



# SiC - photodiode JEC 0.3-4S/ JEC 0.3-4SS



- characteristics :
- ◆ spectral range 210 ... 380 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ high UV-responsivity 0,13 A/W
  - ◆ TO 18-package
  - ◆ components are in conformity with RoHS and WEEE

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

maximum ratings:

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

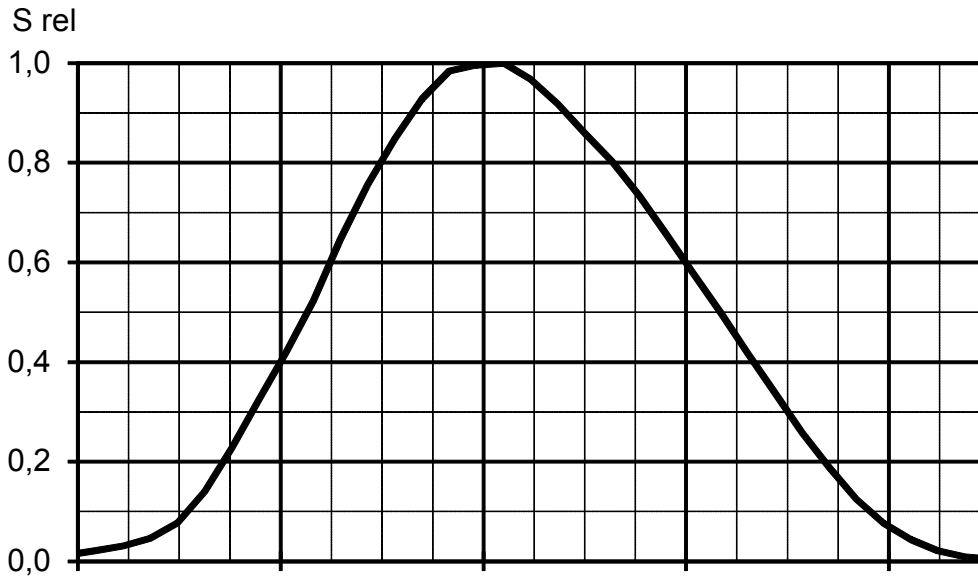
technical data:

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

parameter	test condition	min.	typ.	max.	unit
active area			0,5 x 0,5		mm <sup>2</sup>
spectral range		210		380	nm
maximum of spectral responsivity	$\lambda_{max} = 275 \text{ nm}$		0,13		A/W
absolute spectral responsivity	$\lambda = 254 \text{ nm}$		0,11		A/W
dark current I <sub>R</sub>	$V_R = 1 \text{ V}$		1		fA
capacitance			80		pF

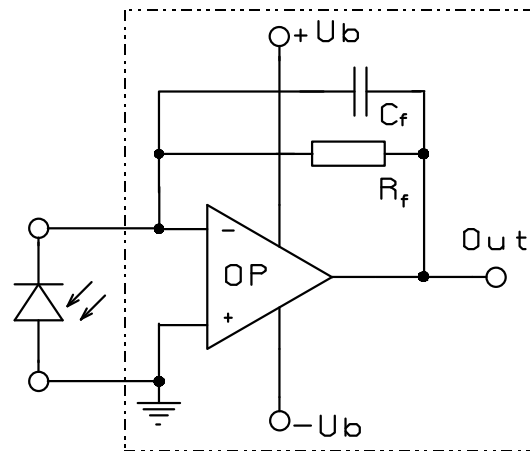
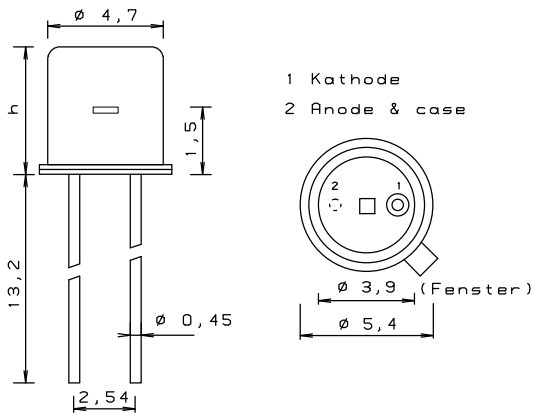
# JEC 0.3-4S/JEC 0.3-4SS

relative spectral responsivity



package dimensions

application example



JEC 0,3S h = 5,2 mm  
JEC 0,3SS h = 3,7 mm

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

The diagram shows dependence of amplitude of the application circuit with OPA 111,  $R_f = 50 \text{ M}\Omega$  and  $C_f = 0.5 \text{ pF}$ .

