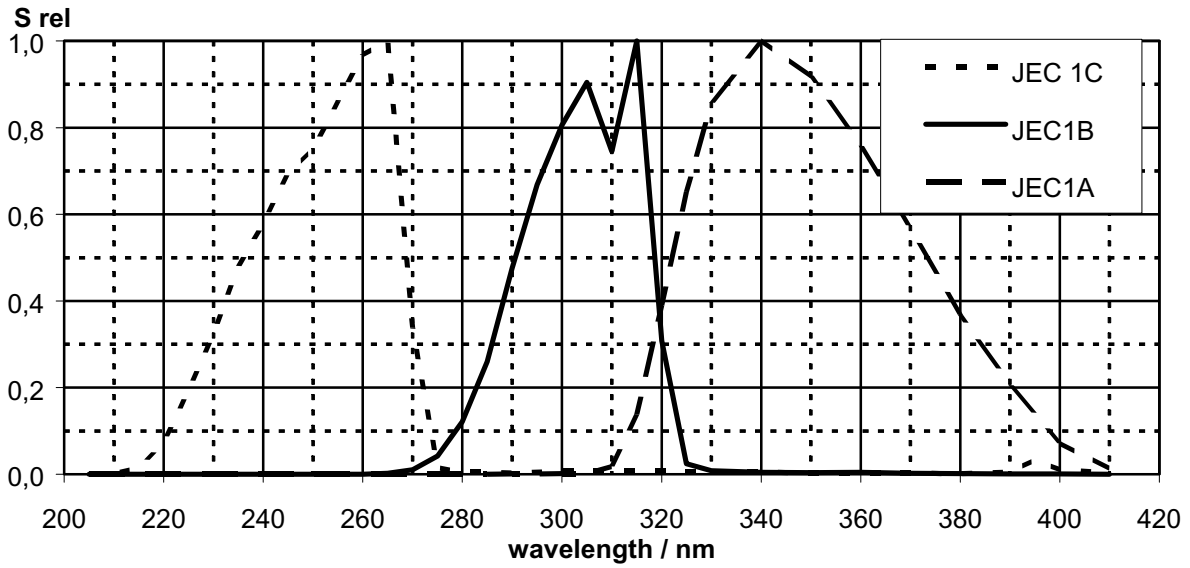
rev2 (09/2009)

For more information:

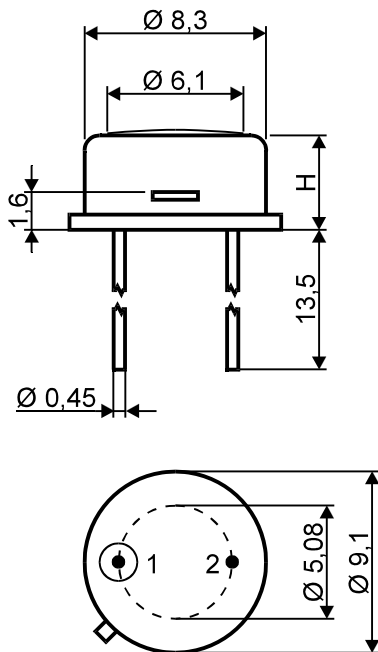
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DATA SHEET

relative spectral response

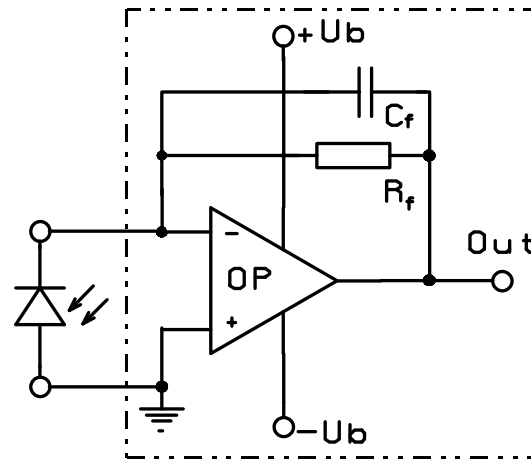


package dimensions



- 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.