

Wavelength	Type	Technology	Case
UV-A – UV-C	clear UV-glass	SiC	TO-39

**Description**

Highly reliable photodiode with high spectral sensitivity in the UV range (220 nm - 380 nm), mounted in hermetically sealed TO-39 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<sub>amb</sub> = 25°C, unless otherwise specified

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

**Optical and Electrical Characteristics**

T<sub>amb</sub> = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage <sup>1)</sup>	I <sub>R</sub> = 100 μA	V <sub>R</sub>		20		V
Dark current	V <sub>R</sub> = 1 V	I <sub>D</sub>		10	100	fA
Peak sensitivity wavelength	V <sub>R</sub> = 0 V	λ <sub>p</sub>		280		nm
Responsivity at λ <sub>p</sub>	V <sub>R</sub> = 0 V	S <sub>λ</sub>		0.13		A/W
Sensitivity range at 1%	V <sub>R</sub> = 0 V	λ <sub>min</sub> , λ <sub>max</sub>	220		380	nm
Spectral bandwidth at 50%	V <sub>R</sub> = 0 V	Δλ <sub>0.5</sub>		80		nm
Shunt resistance	V <sub>R</sub> = 10 mV	R <sub>SH</sub>		1		TΩ
Noise equivalent power	λ = 280 nm	NEP		1.1x10 <sup>-15</sup>		W/√Hz
Specific detectivity	λ = 280 nm	D*		2.2x10 <sup>13</sup>		cm · √Hz · W <sup>-1</sup>
Junction capacitance	V <sub>R</sub> = 0 V	C <sub>J</sub>		20		pF
Photo current at λ = 254 nm <sup>1,2)</sup>	V <sub>R</sub> = 0 V E <sub>e</sub> = 100 μW/cm <sup>2</sup>	I <sub>Ph</sub>		3.5		nA

<sup>1)</sup>for information only

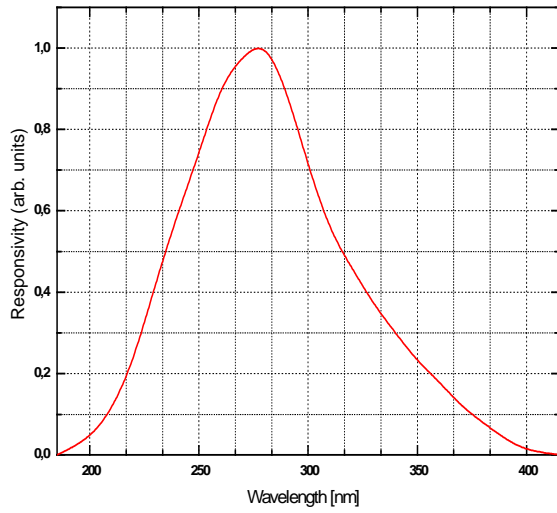
<sup>2)</sup>measured with Hg-LP UV-emitter as radiation source

Note: All measurements carried out with *EPIGAP* equipment

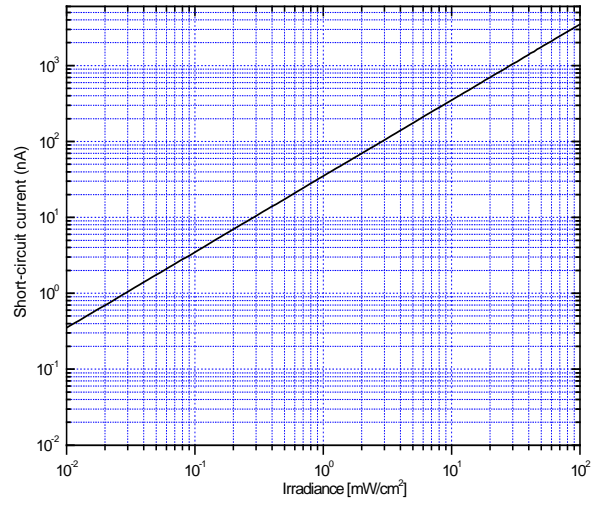
**Labeling**

Type	Lot N°	R <sub>D</sub> (typ.) [TΩ]	Quantity
EPD-280-0-0.3-2			

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



Short-circuit current vs. irradiance (typical) <sup>2)</sup>



Short-circuit current vs. ambient temperature

