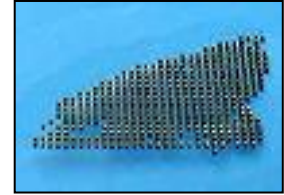




## APD200-CHIP

- InGaAs Avalanche Photodiode
- $\varnothing$  0.2 mm active area
- 0.95 – 1.65  $\mu\text{m}$  spectral range
- Low Leakage Current and Noise
- $\geq 700$  MHz 3 dB Bandwidth
- Low Stray Absorption



### Description



**APD200-CHIP** is an **InGaAs avalanche photodiode chip die** with an active area diameter of **0.2 mm**, offering a very low leakage current and noise, a spectral sensitivity range from **0.95 to 1.65  $\mu\text{m}$**  and low stray absorption.

It is widely used for spectral analysis, optical coherence tomography, SWIR camera, light detection, and LIDAR applications.

### Maximum Ratings ( $T_{\text{CASE}}=25^{\circ}\text{C}$ )

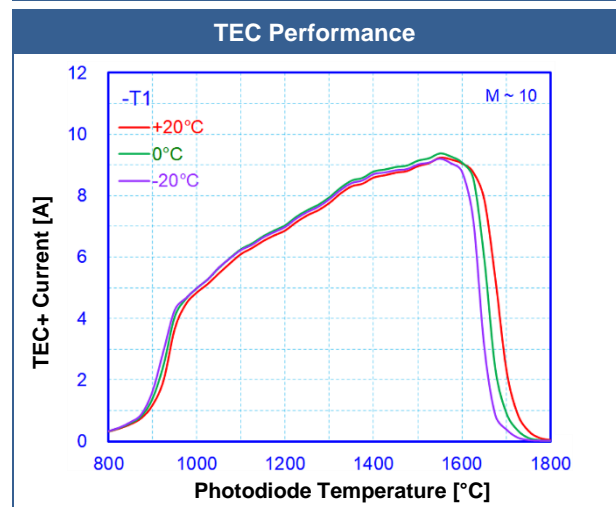
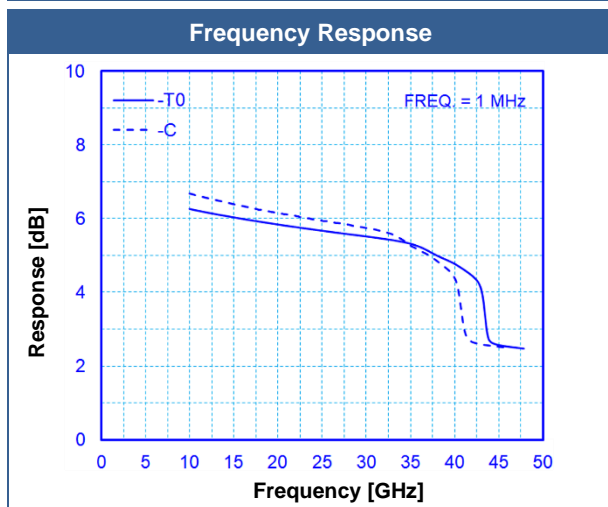
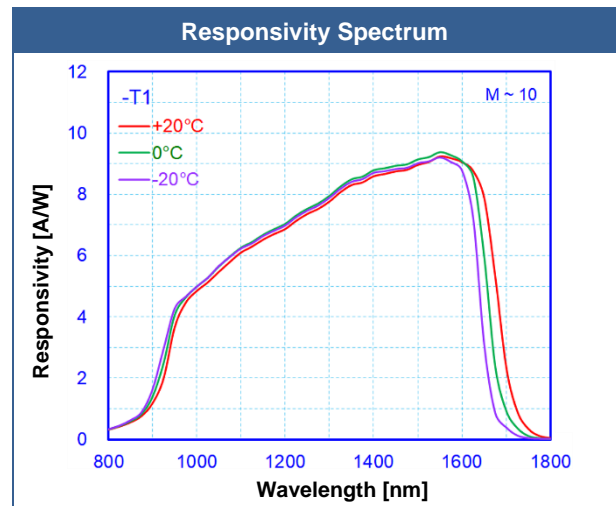
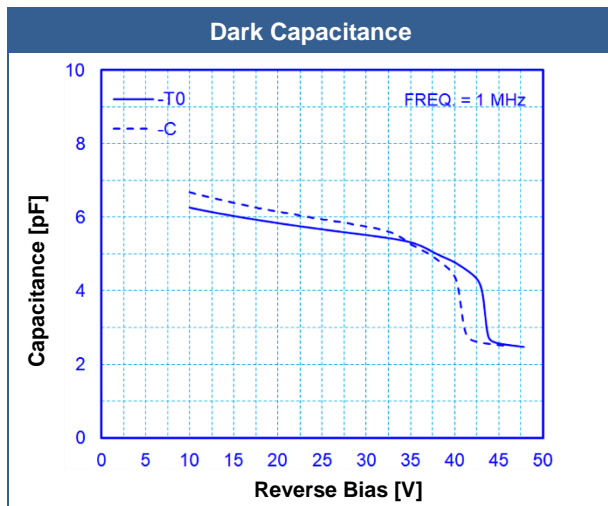
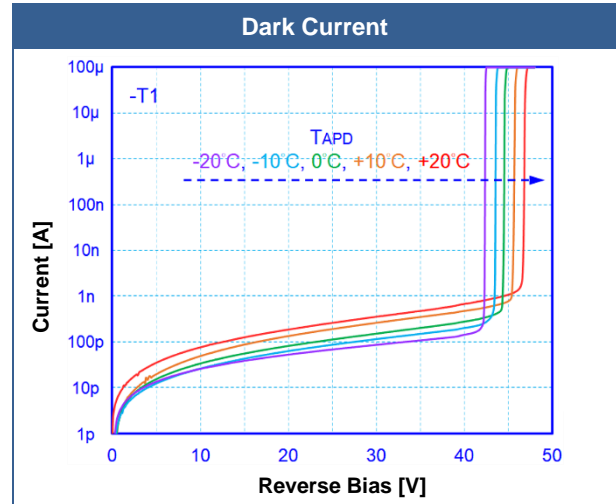
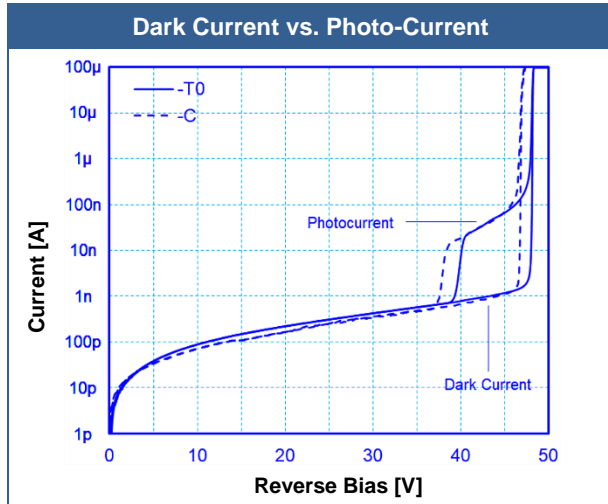
Parameter	Symbol	Values		Unit
		Min.	Max.	
Reverse Current	$I_R$		1	mA
Forward Current	$I_F$		5	mA
Operating Temperature	$T_{\text{CASE}}$	- 40	+ 85	$^{\circ}\text{C}$
Storage Temperature	$T_{\text{STG}}$	- 55	+ 125	$^{\circ}\text{C}$

