

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

PDAB0055-C

Applications:

G-PON / Ge-PON
Long Haul Receivers
SONET/SDH Receivers

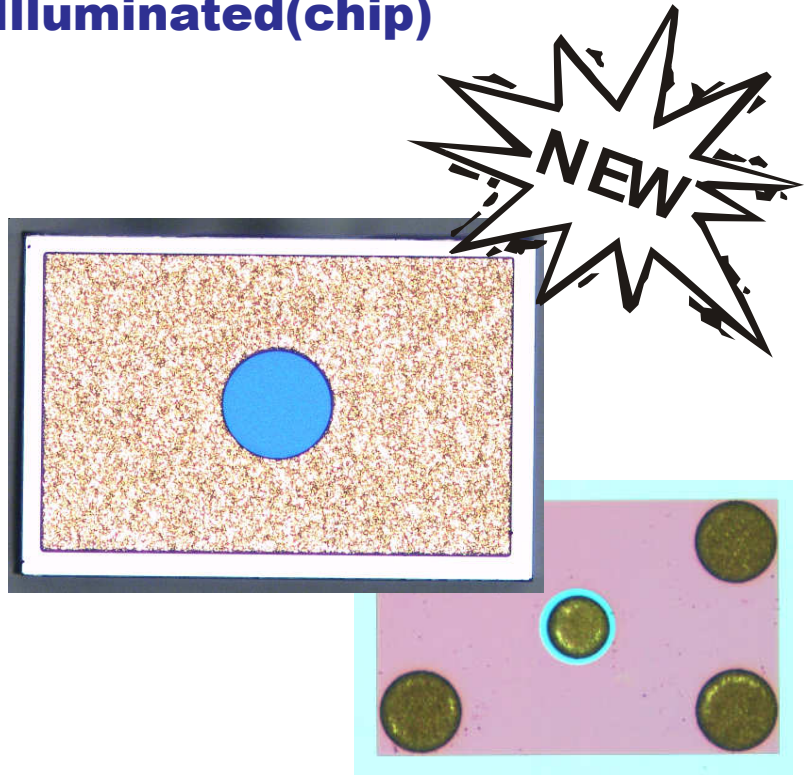
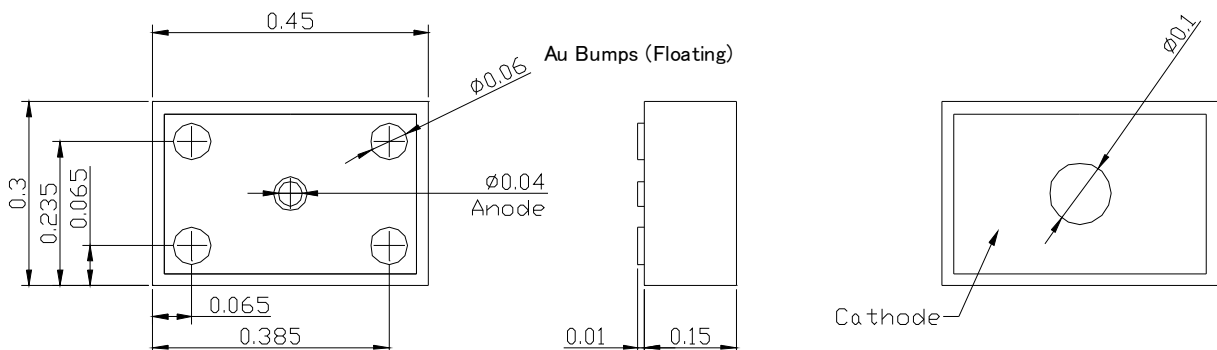
Features:

Planer Structure for High Reliability
1000 to 1625nm Spectral Response
Low Dark Current

Description:

NSG's Avalanche Photodiode (APD), Back-Illumination 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			1.55 μm , M=1
Dark Current (nA)			50	0.9V _{br} , 25°C
Breakdown Voltage (V)	35		60	10 μA
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, P_{out} = 1 μW

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.