

Bidirectional Integrated TAP Detector



ACP's Bidirectional integrated Tap Detector is a hybrid optical component that combines the functionality of a thin film tap and a PIN optical detector in a compact package for power monitoring applications. The unidirectional design ensures only input port power is detected with a high isolation (directivity) for the reflected light.

All AC Photonics' products are Telcordia qualification tested.

Key Features

- Low IL and PDL
- Low Dark Current
- Excellent Directivity
- Hermetically Sealed PD

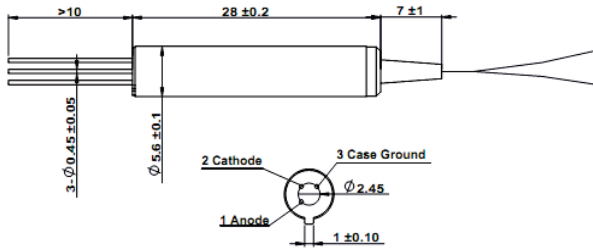
Applications

- EDFA Power Control
- DWDM System Monitor
- Network Switch

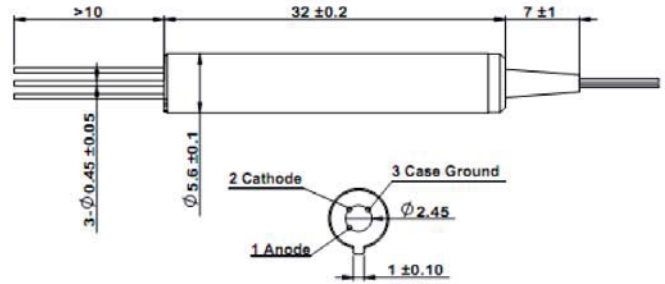
Performance Specifications

| Parameter | | Specifications | | | | |
|---|---------------|---|---------|---------|---------|---------|
| Tap Ratio | | 1% | 2% | 3% | 5% | 10% |
| Wavelength Range | | 1310: 1270nm to 1350nm; 1550: 1510nm to 1590nm L-Band: 1570nm to 1610nm; C+L Band: 1500nm to 1620nm O+C+L Band: 1270nm to 1350nm & 1510nm to 1610nm | | | | |
| Insertion Loss | Single Window | ≤ 0.5dB | ≤ 0.5dB | ≤ 0.5dB | ≤ 0.7dB | ≤ 0.9dB |
| | Dual Window | ≤ 0.7dB | ≤ 0.7dB | ≤ 0.7dB | ≤ 0.9dB | ≤ 1.0dB |
| Wavelength Flatness | | ≤ 0.15dB | | | | |
| Polarization Dependent Loss | | ≤ 0.1dB | | | | |
| Return Loss | | ≥ 45dB | | | | |
| Optical Power | | 23dBm | 21dBm | 18dBm | 16dBm | 13dBm |
| Responsivity (C,L Band) | Max | 15mA/W | 25mA/W | 40mA/W | 64mA/W | 145mA/W |
| | Min | 7mA/W | 13mA/W | 25mA/W | 42mA/W | 70mA/W |
| Responsivity (1310) | Max | 11mA/W | 23mA/W | 38mA/W | 60mA/W | 136mA/W |
| | Min | 5mA/W | 11mA/W | 23mA/W | 40mA/W | 65mA/W |
| Polarization Dependent Responsivity | | ≤ 0.1dB | | | | |
| Operating Temperature | | -5 to +70°C | | | | |
| Storage Temperature | | -40 to +85°C | | | | |
| PD Bias Voltage | | 5V | | | | |
| PD Bias Voltage | | ≤ 20V | | | | |
| Dark Current@-5V bias | | ≤ 0.5nA@25°C, ≤ 2nA@70°C | | | | |
| PD Cut-off Frequency (RL=50, -3dB, -5V) | | ≥ 1 GHz | | | | |
| Fiber Type | | SMF-28e or SMF-28XB | | | | |
| Soloering Temperature | | 250(<10sec) | | | | |

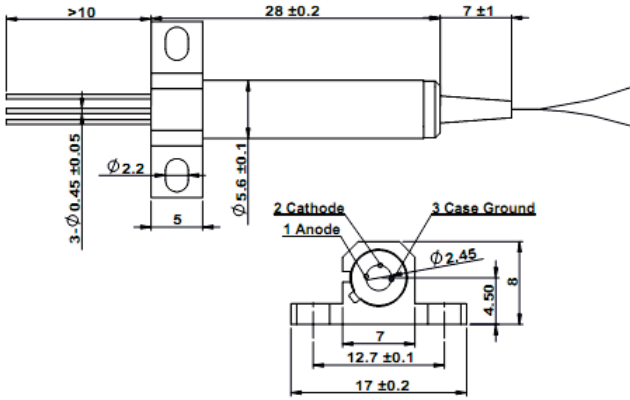
Mechanical Dimensions



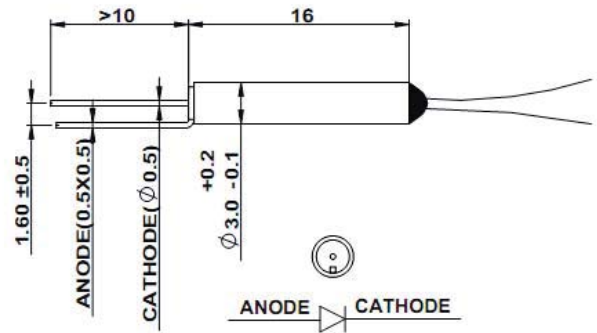
Standard Package (250um fiber)



Standard Package (900um jacket)



Standard Package with Flange



Miniature Package (bare fiber)

Ordering Information

| TPTD | Channel | Tap Ratio | Package Size | Flange | Pigtail Style | Fiber Length | Fiber Type | In/Out Connector |
|------|---|---|--------------------------|---|------------------------------------|----------------------|----------------------------|--|
| | 13 = 1310nm 15 = 1550nm 16 = L-Band 35 = 1310nm/1550nm CL = C+L Bands 36 = O+C+L Bands | 01 = 1% 02 = 2% 03 = 3% 05 = 5% 10 = 10% . . . | S = Standard M = Mini | 1 = With Mount Flange 2 = Without Mount Flange | 1 = Bare Fiber 2 = 900um Jacket | 1 = 1.0m 2 = 2.0m | 1 = SMF-28 2 = SMF-28XB | 0 = None 1 = FC/APC 2 = FC/PC 3 = SC/APC 4 = SC/PC 5 = ST 6 = LC/UPC 7 = LC/APC 8 = MU |