

Integrated Tap Detector (TAPD) Standard and Compact Package

Applications:

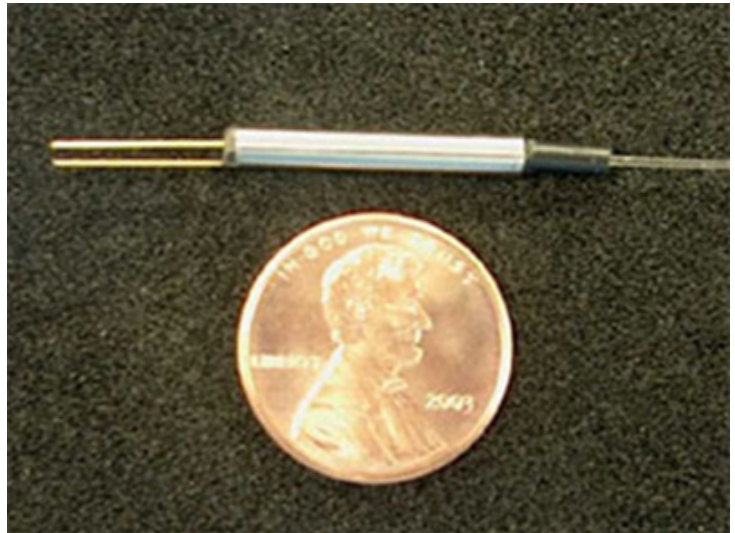
EDFA Power Monitoring/Control
DWDM Channel Monitoring
ROADM Monitoring / Control



Features:

Low Insertion Loss
Low Wavelength Dependent Loss
Excellent Thermal Stability

Broad Wavelength Range
Low Dark Current
Telcordia GR-468-CORE Compliant



Description:

Go!Foton's Integrated Tap Detector(TAPD) series combines an optical coupler, based on NSG's filter-on-lens technology, with Go!Foton's proprietary PIN photodiode to create a single channel optical power monitor. The integrated design reduces the number of parts, minimizes fiber handling and results in a compact footprint, which simplifies assembly of amplifier and WDM monitoring devices. The hermetically sealed InGaAs photo detector has an excellent low dark performance and a flat and rapid power response across a wide wavelength range.

Specifications:

| C Band | Tap Ratio | | 0.5% | 1% | 2% | 3% | 5% | 10% | |
|--------|-------------------------------------|-----|-------------|------|------|------|------|------|-----|
| | Wavelength Range | nm | 1520 ~ 1570 | | | | | | |
| | Insertion Loss | dB | <0.5 | <0.5 | <0.5 | <0.5 | <0.6 | <0.8 | |
| | Wavelength Flatness | dB | <0.1 | | | | | | |
| | Temperature Dependent Loss | dB | <0.15 | | | | | | |
| | Polarization Dependent Loss | dB | <0.05 | | | | | | |
| | Optical Return Loss | dB | >50 | | | | | | |
| | PD Bias Voltage, V_R | V | 5 | | | | | | |
| | Maximum Optical Power Handling | dBm | 26 | 23 | 20 | 18 | 16 | 13 | |
| | Responsivity | max | mA/W | 8.5 | 15 | 26 | 40 | 64 | 145 |
| | | min | mA/W | 4 | 8 | 16 | 26 | 40 | 70 |
| | Wavelength Dependent Responsivity | dB | < 0.3 | | | | | | |
| | Temperature Dependent Responsivity | dB | <0.2 | | | | | | |
| | Polarization Dependent Responsivity | dB | <0.1 | | | | | | |

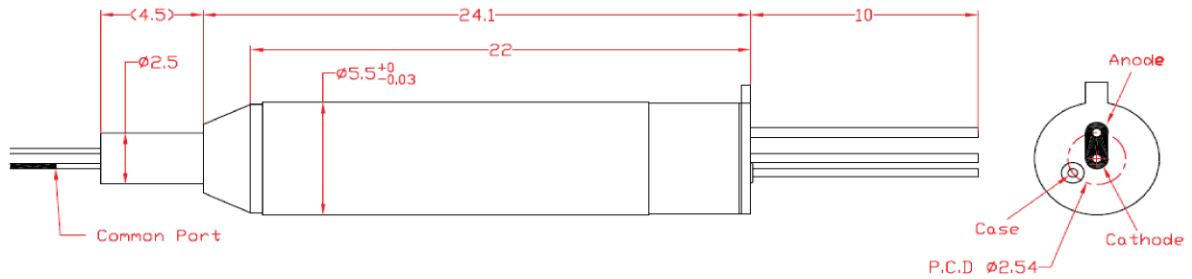
| L Band | Tap Ratio | | 0.5% | 1% | 2% | 3% | 5% | 10% | |
|--------|-------------------------------------|-----|-------------|------|------|------|------|------|-----|
| | Wavelength Range | nm | 1570 ~ 1610 | | | | | | |
| | Insertion Loss | dB | <0.5 | <0.5 | <0.5 | <0.5 | <0.6 | <0.8 | |
| | Wavelength Flatness | dB | <0.1 | | | | | | |
| | Temperature Dependent Loss | dB | <0.15 | | | | | | |
| | Polarization Dependent Loss | dB | <0.05 | | | | | | |
| | Optical Return Loss | dB | >50 | | | | | | |
| | PD Bias Voltage, V_R | V | 5 | | | | | | |
| | Maximum Optical Power Handling | dBm | 26 | 23 | 20 | 18 | 16 | 13 | |
| | Responsivity | max | mA/W | 8.5 | 15 | 26 | 40 | 64 | 145 |
| | | min | mA/W | 4 | 8 | 16 | 26 | 40 | 70 |
| | Wavelength Dependent Responsivity | dB | < 0.4 | | | | | | |
| | Temperature Dependent Responsivity | dB | < 0.4 | | | | | | |
| | Polarization Dependent Responsivity | dB | < 0.1 | | | | | | |

