

# 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 mm<sup>2</sup>
  - ◆ 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

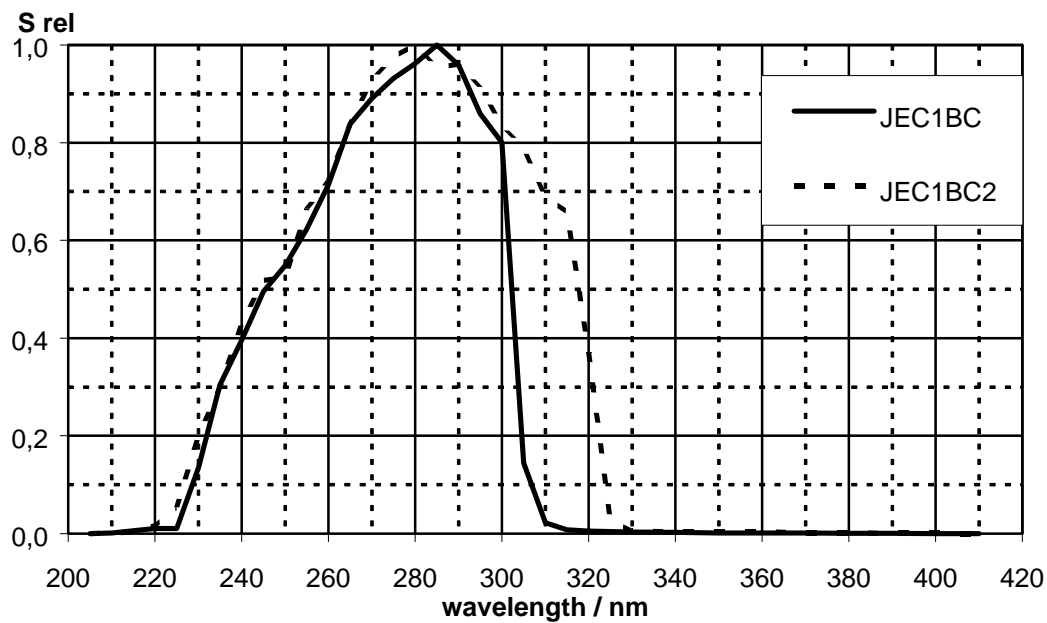
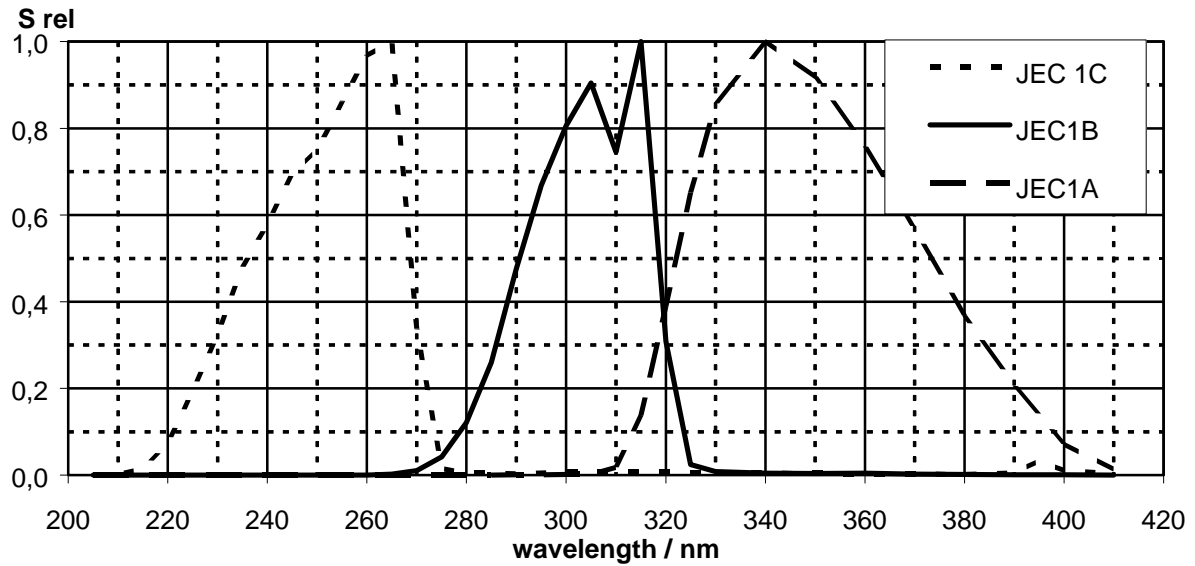
## technical data :

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

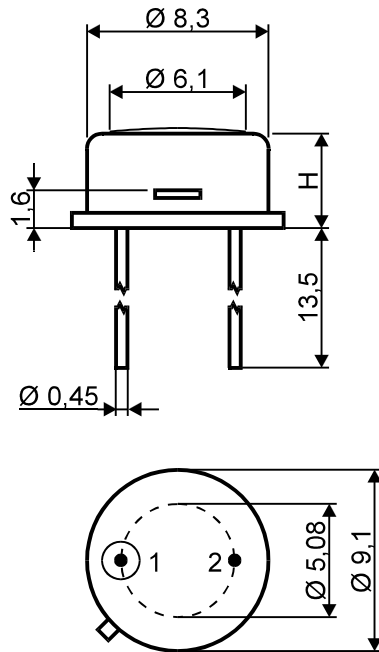
parameter	test-conditions	* - filter option					units
		JEC 1C	JEC 1BC	JEC 1BC2	JEC 1B	JEC 1A	
name of component		JEC 1C	JEC 1BC	JEC 1BC2	JEC 1B	JEC 1A	
active area		1 x 1					mm <sup>2</sup>
spectral range	$S=0,1 \cdot S_{max}$						
$\lambda_{min}$		220	230	225	280	335	nm
$\lambda_{max}$		275	305	320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

rev. 2 (03/2009)

## relative spectral response

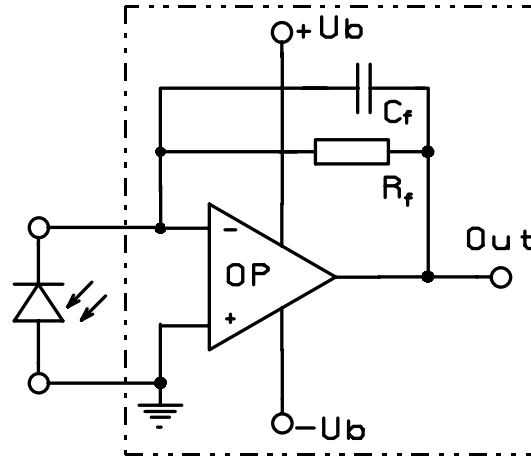


## package dimensions



- 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.