

Data Sheet

UV photodiode

EOPD-440-0-2.5

Radiation	Type	Technology	Case
UV - visible	Schottky contact	GaP	TO-39

	<p><b>Description:</b></p> <p>Wide bandwidth and high spectral sensitivity in the UV and visible range (190 nm - 570 nm), mounted in hermetically sealed TO-39 package with UV-glass window</p>
	<p><b>Application:</b></p> <p>Medical engineering (dermatology), output check of UV - lamps and oil or gas burner flame, measurement and control of ecological parameters, radiation control for a solarium, UV water purification facilities</p>

Maximum Ratings

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

Parameter	Symbol	Value	Unit
Active area	A	4.8	mm <sup>2</sup>
Temperature coefficient of dark current	TC(I <sub>D</sub> )	7	%/K
Operating temperature range	T <sub>amb</sub>	-40 to +125	°C
Storage temperature range	T <sub>stg</sub>	-40 to +125	°C
Acceptance angle at 50% S <sub>λ</sub>	φ	135	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> =10 μA	V <sub>R</sub>	5			V
Dark current	V <sub>R</sub> =5 V	I <sub>D</sub>		15	40	pA
Peak sensitivity wavelength	V <sub>R</sub> =0 V	λ <sub>p</sub>		440		nm
Responsivity at λ <sub>p</sub>	V <sub>R</sub> =0 V	S <sub>λ</sub>	0.1	0.13		A/W
Sensitivity range at 1% of S <sub>λ</sub>	V <sub>R</sub> =0 V	λ <sub>min</sub> , λ <sub>max</sub>	190		570	nm
Spectral bandwidth at 50% of S <sub>λ</sub>	V <sub>R</sub> =0 V	Δλ <sub>0.5</sub>		180		nm
Shunt resistance	V <sub>R</sub> =10 mV	R <sub>SH</sub>	80	100		GΩ
Noise equivalent power	λ = 440 nm	NEP		1.3 x 10 <sup>-14</sup>		W/√Hz
Specific detectivity	λ = 440 nm	D*		1.7 x 10 <sup>13</sup>		cm · √Hz · W <sup>-1</sup>
Junction capacitance	V <sub>R</sub> =0 V	C <sub>J</sub>		1000		pF
Photocurrent at = 440 nm <sup>1)</sup>	V <sub>R</sub> =0 V	I <sub>ph</sub>		6.5		μA
	E <sub>e</sub> =1 mW/cm <sup>2</sup>					

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

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