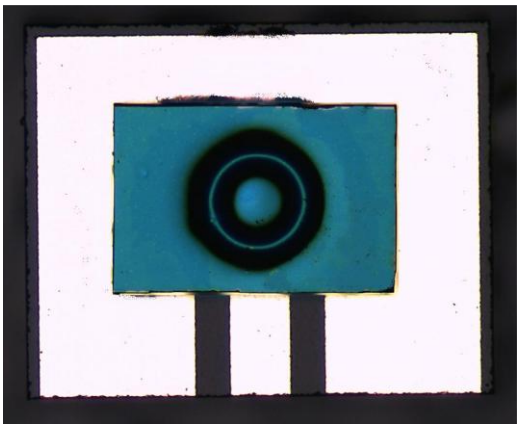
# InGaAs Avalanche Photodiode (APD) with Integrated Lens

# 10 Gbps (Chip-on-Carrier)

## PDAB0022L-CC



## Applications

Long Haul Receivers
SONET/SDH Receivers

## Features

Ceramic sub-carrier
Integrated Lens
Planer Structure for High Reliability
1000 to 1625nm Spectral Response
Low Dark Current

## Description

Go!Foton Avalanche Photodiode (APD) is suitable for 10 Gbps applications in optical communications. This InGaAs APD has a planer structure for high reliability. It has back illuminated structure. The optical signal goes through the integrated lens on the back surface.

## Specifications

### Electro-Optical Characteristics

| Parameter | Min | Typ | Max | Conditions |
|---|---|---|---|---|
| Active Area Diameter (μm) | | 22 | | |
| Responsivity (A/W) | 0.80 | | | 1.55μm, M=1 |
| Dark Current (nA) | | | 50 | $0.9V_{br}$, 25 °C |
| Breakdown Voltage (V) | 25 | | 40 | 100μA |
| Capacitance (pF) | | | 0.3 | 1MHz, M=10 |
| Frequency Response (GHz) | 7 | | | M=8, RL=50Ω |
| Operating Voltage (V) | | | $V_{br}$ - 1 | M=10 |
| Punch-through Voltage (V) | 12 | | $V_{br}$ - 7 | |
| Temperature Coefficient of Vb (%/°C) | | | 0.15 | |

1) Condition unless noted: 25°C, Pout =1uW
2) Punch-through voltage is defined as voltage where 1.5V above the voltage where the first deviation of IV curve under illumination shows local maximum
3) Responsivity at punch-through voltage is defined as responsivity at M=1

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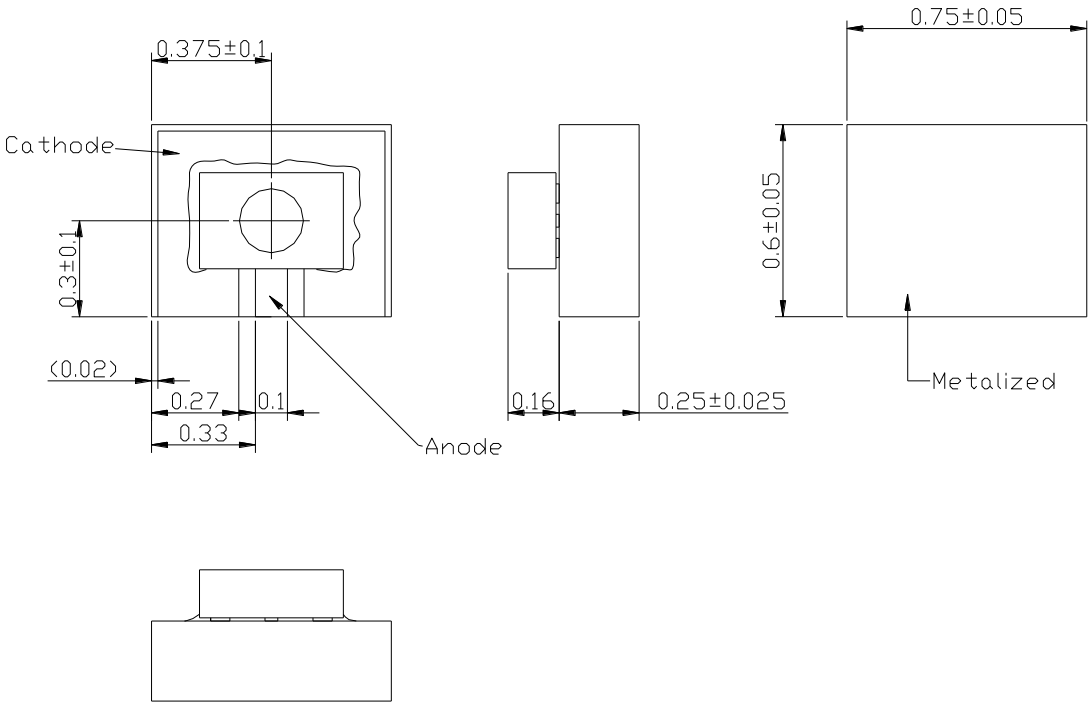
## Absolute Maximum Rating

| Parameter | Min | Typ | Max |
|---|---|---|---|
| Reverse Current (mA) | | | 1 |
| Forward Current (mA) | | | 1 |
| Maximum Input Power (mW) | | | 0.5 |
| Operating Temperature[4] (°C) | -40 | | 85 |
| Storage Temperature[4] (°C) | -40 | | 85 |

4) Operational or storage beyond these absolute maximum ratings causes permanent damage to the device.

## Drawing

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