

EPIGAP Optronik GmbH

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customized optoelectronics



Product Data Sheet

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PD UV

EPD-150-0-3.6

Rev. 01 aus 2011

Radiation	Type	Technology	Case
VUV	Schottky Contact	GaP	TO-39

Description:	
	<p>Wide bandwidth and high sensitivity from VUV up to the visible spectrum (150 nm - 550 nm), mounted in hermetically sealed TO-39 package with sapphire window</p>
Application:	
	<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

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

Parameter	Symbol	Value	Unit
Active area	A	10.9	mm ²
Temperature coefficient of I_{ph}	$T_C(I_{ph})$	7.0	%/K
Operating temperature range	T_{amb}	-40 to +125	°C
Storage temperature range	T_{stg}	-40 to +125	°C
Acceptance angle at 50% S_{λ}	φ	120	deg.

Optical and Electrical Characteristics

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

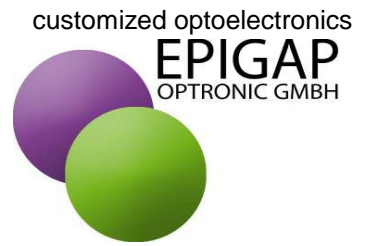
Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage ¹⁾	$I_R = 10\mu\text{A}$	V_R	5			V
Dark current	$V_R = 5\text{V}$	I_D		20	80	pA
Peak sensitivity wavelength	$V_R = 0\text{V}$	λ_p		440		nm
Responsivity at λ_p	$V_R = 0\text{V}$	S_{λ}	0.1	0.13		A/W
Sensitivity range at 1%	$V_R = 0\text{V}$	$\lambda_{min}, \lambda_{max}$	150		550	nm
Spectral bandwidth at 50%	$V_R = 0\text{V}$	$\Delta\lambda_{0.5}$		180		nm
Shunt resistance	$V_R = 10\text{mV}$	R_{SH}	50	70		GΩ
Noise equivalent power	$\lambda = 440\text{ nm}$	NEP		1.5×10^{-14}		$\text{W}/\sqrt{\text{Hz}}$
Specific detectivity	$\lambda = 440\text{ nm}$	D		2.2×10^{13}		$\text{cm} \cdot \sqrt{\text{Hz}} \cdot \text{W}^{-1}$
Junction capacitance	$V_R = 0\text{V}$	C_J		2.6		pF
Photo current at = 254nm ¹⁾	$V_R = 0\text{V}$ $E_e = 1\text{mW}/\text{cm}^2$	I_{ph}		5.4		μA

¹⁾ for information only

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.

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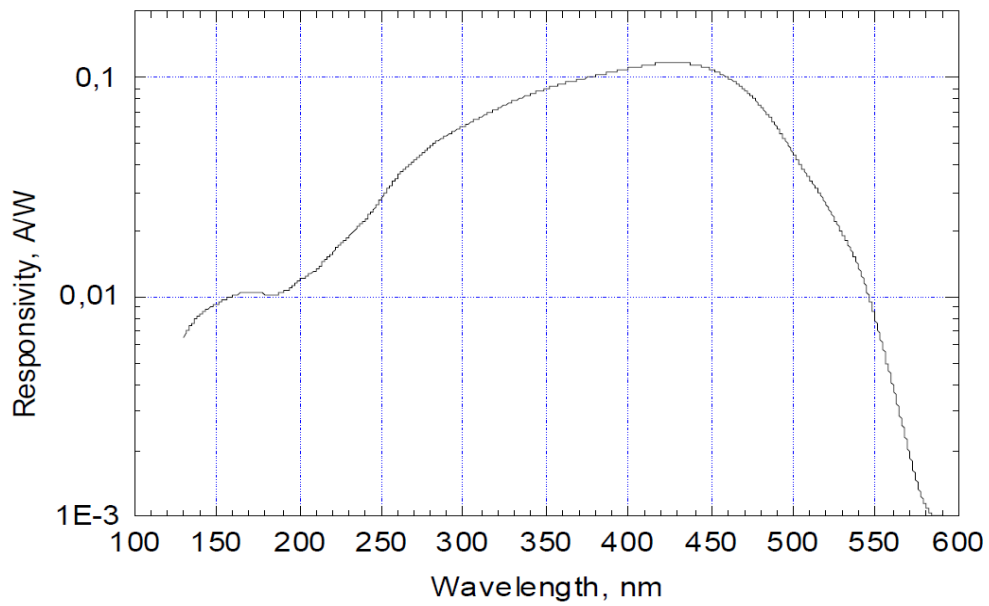
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Typical responsivity

EPD-150-0



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