

One Channel Integrated Power Monitor

(patent pending)

Product Description

The Tap Optical Power Monitor is a hybrid fiber optical passive component that integrates a flat spectral response of a thin-film tap with a high sensitivity PIN photodiode for power monitoring applications. The Power Monitor minimizes component assembly costs and module footprint while increasing module design efficiency by facilitating fiber management. The Power Monitor integrates the functionality of an optical coupler and a photodiode while delivering low insertion loss and low dark current with high temperature stability over a wide wavelength range.



Performance Specifications

| TM Series Power Monitor | Min | Typical | Max | Unit |
|-------------------------|--|---------|------|-------|
| Wavelength | 1270~1350 or 1520~1620 | | | nm |
| Tap Ratio | 1 | 3 | 5 | % |
| Insertion Loss | 0.35 | 0.45 | 0.60 | dB |
| Responsivity | 8 | 25 | 45 | mA/W |
| Input Power | 22 | 18 | 15 | dBm |
| WDL | | 0.002 | | dB/nm |
| Tensile load | | 5 | | N |
| Return Loss | | 45 | | dB |
| PDL | | 0.03 | 0.05 | dB |
| Dark Current at 23°C | | 0.4 | 1.0 | nA |
| Directivity (two types) | | 0 or 25 | | dB |
| Capacitance | | 0.7 | 0.9 | pF |
| Reverse Voltage | | 5 | 20 | V |
| Rise/Fall Time | | 0.3 | | ns |
| Cut-Off Frequency | | 2 | | GHz |
| Operating Temperature | -5 | | 75 | °C |
| Storage Temperature | -40 | | 85 | °C |
| Reliability | Telcordia 1209 and 1221 | | | |
| Fiber Type | SMF28, PM | | | |
| Package Dimension | OD6.0x26 for 250um bare fiber or 900um loose tube OD6.0x28for900um buffer | | | mm |

Notes:

Parameters are specified for the signal wavelength range, all polarization states, and operating temperature range without connector unless otherwise stated.

1. The net responsivity is defined as the ratio of the PD current output and optical power measured at output fiber
2. The maximum optical power is the maximum value of the power at input port within the PD linearity range specified.

Features

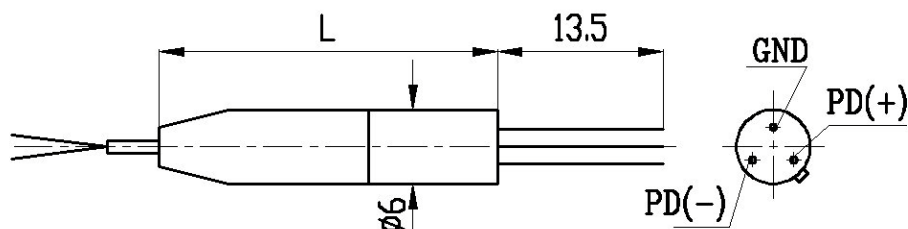
- Integrated
- Low Loss Device
- Custom Tap Ratios Available
- Compact Design

Applications

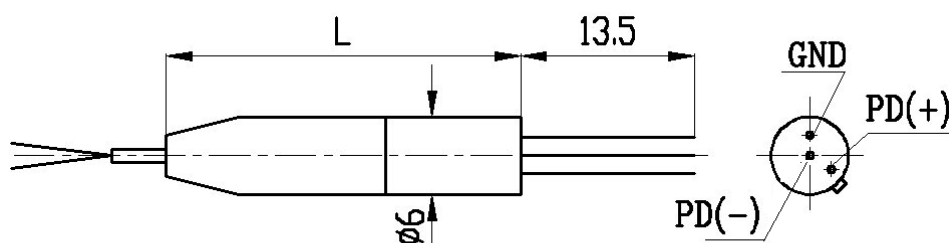
- Channel Monitoring
- Power Monitoring in Optical Interface Modules
- Gain Monitoring for Amplifier
- DWDM System Monitoring

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Mechanical Footprint Dimensions (Unit:mm)



Package Type A



Standard Package

Ordering Information

| TOPM- | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|-------|---|-------------------------------------|--------------------------|---|-------------------------------------|--|--|--|
| | Tap Ratio | Wavelength | Directivity | Package Type | Fiber Type | | Fiber Length | Connector Type |
| | 1% =11 3% =33 5% =55 Special =00 | 1310 = 3 1550 = 5 Special = 0 | No = 1 Yes = 2 | Standard =1 Type A =2 Special = 0 | SMF-28=1 Panda PM=2 Special=0 | Bare fiber =1 900um Loose Tube=3 Special = 0 | 0.25m= 1 0.5m = 2 1.0 m= 3 Special =0 | None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0 |