

Wavelength	Type	Technology	Case
Infrared	Planar	InGaAs/InP	TO-39

	<p>Description</p> <p>InGaAs-Photodiode mounted in TO-39 standard package . High spectral sensitivity in the infrared range (NIR , SWIR) due to large active area.</p>
	<p>Applications</p> <p>Optical communications, safety equipment, light barriers</p>

Miscellaneous Parameters

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

Parameter	Test conditions	Symbol	Value	Unit
Active area		A	7,0	mm ²
Temperature coefficient		$T_C(I_D)$	0,074	1/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
Forward voltage	$I_F = 10 \text{ mA}$	V_F		0,6		V
Breakdown voltage	$I_R = 10 \mu\text{A}$	V_R	5	18		V
Dark current	$V_R = 5 \text{ V}$	I_D		5,0	30,0	nA
Responsivity at 1300 nm	$V_R = 0 \text{ V}$	S_{λ}		0,9		A/W
Sensitivity range at 20%	$V_R = 5 \text{ V}$	$\lambda_{min}, \lambda_{max}$	800		1700	nm
Spectral bandwidth at 50%	$V_R = 5 \text{ V}$	$\Delta\lambda_{0.5}$		780		nm
Dark resistance	$V_R = 10 \text{ mV}$	R_D	15	30		M Ω
Noise equivalent power	$\lambda = 1300 \text{ nm}$	NEP		4.6×10^{-14}		WHz ^{1/2}
Junction capacitance	$V_R = 0 \text{ V}$	C_J		1000	1300	pF
Photo current at 1300 nm*	$V_R = 0 \text{ V}$ $E_e = 1 \text{ mW/cm}^2$	I_{Ph}		15		μA

* for information only

Note: All measurements carried out with calibrated equipment

