



JEC 1 SHT SiC Photodiode

CHARACTERISTICS

Spectral range	210 to 380	nm
Activity area	0.965	mm ²
High UV-responsivity	0.16	A/W
TO-18 package		
Suitable for operating temperatures up to 150°C		

APPLICATIONS

UV measurement only
UV source control (for instance in sterilizers)
Flame detection

MAXIMUM RATINGS

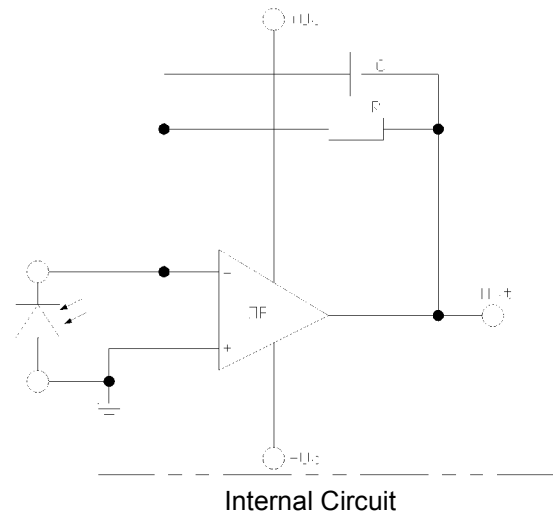
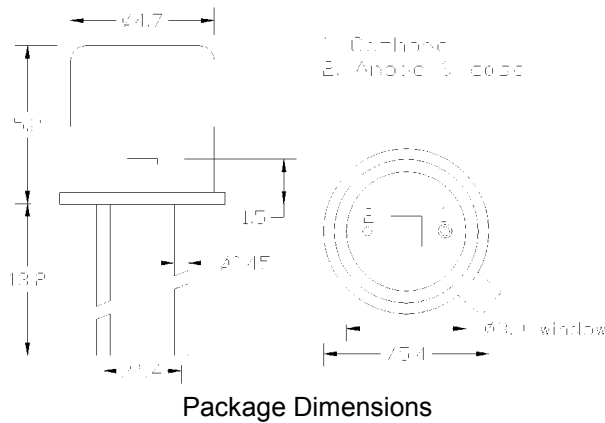
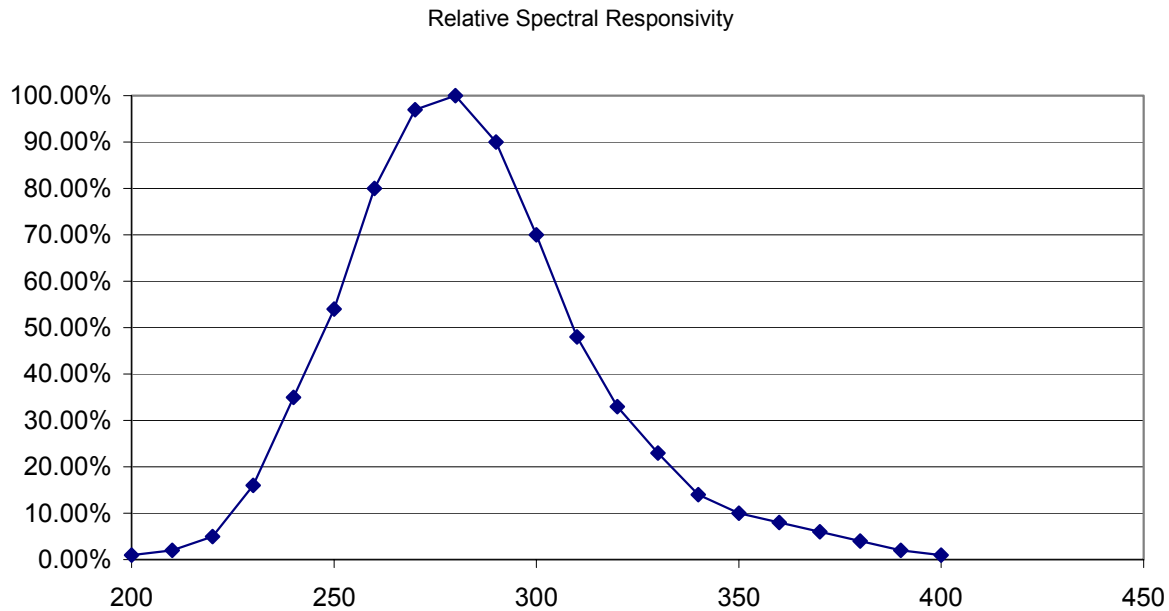
Reverse voltage	20	V
Operating temperature range	-25 to 150	°C
Storage temperature range	-40 to 150	°C
Soldering temperature (3s)	260	°C

TECHNICAL DATA

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

Parameter	Test conditions	Min.	Typ.	Max	Unit
Active area			1 x 1		mm ²
Spectral range		210		380	nm
Maximum of spectral responsivity	$\lambda_{\text{max}} = 275\text{nm}$		0.15		A/W
Absolute spectral responsivity	$\lambda = 254\text{nm}$		0.11		A/W
Dark current I_R	$V_R = 1\text{V}$		2		fA
Short current	bright sun		1		μA
(sunlight)	cloudy		0.4		μA
Capacitance			195		pF





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 1pF.

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

