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Data Sheet

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UV photodiode

EOPD-365-0-1.4

Rev. 03, 2015

Radiation	Type	Case
Ultraviolet	GaP Schottky	TO-46, UV glass + UG11 filter

	Description: Wide bandwidth and high spectral sensitivity in the UV range (245 nm - 400 nm), mounted in hermetically sealed TO-46 package with UG11 UV filter-glass window
	Applications Medical engineering (dermatology), output check of UV - lamps and gas burner flame, measurement and control of ecological parameters, radiation control for solarium, UV water purification facilities

Maximum Ratings

$T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Active area	A	1.2	mm^2
Temperature coefficient of I_D	$\text{TC}(I_D)$	7	%/K
Operating temperature range	T_{amb}	-40 to +70	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-40 to +100	$^{\circ}\text{C}$
Acceptance angle at 50% S_{λ}	φ	50	deg.

Optical and Electrical Characteristics

$T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage ¹⁾	$I_R = 10 \mu\text{A}$	V_R	5			V
Dark current	$V_R = 5 \text{ V}$	I_D		5	30	pA
Peak sensitivity wavelength	$V_R = 0 \text{ V}$	λ_p		365		nm
Responsivity at λ_p	$V_R = 0 \text{ V}$	S_{λ}		0.07		A/W
Spectral bandwidth at 50% of S_{λ}	$V_R = 0 \text{ V}$	$\Delta\lambda_{0.5}$		85		nm
Sensitivity range at 1% of S_{λ}	$V_R = 0 \text{ V}$	$\lambda_{min}, \lambda_{max}$	245		400	nm
Noise equivalent power	$\lambda = 365 \text{ nm}$	NEP	1.8×10^{-14}			$\text{W}/\sqrt{\text{Hz}}$
Specific detectivity	$\lambda = 365 \text{ nm}$	D^*	5.9×10^{12}			$\text{cm}\cdot\sqrt{\text{Hz}}\cdot\text{W}^{-1}$
Junction capacitance	$V_R = 0 \text{ V}$	C_j		250		pF
Switching times ($R_L = 50 \Omega$)	$V_R = 5 \text{ V}$	t_r, t_f		1; 20		ns
Shunt resistance	$V_R = 10 \text{ mV}$	R_{SH}	150	200		G Ω
Photocurrent at $\lambda = 365 \text{ nm}$	$V_R = 0 \text{ V}$	I_{Ph}		0.3		μA
	$E_e = 1 \text{ mW}/\text{cm}^2$					

¹⁾ for information only

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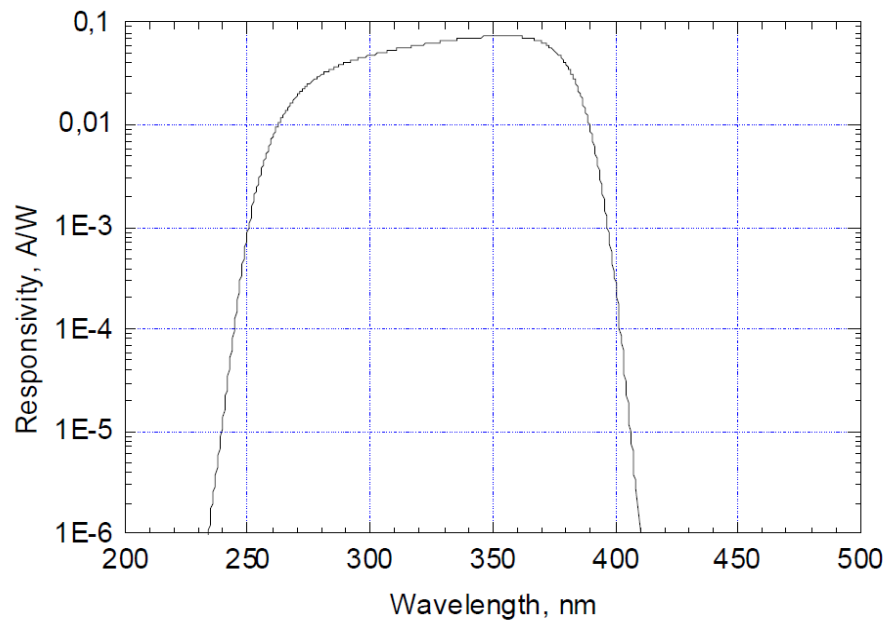
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Typical responsivity



We reserve the right to make changes to improve technical design and may do so without further notice. Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.