

EPIGAP Optronik GmbH

Koepenicker Str. 325b
 D-12555 Berlin
 Fon: +49 (0)30 657637 60
 Fax: +49 (0)30 657637 70
 sales@epigap-optronic.de



Data Sheet

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IR photodiode

EOPD-1300-5-0.3

Rev. 02, 2014

Radiation	Type	Technology	Case
Infrared	Planar	InGaAs/InP	5 mm plastic

Description:	
	<p>InGaAs-Photodiode mounted in standard 5 mm package without standoff . High spectral sensitivity in the infrared range (NIR, SWIR).</p>
Application:	
<p>Optical communications, safety equipment, light barriers</p>	

Maximum Ratings

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

Parameter	Symbol	Value	Unit
Active area, diameter	$A\phi$	300	μm
Temperature coefficient of photocurrent	$TC(I_{ph})$	7.4	%/K
Operating temperature range	T_{amb}	-40 to +85	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-40 to +100	$^{\circ}\text{C}$

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		15	40	μA
Peak sensitivity wavelength	$V_R = 0 \text{ V}$	λ_p		1600		nm
Responsivity at 1300 nm	$V_R = 0 \text{ V}$	S_λ		0.9		A/W
Sensitivity range at 10%	$V_R = 0 \text{ V}$	$\lambda_{min}, \lambda_{max}$	800		1750	nm
Spectral bandwidth at 50%	$V_R = 0 \text{ V}$	$\Delta\lambda_{0.5}$		680		nm
Shunt resistance	$V_R = 10 \text{ mV}$	R_{SH}	3	5		G Ω
Noise equivalent power	$\lambda = 1300 \text{ nm}$	NEP		4×10^{-15}		$\text{W}/\sqrt{\text{Hz}}$
Specific detectivity	$\lambda = 1300 \text{ nm}$	D		4.5×10^{12}		$\text{cm} \cdot \sqrt{\text{Hz}} \cdot \text{W}^{-1}$
Junction capacitance	$V_R = 0 \text{ V}$	C_J		11		pF
Photocurrent at $\lambda = 1300 \text{ nm}$ ¹⁾	$V_R = 0 \text{ V}$	I_{ph}		0.95		μA
	$E_e = 1 \text{ mW}/\text{cm}^2$					

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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