

# SINGLE CHANNEL INTEGRATED TAP MONITORS

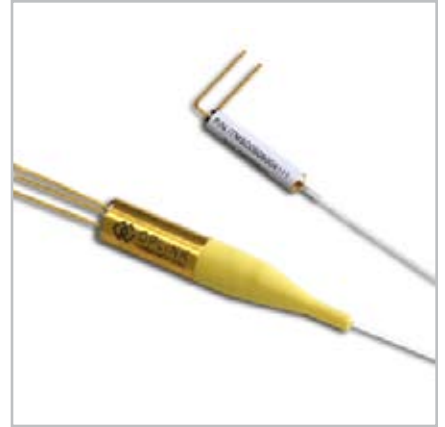
## ITMS Series

### Product Description

Oplink's Single Channel Integrated Tap Monitor (ITMS) is a hybrid component that integrates a flat spectral response of a thin-film tap with a high sensitivity PIN photodiode for power monitoring applications. The ITMS minimizes component assembly costs and module footprint while increasing module design efficiency by facilitating fiber management.

The ITMS 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. It is compact and easy to mount on a PCB board for module and network system use. Applications include DWDM channel power monitoring, optical network switching/protection monitoring, re-configurable optical add/drop multiplexers, and gain/attenuation monitoring in amplifier systems.

Oplink can provide customized designs to meet specialized feature applications. Also, Oplink offers modular assemblies that integrate other components to form a full function module or subsystem.



### Performance Specification

| Parameters  |   |                | Specification |           | Unit |
|---|---|----------------|---------------|-----------|------|
| Operating Wavelength Range                              |   |                | 1260~1360     | 1510~1610 | nm   |
| Through   | Insertion Loss (@ $\lambda_{Op}$ , $T_{Op}$ , All SOP, exclude connector) | 2%             | $\leq 0.4$    |           | dB   |
|   |   | 5%             | $\leq 0.6$    |           |      |
|   |   | 10%            | $\leq 0.9$    |           |      |
| Polarization Dependent Loss                             |   | $\leq 0.05$    |               | dB        |      |
| Return loss (exclude connector)                         |   | $\geq 45$      |               | dB        |      |
| Tapped Monitoring                                       | Responsivity (relative to nominal power at input port)                    | 2%             | 10~23         | 14~25     | mA/W |
|   |   | 5%             | 26~59         | 35~65     |      |
|   |   | 10%            | 52~110        | 70~120    |      |
| Responsivity Temperature Dependence (@1310nm or 1550nm) |   | $\leq 0.3$     |               | dB        |      |
| Responsivity Polarization Dependence                    |   | $\leq 0.1$     |               | dB        |      |
| PD  | PD Dark Current (@ 70°C, -5V bias)  | 0.5G Bandwidth | $\leq 10$     |           | nA   |
|   |   | 2.0G Bandwidth | $\leq 2.5$    |           | nA   |
|   | Reverse Voltage   |                | $\leq 20$     |           | V    |
|   | Forward Current   |                | $\leq 10$     |           | mA   |
| Conditions  | Input Optical Power   | 2%             | $\leq 21$     |           | dBm  |
|   |   | 5%             | $\leq 16$     |           |      |
|   |   | 10%            | $\leq 12$     |           |      |
| Operating Temperature Range (<85%RH, Non-condensing)    |   | -5 to +70      |               | °C        |      |
| Storage Temperature Range (<85%RH, Non-condensing)      |   | -40 to +85     |               | °C        |      |
| Fiber Type  |   |                | SMF-28        |           |      |

### Features

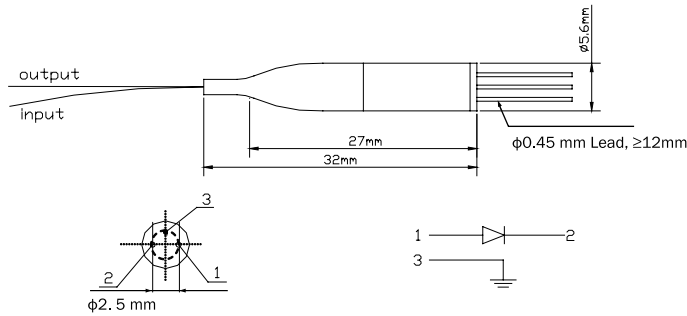
- ◆ 2-/3-pin Package Easily Mounted on a PCB
- ◆ Flat and Broad Operating Wavelength Range
- ◆ Low Insertion Loss and PDL
- ◆ Low Dark Current
- ◆ Various Tap Ratios Available
- ◆ High Temperature Stability with Hermetically Sealed Photodiode

