



InGaAs Avalanche Photodiode Chip

FEATURES

- Highly Reliable Planar Device
- High Responsivity in 0.95 -1.65 μm
- Low Leakage Current and Noise
- $\geq 750\text{-MHz}$ 3dB Bandwidth
- Low Stray Absorption

APPLICATIONS

- Light Detection and Ranging (LIDAR)
- Fiberoptic Communication / Testing
- Spectral Analysis
- Optical Coherence Tomography
- Single-Photodiode SWIR Camera
- Covert IR Sensing



GENERAL DESCRIPTIONS

MODEL NO.		APD0200-17-C
PARAMETER	UNIT	VALUE
Spectral Range	μm	0.95 – 1.65
Aperture Size	μm	$\varnothing 200$
Package Type	---	6CLCC (3.0SQ)

ABSOLUTE MAXIMUM RATINGS

PARAMETER		UNIT	MIN.	MAX.
Reverse Current		mA	---	1
Forward Current		mA	---	5
¹ Ambient Temperature	In Operation	$^{\circ}\text{C}$	-40	+85
	Storage	$^{\circ}\text{C}$	-40	+85

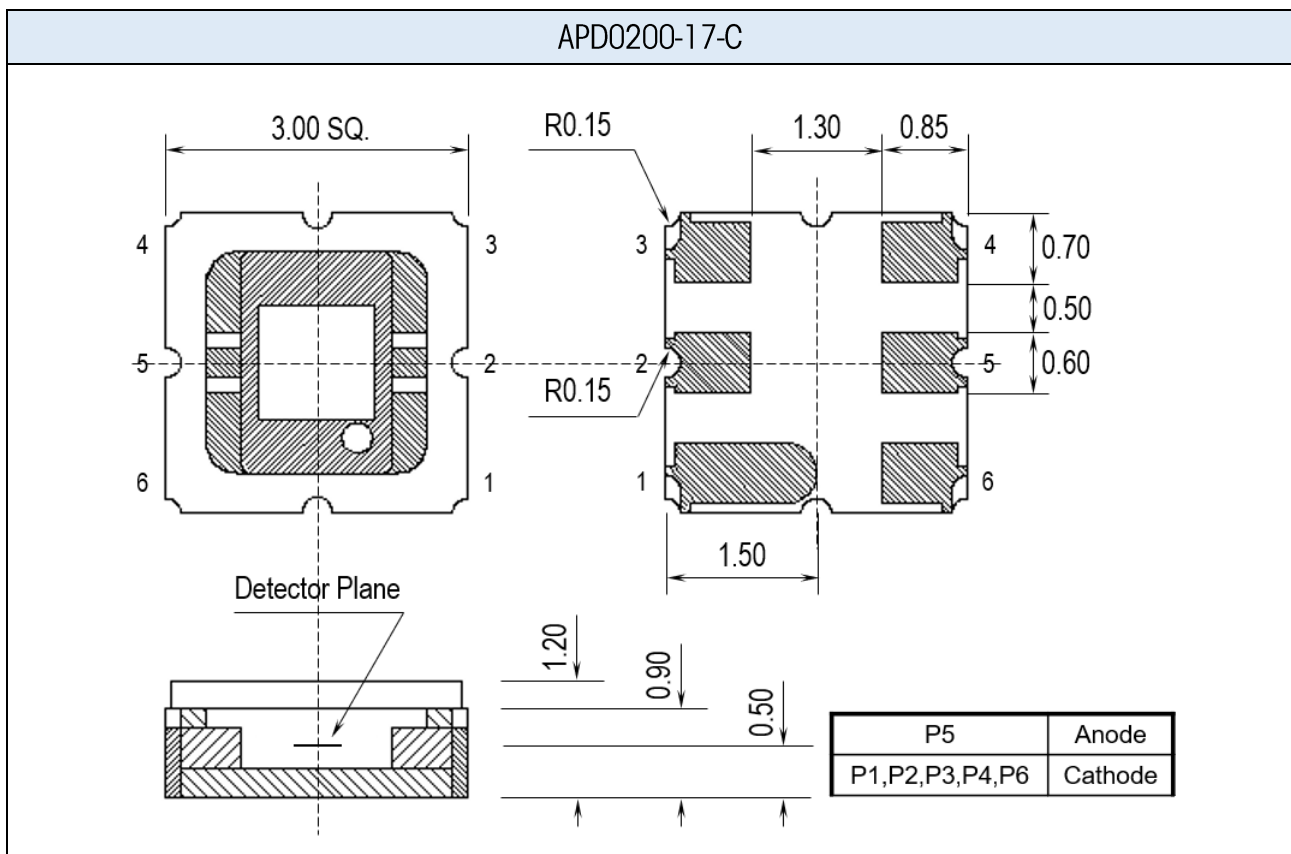
¹Non-condensing environment.