| C+L Band | Tap Ratio | | 0.5% | 1% | 2% | 3% | 5% | 10% | |
|----------|-------------------------------------|-----|-------------|------|------|------|------|------|-----|
| | Wavelength Range | nm | 1520 ~ 1610 | | | | | | |
| | Insertion Loss | dB | <0.5 | <0.5 | <0.5 | <0.5 | <0.6 | <0.8 | |
| | Wavelength Flatness | dB | <0.15 | | | | | | |
| | Temperature Dependent Loss | dB | <0.15 | | | | | | |
| | Polarization Dependent Loss | dB | <0.05 | | | | | | |
| | Optical Return Loss | dB | >50 | | | | | | |
| | PD Bias Voltage, V_R | V | 5 | | | | | | |
| | Maximum Optical Power Handling | dBm | 26 | 23 | 20 | 18 | 16 | 13 | |
| | Responsivity | max | mA/W | 8.5 | 15 | 26 | 40 | 64 | 145 |
| | | min | mA/W | 4 | 8 | 16 | 26 | 40 | 70 |
| | Wavelength Dependent Responsivity | dB | < 0.45 | | | | | | |
| | Temperature Dependent Responsivity | dB | <0.45 | | | | | | |
| | Polarization Dependent Responsivity | dB | <0.1 | | | | | | |

All specifications are without fiber connectors.

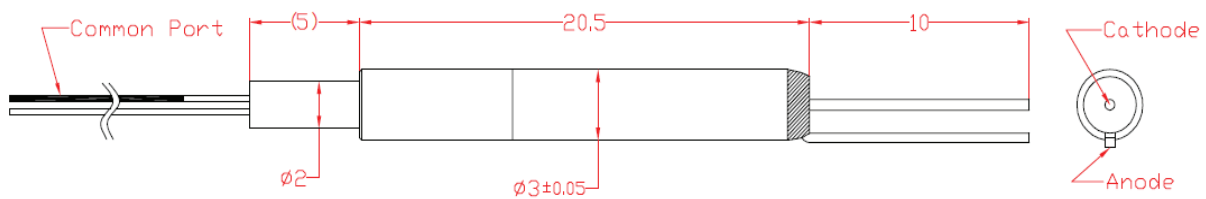
| Common | Operating Temperature | °C | 0 ~ +75 |
|--------|---|------------------|-----------------------|
| | Storage Temperature | °C | -40 ~ +85 |
| | Dark Current | nA | <0.5 (@RT), < 5(Top) |
| | PD Cut-Off Frequency, $R_L=50\Omega$, -3dB | MHz | 300 (Typical) |
| | Linearity | % | +/- 10 |
| | Fiber Type | - | SMF-28e or equivalent |
| | Fiber Length | m | > 1 |
| | Package Size | Standard Package | mm (φ)5.5 x (L)24.5 |
| | | Compact Package | mm (φ)3.0 x (L)20 |
| | Soldering Temperature | °C | 250 (<10 sec) |

Dimensions:



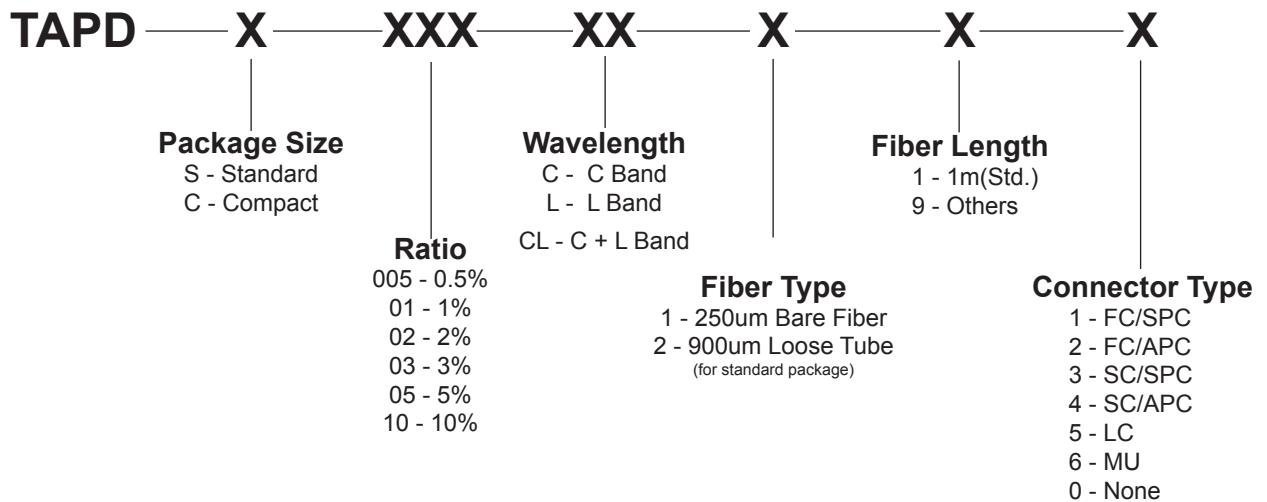
Standard Package

*Mounting Bracket is available upon request



Compact Package

Ordering Information:



Example: TAPD - S - 050 - CL - 1 - 1 - 4

TAP Detector, Standard Size, 5% Ratio, C+L Band Wavelength, SMF-28e, 250um Bare Fiber, 1m with SC/APC Connector