

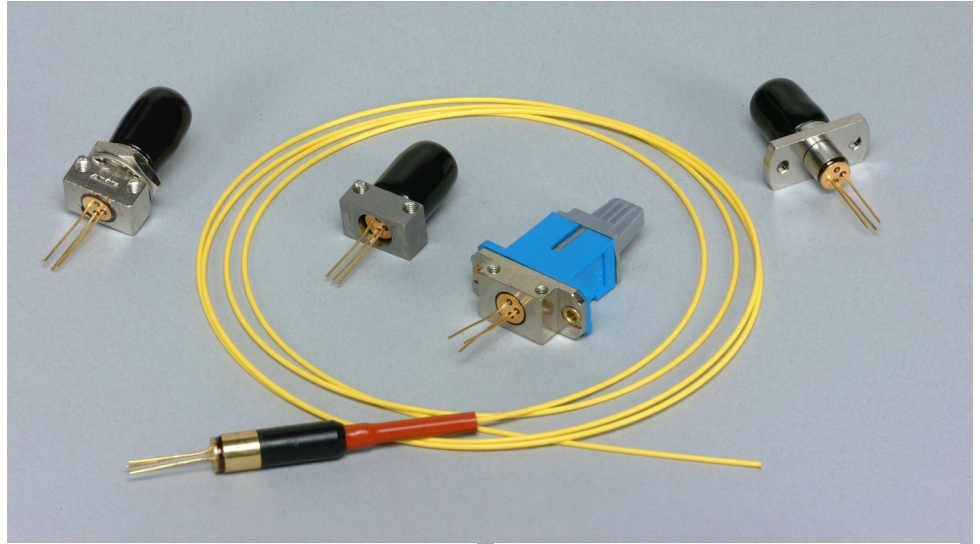


PDIN Series Analog InGaAsP PIN Photodiodes

Analog InGaAs PIN Detectors

PD-LD Inc. offers low noise, high responsivity analog InGaAsP photo detectors in convenient fiber coupled packages. These assemblies incorporate 70 micron diameter active area detector that responds optimally to both 1310 and 1550 nm light sources. Each module contains a semiconductor whose bandwidth is ideally suited to industry standard transmission rates from DC to 3.0 GHz (typ). The low intermodulation distortion values make them useful in multi-channel CATV applications. When fiber pigtailed with SMF these components are available with low back reflection performance. LBR is specified as -45 db maximum optical return loss.

These modules are available with either bare or connectorized fiber pigtailed or in receptacle style housings suitable for board or panel mounting. These high reliability units are operational over industrial environmental conditions.



Applications

- CATV Trunk
- Feeder
- ONU Nodes
- Forward Path AM CATV to 3.0GHz
- Return Path CATV Receivers to 325 and 550 MHz.

Features

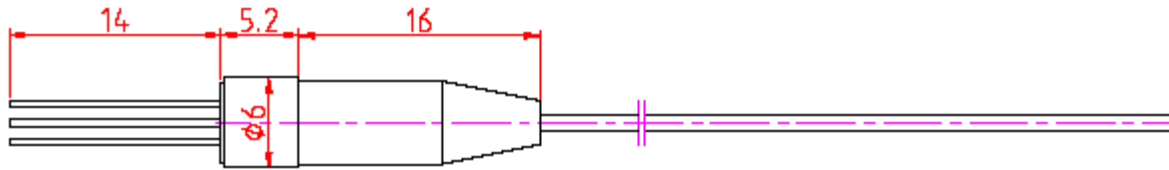
- InGaAs Photodiodes with low Intermodulation Distortion (IM2)
- High Linearity
- High Responsivity
- Low capacitance receivers
- -40 to 85°C Operating Range
- FC, ST, SC Receptacle Housing
- Pigtailed with SMF, MMF available on request

