

## PDIN BR 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 35 micron diameter active area detectors that responds optimally to both 1310 and 1550 nm light sources. Each module contains a semiconductor whose bandwidth is ideally suited to transmission rates from DC to 6.5 GHz (typ). The low intermodulation distortion values make them useful in multi-channel CATV applications. When fiber pigtailed these components are available with low back reflection performance. LBR is specified as -40 db maximum optical return loss.

These modules are available with either bare or connectorized fiber pigtails 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 6.5GHz

### 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 9/125 μm Fiber

Parameter	Units	Symbol	PDINBR035 Series (V <sub>R</sub> =5V, T=25 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 <sub>e</sub>	5.0 min 6.5 typ
Second Order Intermod Distortion Product <sup>1</sup>	dBc	IM2	-65 max -75 typ
Dark Current	nA	I <sub>d</sub>	1 max @25 C 0.1 typ @ 25C
Reverse Voltage	V	V <sub>R</sub>	20 max
Breakdown Voltage	V	V <sub>BD</sub>	40 typ @I <sub>R</sub> =10 uA 25 min
Capacitance	pF	C	0.55 max 0.40 typ
Forward Current	mA	I <sub>F</sub>	10 max
Optical Back Reflection Option	OBR	dB	-40

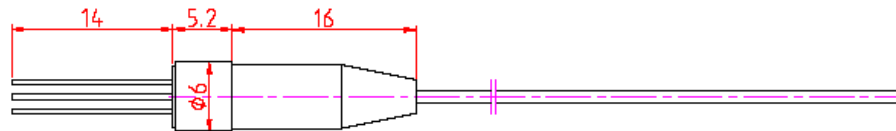
<sup>1</sup> IM2 measured at 12V reverse bias, 1 mW input optical power, 1310 nm, 50 ohm matched impedance, f<sub>1</sub>+ f<sub>2</sub> =850 MHz

Specifications are subject to change without notice.

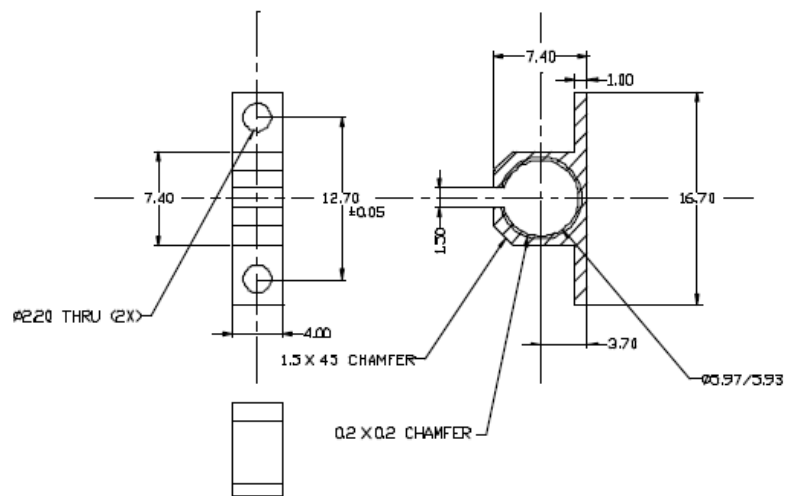
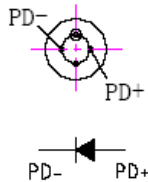
06-20 Analog PIN BR.Rev A

**PDIN BR Series Analog InGaAsP PIN Photodiodes**

**Pinout & Mechanical Dimensions (mm)**



Type A



**Ordering Information**

**Fiber Pigtailed Devices**

**PDINBR035FCCB-O-V-M**

<b>D= PIN Diode</b> <b>035= Diameter</b>	<b>IN= InGaAs Photodiode</b> <b>F = Fiber Type</b> 1 = 9/125/900 SMF 2 = 50/125 MMF 3 = 62.5/125 MMF 5= 9/125/900 LBR 9 = Customer Supplied	<b>BR= Analog PIN with "A" pin-out</b>	<b>CC = Connector Type</b> <b>LA = LC/APC</b> <b>SC = SC</b> <b>SA = SC/APC</b> <b>FC = FC PC</b> <b>FA = FC/APC</b> <b>00 = No Connector</b>
<b>Bracket Type (pigtail only)</b> <b>A = None</b> <b>B = Panel Mount</b> <b>D = Board Mount</b> <b>E = Panel Mount (12mm hole spacing)</b>	<b>O = Orientation of Leads</b> <b>Z= Ground at 12:00</b> <b>A= shipped loose</b>	<b>V=Version</b> <b>O= standard</b>	<b>M = Length in meters (pigtail only)</b> <b>10 = 10 meters</b> <b>03 = 3 meters</b> <b>01 = 1 meter</b> <b>.23= 0.23 meters</b>

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