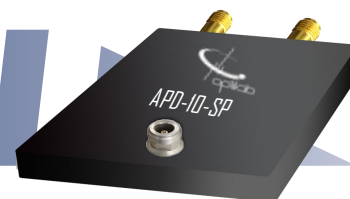




12. APD-10-SP

OCT Modules



Space Grade Avalanche Photodiode, 10 Gb/s, with TIA

NEW!

The Optilab APD-10-SP is a high-sensitivity avalanche photodiode (APD) receiver designed for space laser communication applications. This compact, free-space module integrates a high-speed InGaAs APD with a high-gain transimpedance amplifier (TIA), all enclosed in a compact package for reduced size, weight, and power consumption (SWaP), making it ideal for space-constrained applications.

The avalanche photodiode passes satellite environmental qualification test project such as temperature, vibration, shock, thermal and radiation test, making it qualified for space laser communication.

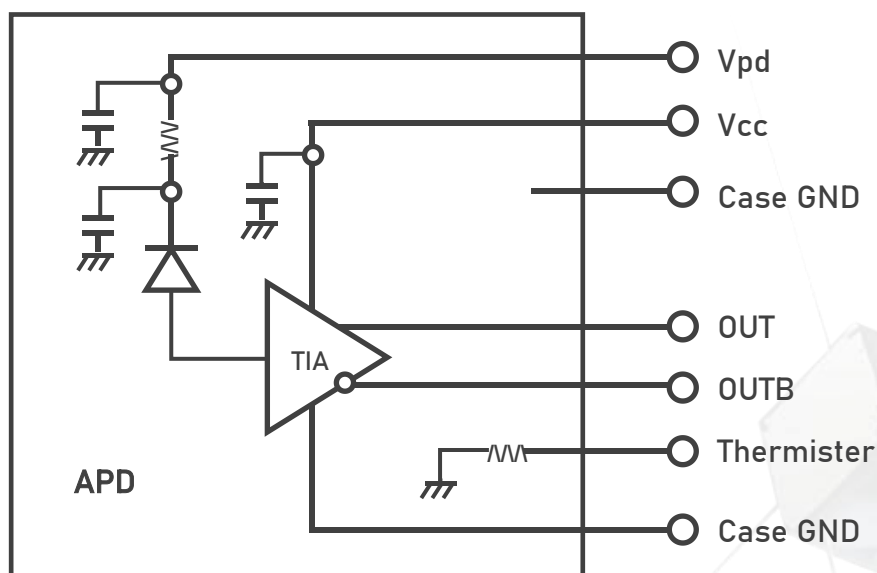
USE IN

- CubeSat
- Free Space Communication
- Optical Communications Terminal (OCT)
- Remote Sensing

FEATURES

- High Sensitivity: -28 dBm typ.
- Low Power Consumption
- TIA Amplifier
- > 10 Gb/s Gain Bandwidth
- High Gain 30 dB
- Space Grade

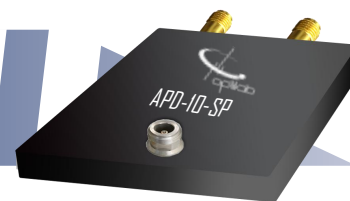
FUNCTIONAL DIAGRAM





12. APD-10-SP

OCT Modules



NEW!

GENERAL SPECIFICATIONS

Operating Wavelength Range	1250 nm to 1600 nm
VBR Temperature Coefficient	0.07 V/°C typ.; 0.11 V/°C max.
Responsivity	0.7 A/W min.; 0.8 A/W typ.
APD Gain M Factor	9 typ.
Sensitivity	-32 dBm min.; -27 dBm max.
Transimpedance	3 k Ω min.; 4.7 k Ω typ.
Differential Output Swing	320 mVpp typ.; 300 mVpp min.
3 dB S21 Bandwidth	8 GHz min.; 8.5 GHz typ.
Bandwidth	10 Gb/s
Low Frequency Cutoff	40 kHz typ.; 100 kHz max.

MECHANICAL SPECIFICATIONS

Operating Temperature	-30°C to +65°C
Storage Temperature	-40°C to +85°C
Optical Connectors	FC/APC
Optical Fiber	OM2, 50 μ m Core

TYPICAL S21

