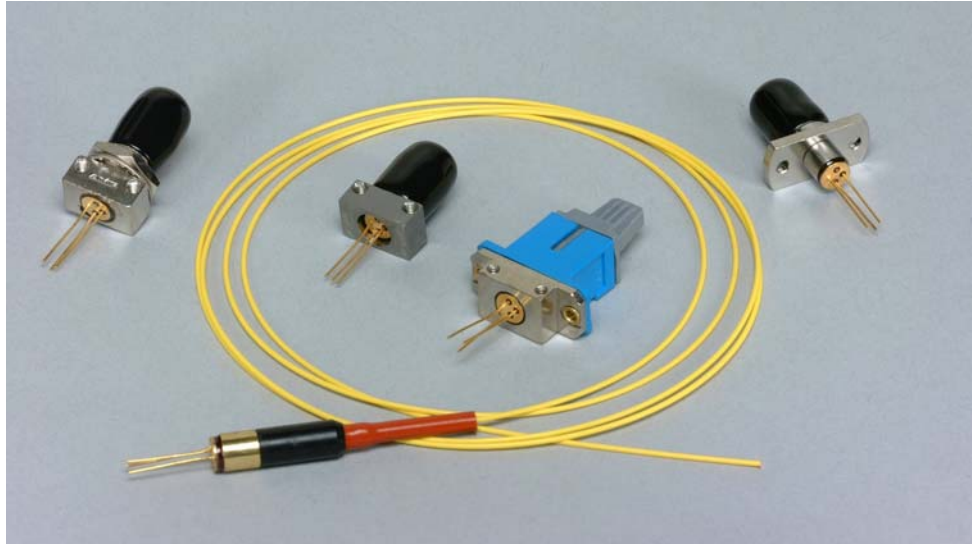


PD-LD offers InGaAs PIN photodiodes with a 45 micron diameter active area that are ideal for use in Channel Monitoring Applications. The detectors exhibit their intrinsically high optical responsivity between 1100 nm and 1650 nm with the highest performance between 1550 nm and 1625 nm. These semiconductors are selected for their low dark current values and inherently low capacitance. The semiconductor structure and pigtailing process ensures low Polarization Dependent Loss so that fiber movement and twisting will not significantly affect the assemblies responsivity .



Pigtailing

Devices can be pigtailed with any size optical fiber that is compatible with its active area size. Pigtails may range in core size from 3um to 100micron. One meter is the standard length, but any length or connector termination may be specified. Pigtails may be terminated with ST, FC, SC and LC connectors with either PC or APC polish.

RoHS Compliant

Low Back Reflection Assemblies

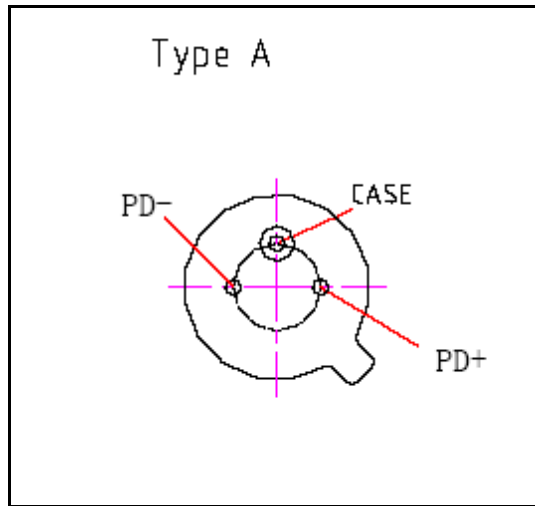
For those applications requiring low optical back reflection, PD-LD offers a series of fiber pigtailed InGaAs detectors. Typically 45 um , 55 um, 70 um or 75um InGaAs detectors are aligned to angle-polished, radially tuned fiber pig-tails, in order to minimize incident reflected light. With this process, back reflection values may be minimized. Such devices are ideal for CATV, tap monitor and high speed digital applications.

Manufacturing

PD-LD Inc. maintains a large inventory of the most popular detector sizes and pin-outs. Efficient package designs and manufacturing processes allow PD-LD to rapidly support both small and large volume requirements. Complete 100% testing of all critical parametric device values ensure optimal performance and quality. Not all receptacle packaging styles are represented on this data sheet, so please contact PD-LD for specific needs.

| PDINBU045G00A-0-0-01 45 um diameter InGaAs PIN Photodiode for 1100 nm to 1650 nm Operation Vr=5V | | | | | |
|--|------|------|---------|------|-----------------------|
| Parameter | Unit | Min. | Typical | Max | Test Conditions |
| Wavelength | nm | 1100 | 1550 | 1650 | |
| Responsivity | A/W | 0.90 | | | 1550 nm |
| Responsivity | A/W | 0.90 | | | 1625 nm |
| Back Reflection | dB | | | -45 | 1550 nm |
| Dark Current | nA | | 0.1 | 1.0 | Vr=5V, Tc=-40 to 85°C |
| Capacitance | pF | | 0.5 | 0.7 | F=1MHz |
| Bandwidth | GHz | 3.0 | | | |
| Fiber Length | m | 1.0 | | | |
| Operating Temp. | °C | -40 | | 85 | |
| Storage Temp. | °C | -40 | | 85 | |

Pin-out



**Pigtailed
PDXXKAAAFCCB-O-V-M**

| Device Type XX | Device Code K | Active Area AAA | Fiber Size F (µm) | Connector CC Pigtail Only | Bracket B Pigtail Only | Orientation O | Version V | Pigtail Length M |
|-------------------|--------------------|--------------------|--|---|-------------------------------------|--|--------------|---------------------|
| IN=InGaAs PIN | BU= "A" pin-out | 045=45microns | G= Low Back Reflection , 9/125/250 um | FA=FC/APC connector 00= No connector | A=None D= Horizontal board mount | 0= not applicable V=9:00 Anode 6:00 Ground 3:00 Cathode | 0 = None | 01=1 m |

InGaAs Absolute Maximum Ratings (Tc=25°C)

| Parameter | Symbol | Value | Unit |
|-----------------------|-----------|-----------|--------|
| Reverse Current | I_R | 7 | mA |
| Reverse Voltage | V_R | 15 | V |
| Forward Current | I_F | 10 | mA |
| Operating Temperature | T_{OPR} | -40 to 85 | °C |
| Storage Temperature | T_{STR} | -40 to 95 | °C |
| Input Optical Power | P | 50 | mW |
| Soldering Temperature | | 260/10 | °C/sec |

Mechanical Drawing for Coaxial Fiber Pigtailed PIN Photodiode
With No Mounting Bracket Model PDINBU045G00A-0-0-01
With Horizontal Mounting Bracket "D" Model PDINBU045G00D-V-0-01

