

Wavelength	Type	Technology	Case
UV-A – UV-C	clear UV-glass	SiC	TO-46

Description

Highly reliable photodiode with high spectral sensitivity in the UV range (220 nm - 380 nm), mounted in hermetically sealed TO-46 package with clear UV-glass window

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		280		nm
Responsivity at λ _p	V _R = 0 V	S _λ		0.13		A/W
Sensitivity range at 1%	V _R = 0 V	λ _{min} , λ _{max}	220		380	nm
Spectral bandwidth at 50%	V _R = 0 V	Δλ _{0.5}		80		nm
Shunt resistance	V _R = 10 mV	R _{SH}		2		TΩ
Noise equivalent power	λ = 280 nm	NEP		7.6x10 ⁻¹⁶		W/√Hz
Specific detectivity	λ = 280 nm	D [*]		3.1x10 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}		3.5		nA

¹⁾for information only

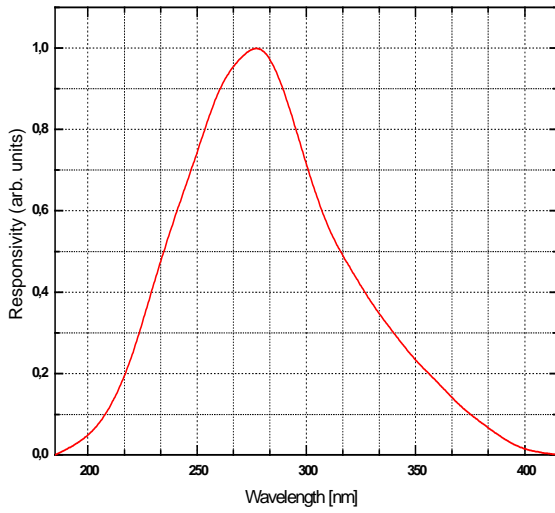
²⁾measured with Hg-LP UV-emitter as radiation source

Note: All measurements carried out with EPIGAP equipment

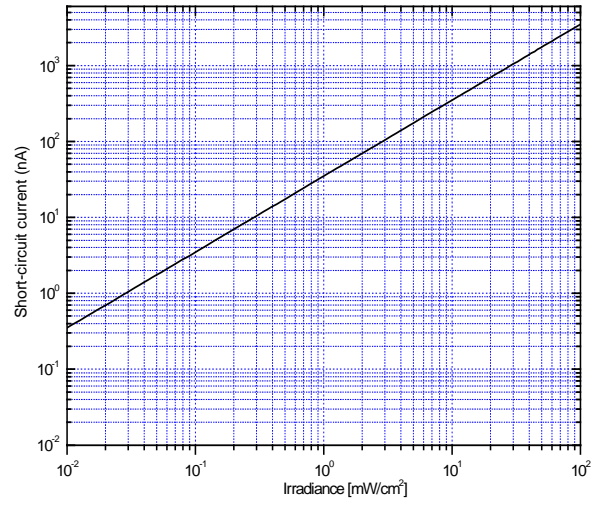
Labeling

Type	Lot N°	R _D (typ.) [TΩ]	Quantity
EPD-280-0-0.3-1			

Typical responsivity to incident radiation, normalized to S @ $\lambda = 280$ nm



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



Short-circuit current vs. ambient temperature

