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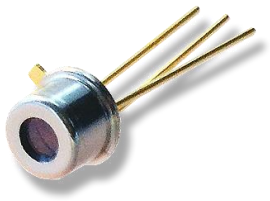
Rev. A1

PT5113

- InGaAs PIN Photodiode
- 0.9 – 1.7 µm spectral range
- Ø 300 µm active area
- TO46 package
- Flat glass window



RoHS COMPLIANT Pb-Free

Description

PT5113 is an InGaAs PIN photodiode with a sensitive area of **Ø 300 µ**m and sensitivity range of 900-1700 nm. It features wide dynamic range, **high responsibility**, and low dark current. **PT5113** comes in hermitically sealed TO46 package with flat glass window.

Maximum Ratings

Parameter	Symbol	Values Min.	Values Max.	Unit
Forward Current	I_F		10	mA
Reverse Voltage	V_F		30	V
Operating Temperature	T_{CASE}	- 40	+ 85	°C
Storage Temperature	T_{STG}	- 40	+ 85	°C
Soldering Temperature *	T_{SLD}		+ 260	°C

* must be completed within 5 seconds

Electro-Optical Characteristics (T_{CASE} = 25°C)

Parameter	Symbol	Condition	min.	typ.	max.	Unit
Spectral Range	λ		0.9		1.7	µm
Aperture Diameter	Ø			300		µm
Dark Current	I_D	V_R= -5 V			1.0	nA
Capacitance	C_J	@ 1 MHz, V_R= -5 V			6.0	pF
-3dBm Bandwidth		R_L= 50 Ω	0.8			GHz
Responsivity	S_λ	1.31 µm, V_R= -5 V	0.85			A/W
		1.55 µm, V_R= -5 V	0.90			
Saturation Power	P_S	V_R= 0 V	6			dBm

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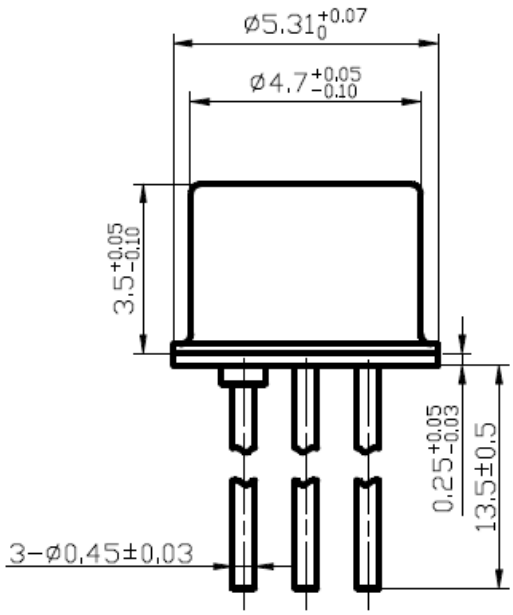
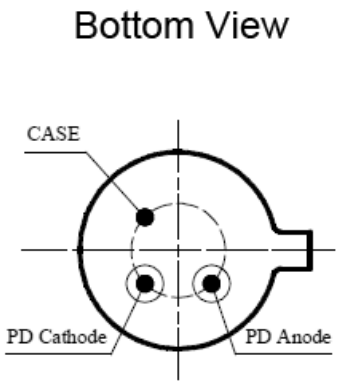
Outline Dimensions & Pinout

TO-46





all dimensions in mm

Precautions

Soldering

- Do avoid overheating of the PD
- Do avoid electrostatic discharge (ESD)
- Do avoid mechanical stress, shock, and vibration
- Do only use non-corrosive flux
- Do not charge the PD with light until it has cooled down to room temperature after soldering

Cleaning

Cleaning with isopropyl alcohol, propanol, or ethyl alcohol is recommended
DO NOT USE acetone, chloroseen, trichloroethylene, or MKS
DO NOT USE ultrasonic cleaners

Static Electricity

PDs are sensitive to electrostatic discharge (ESD). Precautions against ESD must be taken when handling or operating these PDs. Surge voltage or electrostatic discharge can result in complete failure of the device.

Revision History

Revision	Release Date	Note
A1	*2021-03*	Initial release