

Wavelength	Type	Technology	Case
UV-C	clear UV-glass + filter	SiC	TO-46

Technical drawing of a TO-46 photodiode package. The side view shows a cylindrical package with a diameter of 5.31 mm and a height of 4.75 mm. The top view shows a circular package with an outer diameter of 5.31 mm and an inner diameter of 4.22 mm. The drawing includes dimensions for the cathode and anode leads, such as a length of 13.4 mm and a diameter of 0.14 mm. A chip location is indicated on the top view.

Description

Selective photodiode with high spectral sensitivity in the UVC range (230 nm - 285 nm), mounted in hermetically sealed TO-46 package with clear UV-glass window and filter

Note: housing with diffuse glass window available on request

Applications

Environmental technology, analytical techniques, medical applications, industrial sensors, inspecting and controlling of UV radiation as well as for more general purposes

Miscellaneous Parameters

T_{amb} = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	0.056	mm ²
Temperature coefficient of I _{Ph}		T _C (I _{Ph})	0.1	%/K
Operating temperature range		T _{amb}	-40 to +70	°C
Storage temperature range		T _{stg}	-40 to +100	°C
Acceptance angle at 50% S _λ		φ	50	deg.

Optical and Electrical Characteristics

T_{amb} = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage ¹⁾	I _R = 100 μA	V _R		20		V
Dark current	V _R = 1 V	I _D		5	100	fA
Peak sensitivity wavelength	V _R = 0 V	λ _p		270		nm
Responsivity at λ _p	V _R = 0 V	S _λ		0.11		A/W
Sensitivity range at 1%	V _R = 0 V	λ _{min} , λ _{max}	230		285	nm
Spectral bandwidth at 50%	V _R = 0 V	Δλ _{0.5}		35		nm
Shunt resistance	V _R = 10 mV	R _{SH}		2		TΩ
Noise equivalent power	λ = 270 nm	NEP		9.0x10 ⁻¹⁶		W/√Hz
Specific detectivity	λ = 270 nm	D*		2.6x10 ¹³		cm · √Hz · W ⁻¹
Junction capacitance	V _R = 0 V	C _J		20		pF
Photo current at λ = 254 nm ^{1,2)}	V _R = 0 V E _e = 100 μW/cm ²	I _{Ph}		2.6		nA

¹⁾for information only

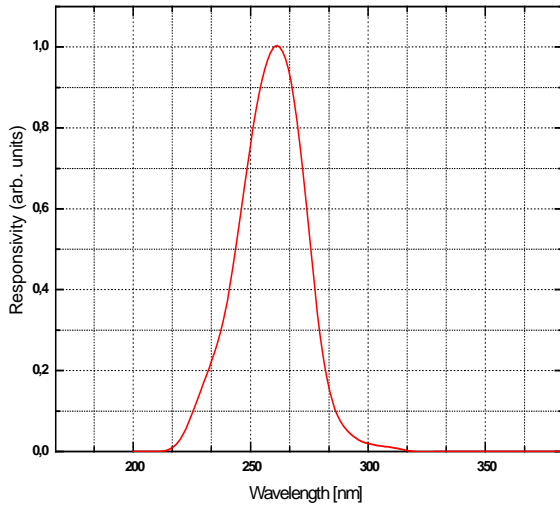
²⁾measured with Hg-LP UV-emitter as radiation source

Note: All measurements carried out with EPIGAP equipment

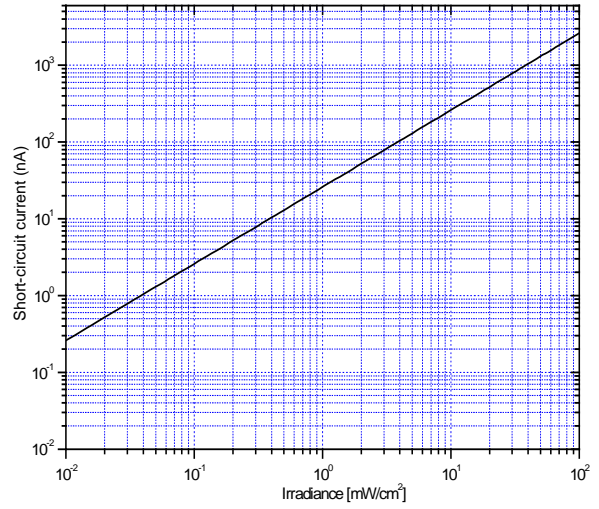
Labeling

Type	Lot N°	R _D (typ.) [TΩ]	Quantity
EPD-270-0-0.3-1			

Typical responsivity to incident radiation, normalized to S @ $\lambda = 270$ nm



Short-circuit current vs. irradiance (typical) ²⁾



Short-circuit current vs. ambient temperature