Parameter	Units	Symbol	PDINBJ070 Series ($V_R=5V$, $T=25\text{ C}$)
Operating Wavelength	nm	Lambda	1100 to 1600 nm
Responsivity -1300 nm -1550 nm	A/W	R	0.80 min 0.80 min
Analog Bandwidth (-3 dB)	GHz	BW_e	3.0 min
Second Order Intermod Distortion Product ¹	dBc	IM2	-70 max
Third Order Intermod Distortion Product	dBc	IM3	-80 max
Dark Current	nA	I_d	1 max @25 C 100 max @ 85C
Reverse Voltage	V	V_R	50 max
Breakdown Voltage	V	V_{BD}	55 typ @ $I_R=10\text{ uA}$ 25 min
Capacitance	pF	C	0.8 max 0.56 typ
Forward Current	mA	I_F	50 max
Optical Back Reflection w/SMF	OBR	dB	-45
Polarization Dependent Loss	PDL	dB	+/- 0.1

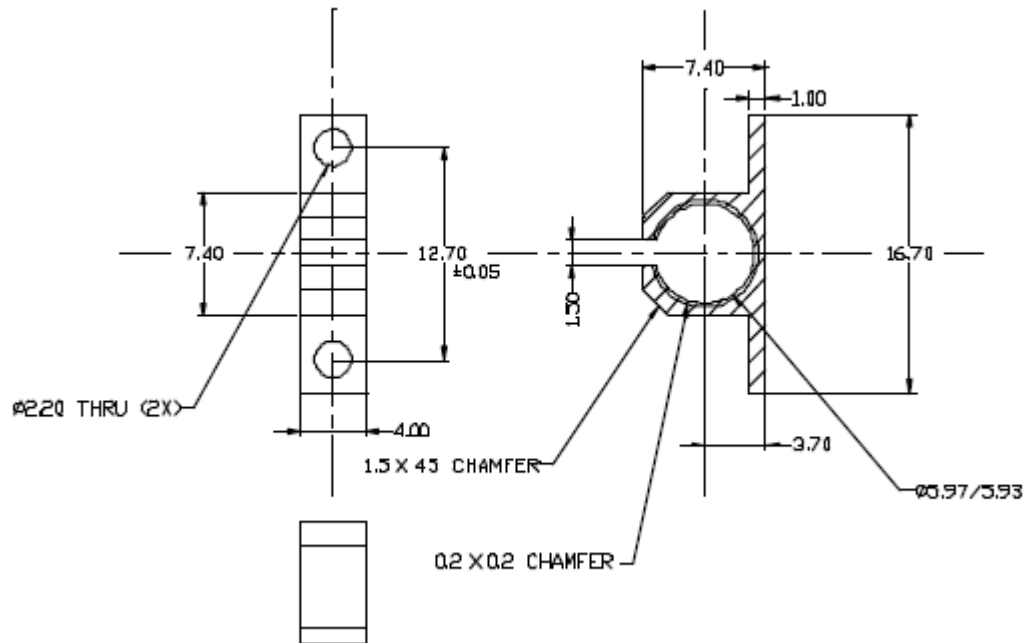
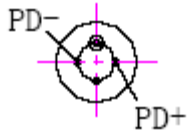
¹ IM2 measured at 5V reverse bias, 1 mW input optical power, 1310 nm, 50 ohm matched impedance, $f_1 + f_2 = 850\text{ MHz}$

PDIN Series Analog InGaAsP PIN Photodiodes

Pinout & Mechanical Dimnsions (mm)



Type A



Ordering Information

Fiber Pigtailed Devices

PDINBJ070FCCB-O-V-MM

D= PIN Diode
070= Diameter

IN= InGaAs Photodiode
F = Fiber Type
1 = 9/125/900 SMF
2 = 50/125 MMF
3 = 62.5/125 MMF
5= 9/125/900 LBR
9 = Supplied by cust

BJ= Analog PIN with "A" pin-out

CC = Connector Type
ST = ST
SC = SC
SA = SC/APC
FC = FC PC
FA = FC/APC
OO = No Connector

Bracket Type (pigtail only) **O = Orientation of Leads**

A = None

B = Panel Mount

D = Board Mount

E = Panel Mount (12mm hole spacing)

W = Shipped Separately with PIN TIA

X = Customer Supplied

Z= Ground at 12:00

V=Version

O= standard

M = Length in meters (pigtail only)

10 = 10meter

03 = 3 meters

01 = 1 meter

.1 = .1 meters

5 = 0.5 meters