



Photodiode

EPD-1300-0-0.5

Preliminary

6/21/2007

rev. 03/07

Wavelength	Type	Technology	Case
Infrared	Planar	InGaAs/InP	TO-18

	<p>Description</p> <p>InGaAs-Photodiode mounted in TO-18 standard package covered with epoxy. High spectral sensitivity in the infrared range (NIR, SWIR).</p> <p>Applications</p> <p>Optical communications, safety equipment, light barriers</p>
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Miscellaneous Parameters

T_{amb} = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	0.196	mm ²
Temperature coefficient		T _C (I _D)	0.074	1/K
Operating temperature range		T _{amb}	-40 to +85	°C
Storage temperature range		T _{stg}	-40 to +100	°C

Optical and Electrical Characteristics

T_{amb} = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F = 10 mA	V _F		0.8		V
Breakdown voltage ²⁾	I _R = 10 μA	V _R	5			V
Sensitivity range at 10 %	V _R = 0 V	λ	800		1750	nm
Spectral bandwidth at 50 %	V _R = 0 V	Δλ _{0.5}		680		nm
Responsivity at 1300 nm ¹⁾	V _R = 0 V	S _λ		0.9		A/W
Dark current	V _R = 5 V	I _D		250	1000	pA
Shunt resistance	V _R = 10 mV	R _{SH}	0.5	1.0		GΩ
Noise equivalent power	λ = 1300 nm	NEP		1.1x10 ⁻¹⁴		W/√Hz
Specific detectivity	λ = 1300 nm	D*		4.0x10 ¹²		cm · √Hz · W ⁻¹
Junction capacitance	V _R = 0 V	C _J		45		pF

¹⁾ measured on bare chip on TO-18 header

²⁾ for information only



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