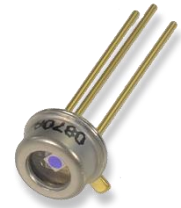




07/2020

APD200-TO46

- InGaAs Avalanche Photodiode
- \varnothing 0.2 mm active area
- 0.95 – 1.65 μm spectral range
- Low Leakage Current and Noise
- ≥ 700 MHz 3 dB Bandwidth
- Low Stray Absorption



Description

APD200-TO46 is an **InGaAs avalanche photodiode** 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 μm** and low stray absorption. **APD200-TO46** comes in a hermetically sealed TO-46 Package with flat glass. 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_{CASE}	- 40	+ 85	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	- 40	+ 85	$^{\circ}\text{C}$
Lead Solder Temperature *	T_{SLD}		+ 250	$^{\circ}\text{C}$

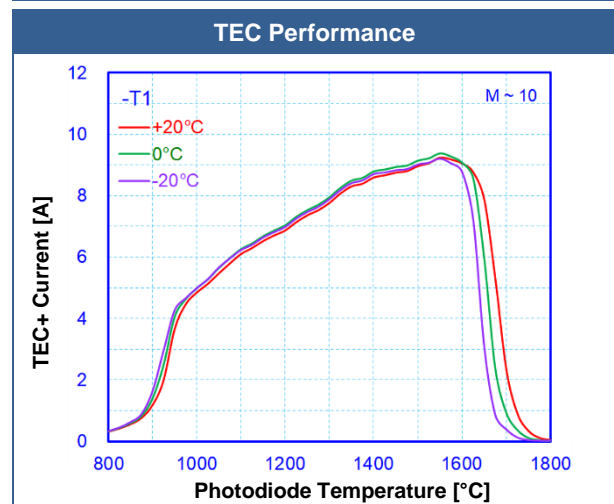
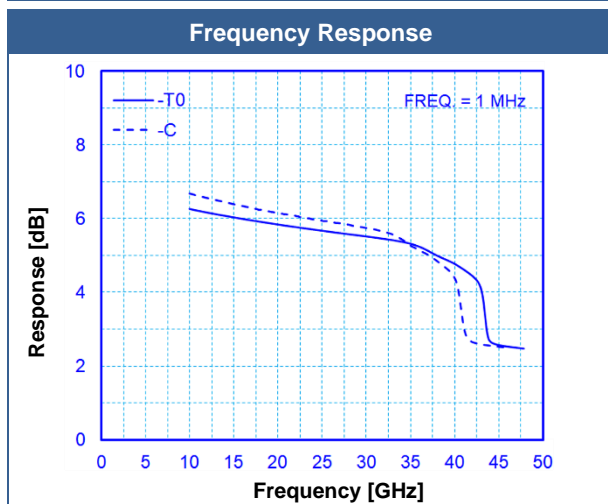
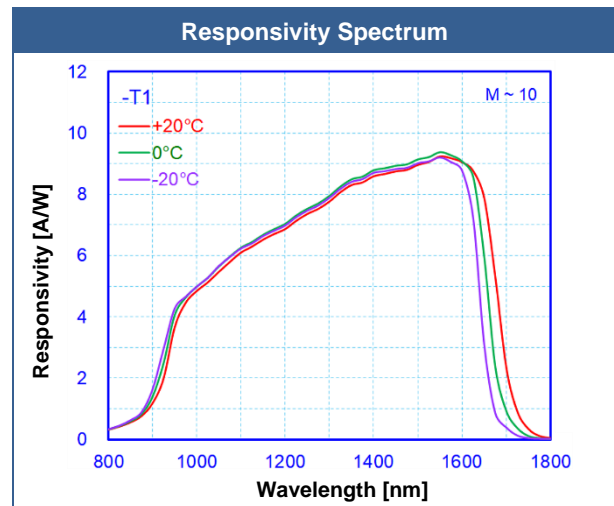
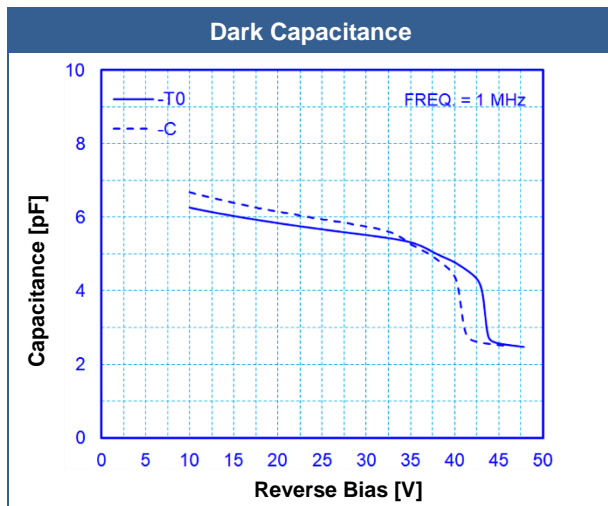
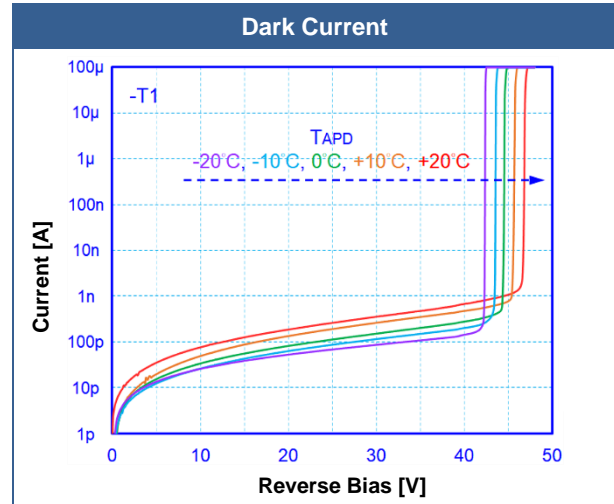
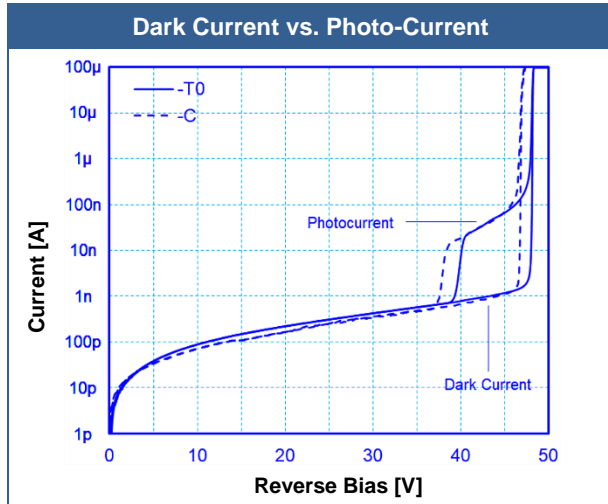
* must be completed within 5 seconds

