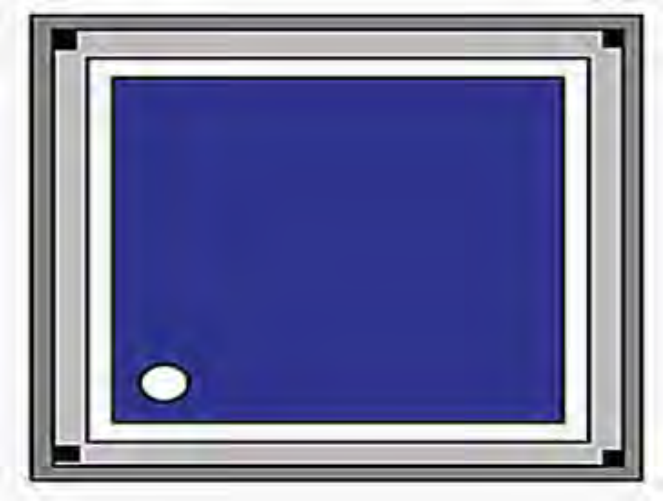
InGaAs Photodiode Chip-PD300



Description

InGaAs photodiodes offer superb response from 900nm to 1700nm, perfect for telecom and near IR detection. The 75 and 120 micron photodiodes are offered in isolated TO-46 packages with a lensed cap for single mode and multi-mode fiber coupling or Bare chips. These two sizes are also available with actively aligned FC receptacles. The 70 micron photodiode is perfect for high bandwidth applications while the 120 micron photodiode is perfect for active alignment applications. The 3mm photodiode is isolated in a TO-5 package with a broadband double sided AR-coated window. With the high shunt resistance, the 3mm photodiode is suitable for high sensitivity to weak signal applications.

Features

- Response Range From 1000nm to 1680nm
- High Responsivity, front side illuminated, double-side pads
- Φ=300μm, round optical window

Application

- Fiber communication
- Fiber sensor

Absolute Maximum Rating

Parameter	Symbol	Rating	Unit
Operating temperature	TC	-40～+85	℃
Storage temperature	TSTG	-50～+125	℃
Forward Current	IF	10	mA
Reverse Current	IR	10	mA
ESD susceptibility	⩾300		V

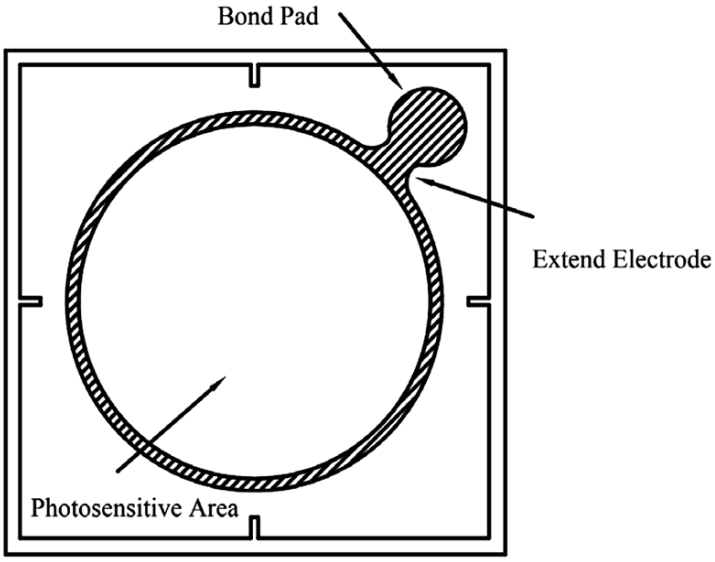
Matters needing attention:
a. Take appropriate ESD protections to avoid damage.
b. InP chips are fragile and easily damaged, so special caution should be used when handling.
c. Do not handle with tweezers. A vacuum tip with a flat surface is recommended. Bonding force and temperature should be applied in a gradual fashion.

E/O Characteristics

The Opto-electronic Characteristics (@Tc=22±3°C)

Parameters	Sym.	Test conditions	Min	Typ	Max	Unit
Response Spectrum	λ	-	1000～1680			nm
Active Diameter	Φ	-	300			μm
Reponsivity	Re	λ=1.31μm, VR=5V, φe=100μW	0.9	-	-	A/W
ForwardVoltage	VF	IF=1mA	-	0.6	0.7	V
Reverse Breakdown Voltage	VBR	ID=10μA, φe=0	35	40	-	V
Dark Current	ID	VR=5V, φe=0	-	0.2	0.8	nA
Capacitance	CPD	VR=5V, φe=0, f=1MHz	-	5	8	pF
Rising Time/Falling Time	Tr/Tf	VR=5V, φe=1mW	-	0.5	1	ns
DC Saturation Power	Sat	VR=0V	1.0	2.5	-	mW
		VR=5V	6.0	14.0	-	

Outline Diagram & Die Dimensions



Die Size	500μm×500μm
Die Thickess	175±10μm
Bond Pad Diameter	75μm
Photosensitive Diameter	300μm
Extend Electrode Length	30μm
P metal	Au
N metal	Au

Note: The structure of PIN PD is planar and front illuminated with P electrode on the top and N electrode on the bottom.