### Applications

- ◆ DWDM channel monitoring
- ◆ Optical network switch/protection monitoring
- ◆ Re-configurable optical add/drop multiplexers
- ◆ Gain/attenuation monitoring in amplifier systems
- ◆ EDFAs and Raman amplifiers

**Mechanical Drawing / Package Dimensions (dimension in mm)**

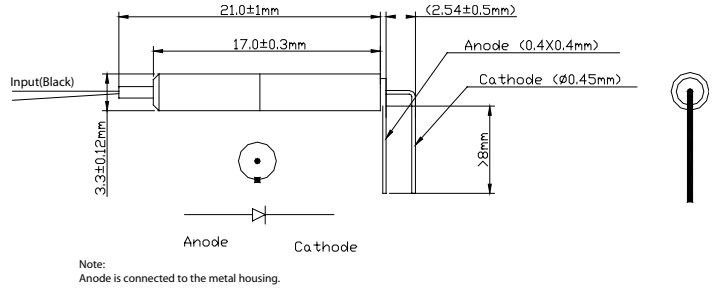
**Standard Package (P1, Bare Fiber or Loose Tube)**



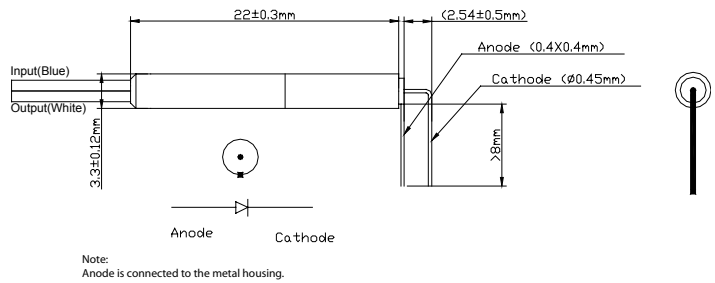
Standard Package Pin Assignment

- Pin 1: Anode
- Pin 2: Cathode
- Pin 3: Case Ground

**Miniature Package (P4, Bare Fiber only)**

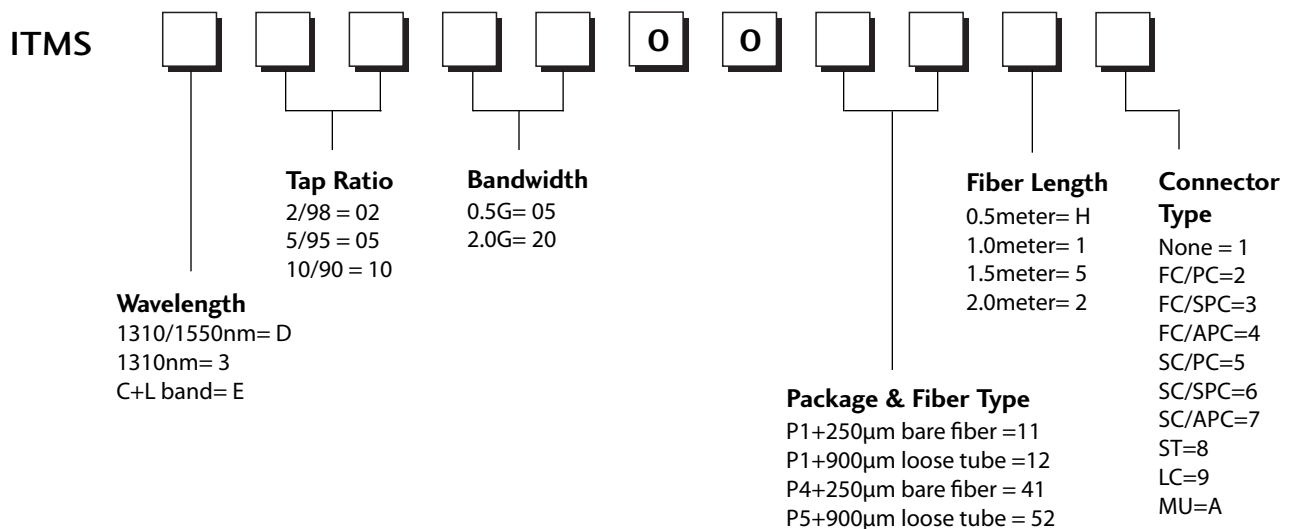


**Miniature Package (P5, Loose Tube only)**



**Ordering Information**

Oplink can provide a remarkable range of customized optical solutions. For detail, please contact Oplink's OEM design team or account manager for your requirements and ordering information (510) 933-7200.



**RoHS:**

1. Add "G" to the end of the above PN for RoHS 6 Requirement.