InGaAs Avalanche Photodiode
2.5 Gbps, Back-Illuminated(chip)

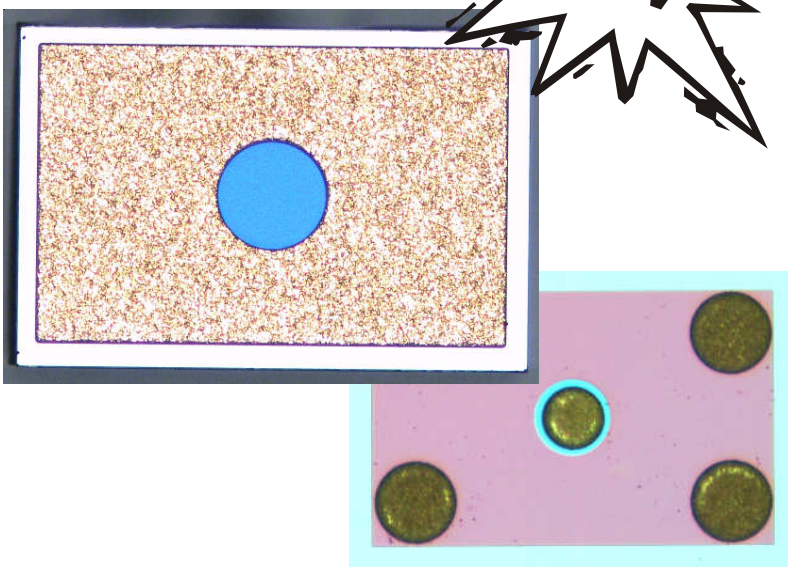
PDAB0055-C

Applications:

G-PON / Ge-PON

Long Haul Receivers

SONET/SDH Receivers



Features:

Planer Structure for High Reliability

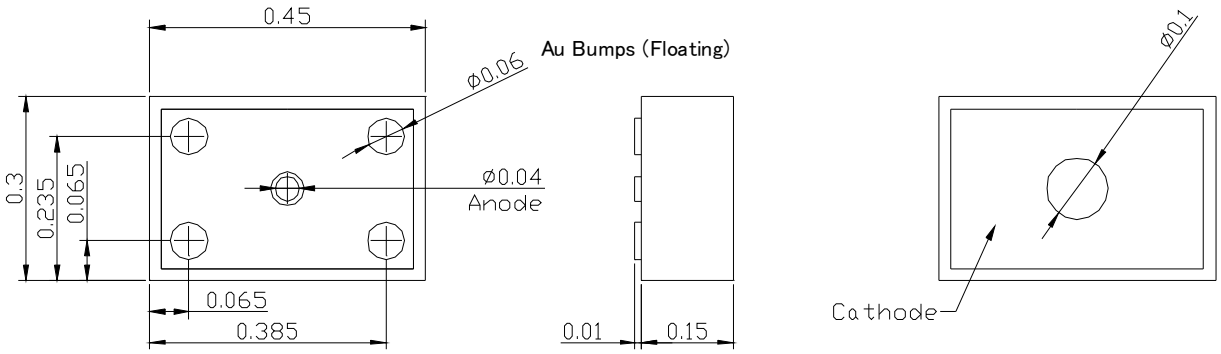
1000 to 1625nm Spectral Response

Low Dark Current

Description:

NSG's Avalanche Photodiode (APD), Back-Illumintion type is suitable for 2.5 Gbps applications in optical communications. This InGaAs APD has a planer structure for high reliability.

Dimension:



Specifications:

Electro-Optical Characteristics

Parameter	Min.	Typ.	Max.	Conditions
Active Area Diameter (μm)		55		
Responsivity (A/W)	0.80			1.55μm, M=1
Dark Current (nA)			50	$0.9V_{br}$, 25°C
Breakdown Voltage (V)	35		60	10μA
Capacitance (pF)			0.7	1MHz, M=10
Frequency Response (GHz)	1.5			M=8, RL=50
Operating Voltage (V)		V_{br}-1	V_{br}	M=10
Punch-through Voltage (V)	15		V_b-10	See below
Temperature Coefficient of V_{br} (%/°C)	0.1	0.15	0.25	

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

Absolute Maximum Rating

Parameter	Min.	Typ.	Max.
Reverse Current (mA)			1
Forward Current (mA)			2
Maximum Input Power (mW)			1
Operating Temperature[4] (°C)	0		+85
Storage Temperature[4] (°C)	-40		+85

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

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