SPECIFICATIONS ($T_{AMB} = 23^{\circ}\text{C}$)

Parameter	Unit	Min.	Typ.	Max.	Conditions
Dark Current	nA	---	5	50	M=10
Operating Voltage (V_{OP})	V	32		50	M=10
Breakdown Voltage (V_{BD})	V	35		55	$I_{BD}=100\mu\text{A}$
Capacitance	pF	---	2.5	3.0	M=10, f=1MHz
Responsivity	A/W	8	9		M=10, $\lambda=1.55\mu\text{m}$
		0.8	0.9		M=1, $\lambda=1.55\mu\text{m}$
Useable Gain	---	10	20	---	$\lambda=1.55\mu\text{m}$
3dB Bandwidth (f_{3dB})	GHz	0.75	0.85		M=10, $\lambda=1.55\mu\text{m}$
Spectral Noise Current	$\text{pA}/\sqrt{\text{Hz}}$	---	0.5	1.5	M=10, $\Delta f=1\text{kHz}$

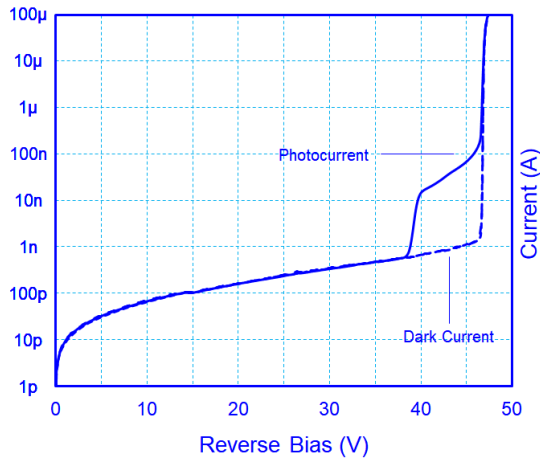
PACKAGE OUTLINE (UNIT: mm)



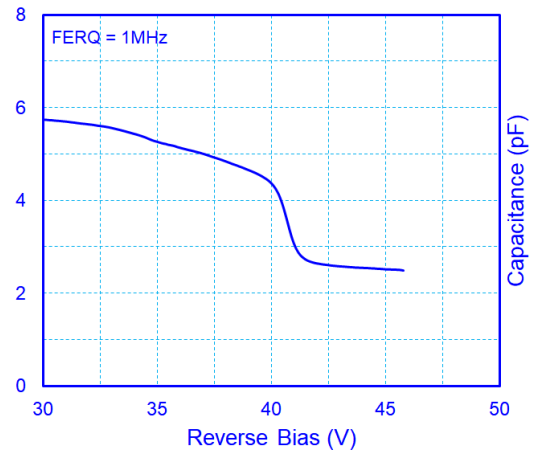


EXAMPLE CURVES ($T_{AMB} = 23^{\circ}C$)

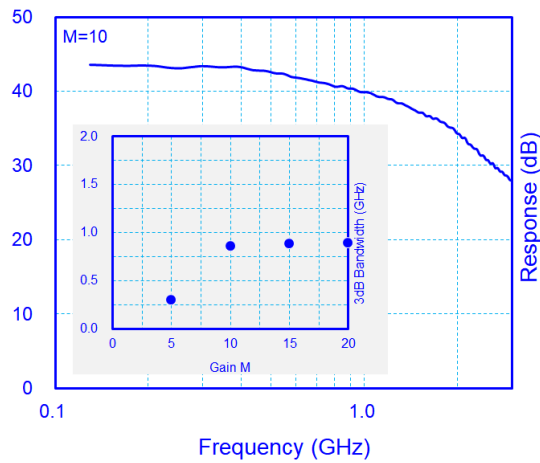
Dark- / Photo-Current



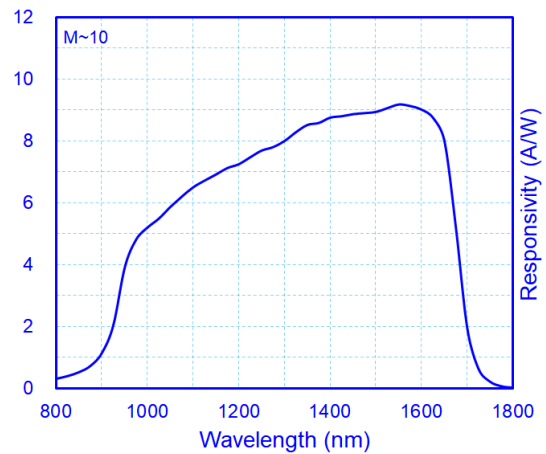
Dark Capacitance



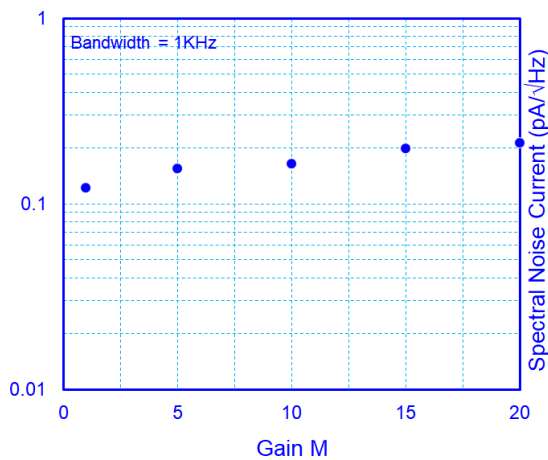
Frequency Response



Responsivity Spectrum



Spectral Noise Current



Note: The example curves are subject to change without notice.