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

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Spectral Range	λ		0.95		1,65	μm
Aperture Diameter	\varnothing			200		μm
Peak Sensitivity	λ_P	$V_R=0V$				μm
Dark Current	I_D	M=10		5	50	nA
Operating Voltage	V_{OP}	M=10	32		50	V
Breakdown Voltage	V_{BD}	$I_{BD}=100\mu\text{A}$	35		55	V
Capacitance	C_J	M=10, f=1MHz		2.5	3.0	
Responsivity	S_λ	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 Ω	0.8	1		GHz
Spectral Noise Current		M=10, $\Delta\lambda=1\text{kHz}$		0.5	1.5	$\text{pA}/\sqrt{\text{Hz}}$
Temperature Coefficient of V_{BD}				0.10	0.15	$\text{V}/^{\circ}\text{C}$

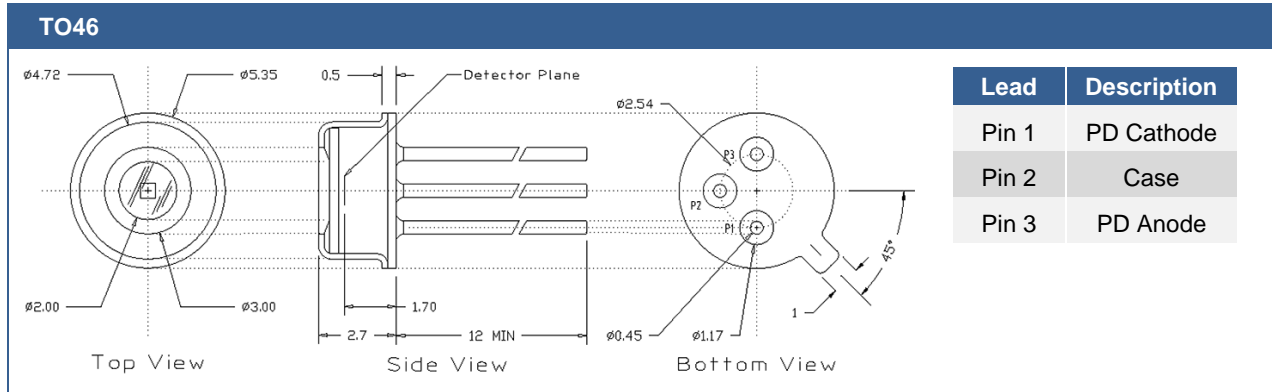


Typical Performance Curves





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