

# Multimode Power Monitor

## Product Description

The Tap Optical Power Monitor is a hybrid fiber optical passive component that integrates a power taper and a high sensitivity PIN photodiode or avalanche 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 combines 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

| Power Monitor                     | Min                     | Typical | Max  | Unit  |
|-----------------------------------|-------------------------|---------|------|-------|
| Wavelength <sup>[1]</sup>         | 500                     | 850     | 1700 | nm    |
| Tap Ratio                         |                         | 3       |      | %     |
| Insertion Loss <sup>[2]</sup>     |                         | 0.6     | 0.80 | dB    |
| Responsivity <sup>[3]</sup>       | 5                       | 10      | 15   | mA/W  |
| Input Power <sup>[4]</sup>        | -30                     |         | 20   | dBm   |
| Wavelength Dependent Loss         |                         | 0.02    | 0.04 | dB/nm |
| Return Loss                       | 20                      | 25      |      | dB    |
| Dark Current at 23°C (for PIN-PD) |                         | 1.0     | 5.0  | nA    |
| Dark Current at 23°C (for APD)    | 0.02                    | 0.05    | 0.4  | nA    |
| Capacitance(for PIN-PD)           |                         | 8       | 15   | pF    |
| Capacitance(for APD)              |                         | 1.5     |      | pF    |
| Response Bandwidth                |                         | 1       |      | MHz   |
| Operating Temperature             | -5                      |         | 75   | °C    |
| Storage Temperature               | -40                     |         | 85   | °C    |
| Reliability                       | Telcordia 1209 and 1221 |         |      |       |
| Fiber Type                        | MMF 50/125, or 62.5/125 |         |      |       |
| Package Dimension                 | φ6.0×L18                |         |      | mm    |

### Notes:

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

[1]. The monitor wavelength depends on the detector. Si for 400-1100nm, InGaAs for 500-1700nm, GaAsP for 300-680 nm.

[2]. The insertion loss is measured at 850 nm with CPR<14.

[3]. It is specified based Si-PD for 850 nm light. Customer specified wavelength measurement is available. Please call us for other PDs.

[4]. 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

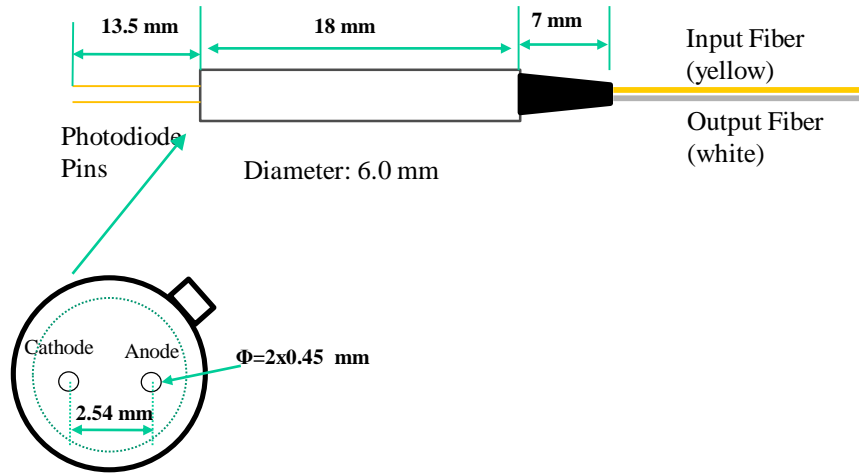
## Applications

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



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## Mechanical Footprint Dimensions (Unit:mm)



## Ordering Information

| MMPM-   | Tap Ratio                             | Wavelength (measured)                                     | Directivity   | PD Type                                  | Fiber Type  | Fiber Length                              | Connector  |
|---|---------------------------------------|---|---------------|--|---|---|--|
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 1%=01<br>3%=03<br>5%=05<br>Special=00 | 550=2<br>850=8<br>1060=1<br>1310=3<br>1550=5<br>Special=0 | No=1<br>Yes=2 | Si=1<br>InGaAs=2<br>GaAsP=3<br>Special=0 | 50/125=1<br>62.5/125=2<br>Special=0<br>Bare fiber=1<br>900um<br>Loose Tube=3<br>Special=0 | 0.25m=1<br>0.5m=2<br>1.0 m=3<br>Special=0 | None=1<br>FC/PC=2<br>FC/APC=3<br>SC/PC=4<br>SC/APC=5<br>ST/PC=6<br>LC=7<br>Special=0 |