### Electro-Optical Characteristics ( $T_{\text{CASE}}=25^{\circ}\text{C}$ )

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Spectral Range	$\lambda$		0.95		1,65	$\mu\text{m}$
Aperture Diameter	$\varnothing$			200		$\mu\text{m}$
Peak Sensitivity	$\lambda_P$	$V_R=0\text{V}$				$\mu\text{m}$
Dark Current	$I_D$	M=10		5	50	nA
Operating Voltage	$V_{\text{OP}}$	M=10	32		50	V
Breakdown Voltage	$V_{\text{BD}}$	$I_{\text{BD}}=100\mu\text{A}$	35		55	V
Capacitance	$C_J$	M=10, f=1MHz		2.5	3.0	
Responsivity	$S_{\lambda}$	M=10, $\lambda=1.55\mu\text{m}$	8	9		A/W
Useable Gain	$T$	$\lambda=1.55\mu\text{m}$	10	20		
3dB Bandwidth		M=10, $\lambda=1.55\mu\text{m}$ , $50\Omega$	0.7	0.85		GHz
Spectral Noise Current		M=10, $\Delta\lambda=1\text{kHz}$		0.5	1.5	$\text{pA}/\sqrt{\text{Hz}}$
Temperature Coefficient of $V_{\text{BD}}$				0.10	0.15	$\text{V}/^{\circ}\text{C}$

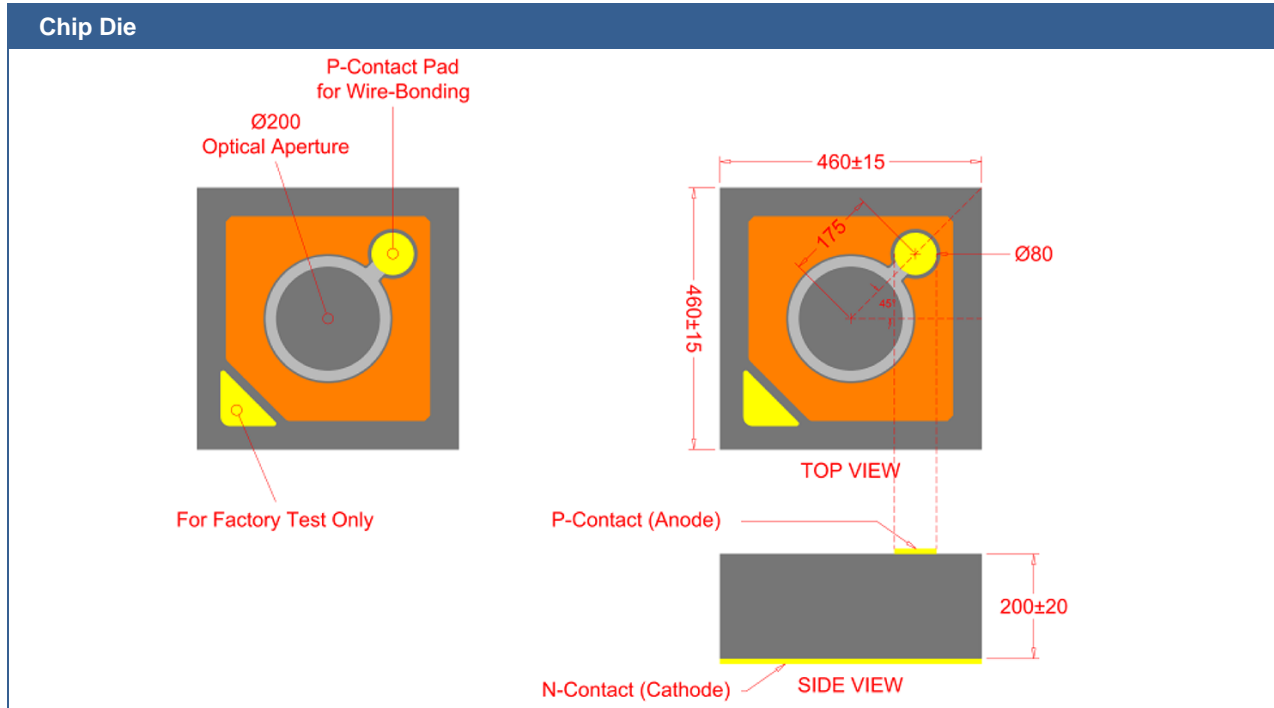


## Typical Performance Curves





## Outline Dimensions



All Dimensions in mm

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The above specifications are for reference purpose only and subjected to change without prior notice