



ROITHNER LASERTECHNIK GmbH

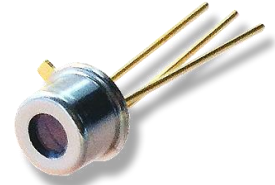
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PT5113

- InGaAs Pin Photodiode
- 900 – 1700 nm Spectral Range
- Ø 300 µm Active Area
- TO-46 Can / Flat Glass Window



Description

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

Maximum Ratings*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Operating Temperature	T_{OP}	- 40	+ 85	°C
Storage Temperature	T_{STG}	- 40	+ 85	°C
Reverse Voltage	U_R		30	V
Forward Current	I_F		10	mA
Solder Temperature ($t_{max. 3s}$)	T_{SLD}		+ 260	°C

*Operating close to or exceeding these parameters may damage the device

Electro-Optical Characteristics ($T_{CASE} = 25^{\circ}C$)

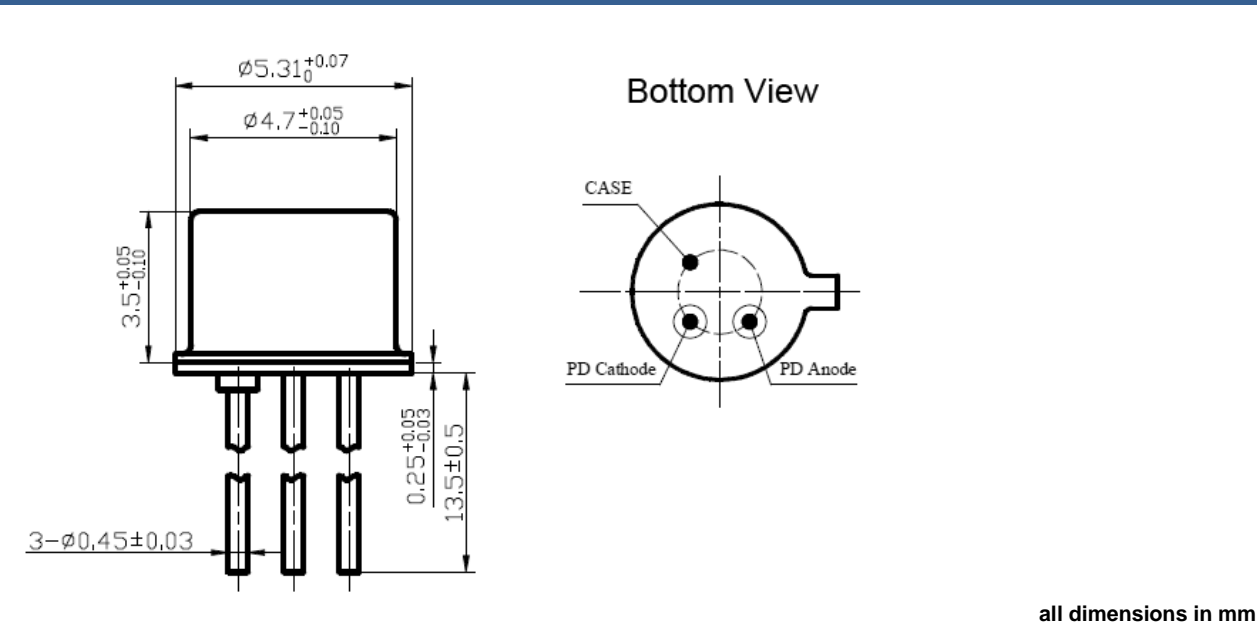
Parameter	Symbol	Condition	min.	typ.	max.	Unit
Spectral Range	λ		0.9		1.7	µm
Active Area Diameter	\varnothing			300		µm
Dark Current	I_D	$U_R = -5 V$			1.0	nA
Capacitance	C_J	@ 1 MHz, $V_R = -5 V$			6.0	pF
-3dB Bandwidth	f	$R_L = 50 \Omega$	0.8			GHz
Responsivity	S_λ	1.31 µm, $U_R = -5 V$	0.85	0.90		A/W
		1.55 µm, $U_R = -5 V$	0.90	0.95		
Saturation Power	P_S	$U_R = 0 V$	6.0			dBm





Outline & Pinout

TO-46



Precautions

Soldering

- Do avoid overheating of the PD
- 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, chloroform, 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.

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