



JECF 1 I-DE SiC Photodiode

CHARACTERISTICS

Spectral response according to erythema (CIE 87)

Active area 1 mm²

TO-5 package sensor isolated to package

Integrated diffuser, cos-response characteristic

APPLICATIONS

Measurement of erythema effective UV – part of sun- or UV-lamp radiation

MAXIMUM RATINGS

Maximum reverse voltage 20 V

Operating temperature range -25 to 70 °C

Storage temperature range -40 to 100 °C

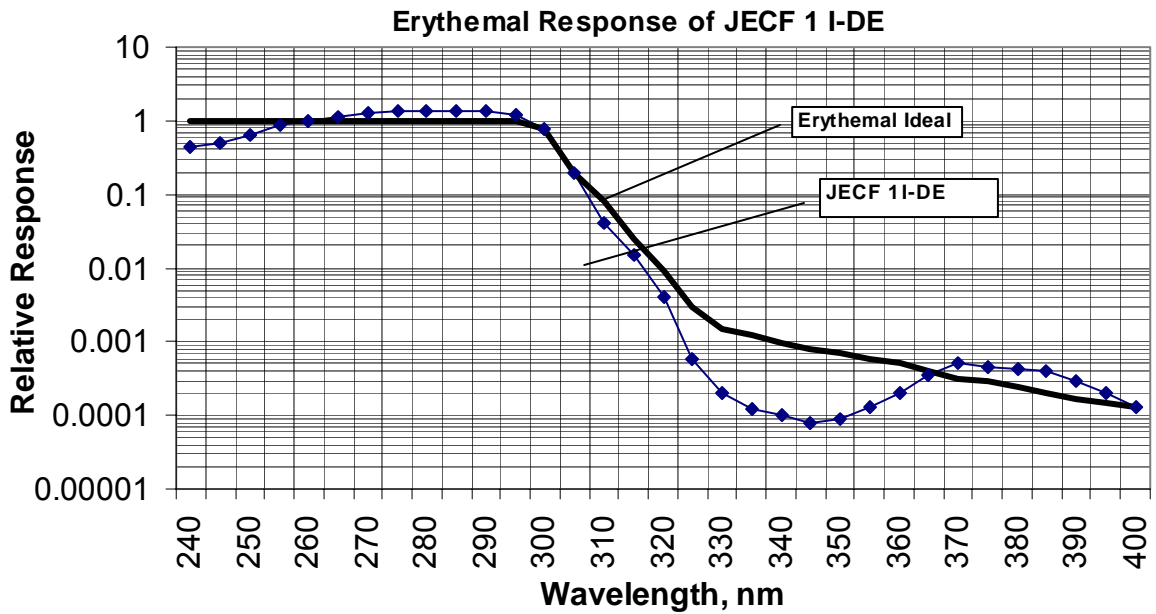
Soldering temperature (3s) 260 °C

TECHNICAL DATA

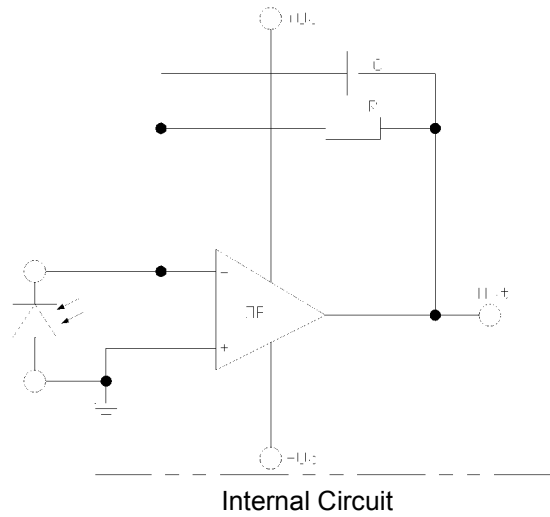
Common test conditions, if not otherwise specified: $\gamma_a = 25^\circ\text{C}$, $V_R = 0\text{V}$

Parameter	Test conditions	Min.	Typ.	Max.	Unit
Sensitive area			Ø 3.3		mm
Maximum of spectral responsivity	$S = S_{\text{max}}$		285		nm
Absolute spectral responsivity	$\lambda = 285\text{nm}$	1.1	1.75	2.1	mV/nW
Dark current I_R	$V_R = 1\text{V}$		10		fA
Capacitance			195		pF





Package Dimensions Available On Request.



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 $C_f = 0.5\text{pF}$.

