Avalanche Photodiode, 10 Gb/s with TIA

The Optilab APD-10 is a high sensitivity APD-TIA receiver in a fiber pigtail coupled package. It includes a high speed InGaAs avalanche photodiode with a high gain TIA in a hermetically sealed coaxial package. It incorporates an LC/UPC pigtail and a flexible printed circuit (FPC). The signal GND and a receptacle are electrically isolated in this APD receiver.

**Features**
- > 10 Gb/s Gain Bandwidth
- TIA Amplifier
- High sensitivity: -26 dBm Typ.
- Low power consumption: 0.1W Typ.

**Applications**
- 10GBASE-L Ethernet
- SONET OC-192
- SDH STM-64
- 10G Fibre Channel
- Fiber Optic Sensors

**Fuctional Diagram**
**Avalanche Photodiode, 10 Gb/s with TIA**

### OPTIONS
**APD-10-LC**

### TECHNICAL INFO
For technical info and support:

- sales@optilab.com
- www.optilab.com

**Optilab, LLC**
Phoenix, AZ, USA

### WEB ORDER
To order this and many more products, please visit OEQuest.com and order online today.

### General Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Wavelength Range</td>
<td>1250 nm to 1600 nm</td>
</tr>
<tr>
<td>APD Breakdown Voltage</td>
<td>25 V min. ; 34 V typ. ; 40 V max.</td>
</tr>
<tr>
<td>V_{th} Temperature Coefficient</td>
<td>0.07 V/°C typ. ; 0.11 V/°C max.</td>
</tr>
<tr>
<td>Total Dark Current</td>
<td>20 nA typ. ; 100 nA max.</td>
</tr>
<tr>
<td>Responsivity</td>
<td>0.65 A/W min. ; 0.75 A/W typ.</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>-27.5 dBm min. ; -26.5 dBm max.</td>
</tr>
<tr>
<td>Transimpedance</td>
<td>10 kΩ min. ; 12 kΩ typ.</td>
</tr>
<tr>
<td>Capacitance</td>
<td>0.18 pF typ. ; 0.22 pF max.</td>
</tr>
<tr>
<td>Optical Return Loss</td>
<td>-27 dB</td>
</tr>
<tr>
<td>3dB S21 Bandwidth</td>
<td>6.0 GHz min. ; 8.0 GHz typ.</td>
</tr>
<tr>
<td>Digital Bandwidth</td>
<td>10 Gb/s</td>
</tr>
</tbody>
</table>

### Mechanical Specifications

- Optical Input Power: -26 dBm min. ; -3 dBm max.
- Reverse Current: 2 mA
- Forward Current: 32 mA typ.
- Operating Temperature: 0 °C to + 85 °C
- Storage Temperature: - 40 °C to + 85 °C
- Optical Connectors: LC/UPC
- Optical Fiber: SMF-28

### Optilab Advantage
- Innovation
- Performance
- Quality
- Customization
- Warranty

### APD Pinout Diagram

![APD Pinout Diagram](image-url)

OEQuest.com

Optilab: photonics for the future