

# BI-DIRECTIONAL SINGLE CHANNEL INTEGRATED TAP MONITORS

## BTMS Series

### Product Description

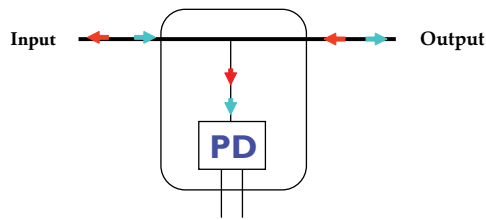
Oplink's Single Channel Bi-directional Integrated Tap Monitor (BTMS) is a hybrid component that integrates a flat spectral response of a thin-film tap with a high sensitivity PIN photodiode for power monitoring applications. The Bi-directional feature allows power monitoring from both input and output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

The BTMS 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 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.



### Functional Diagram



### 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			$\leq 0.1$		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 Polarization Dependence			$\leq 0.1$		dB
Uniformity <sup>[1]</sup>			$\leq 0.5$		dB
PD	PD Dark Current (@ 70°C, -5V bias)		$\leq 10$		nA
	Bandwidth (50 ohm, 5V, -3dB)		$\geq 0.5$		GHz
	Reverse Voltage		$\leq 20$		V
	Forward Current		$\leq 5$		mA
Conditions	Input Optical Power	2%	$\leq 21$		dBm
		5%	$\leq 16$		
		10%	$\leq 12$		
Operating Temperature Range (<85%RH, Non-condensing)			0 to +70		°C
Storage Temperature Range (<85%RH, Non-condensing)			-40 to +85		°C
Fiber Type			SMF-28		

Notes: 1) Excluding connectors.

### Features

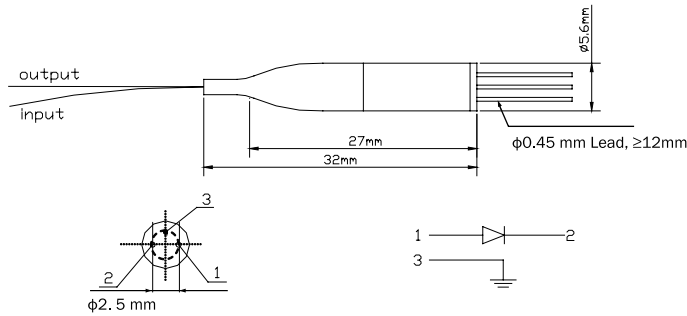
- ◆ 2-/3-pin Package Easily Mounted on a PCB
- ◆ Flat and Broad Operating Wavelength Range
- ◆ Low Insertion Loss and PDL
- ◆ Low Dark Current
- ◆ Various Tap Ratios Available
- ◆ High Temperature Stability with Hermetically Sealed Photodiode
- ◆ Monitor Optical Signal from One Both Input and Output

### Applications

- ◆ EDFAs and Raman amplifiers
- ◆ Add/Drop and optical protection monitoring
- ◆ DWDM/CWDM systems

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

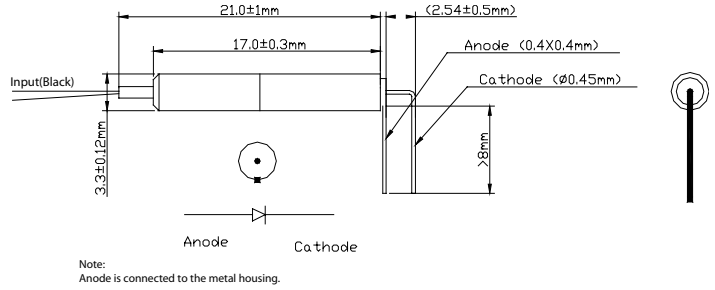
**Standard Package (P1, Bare Fiber or Loose Tube)**



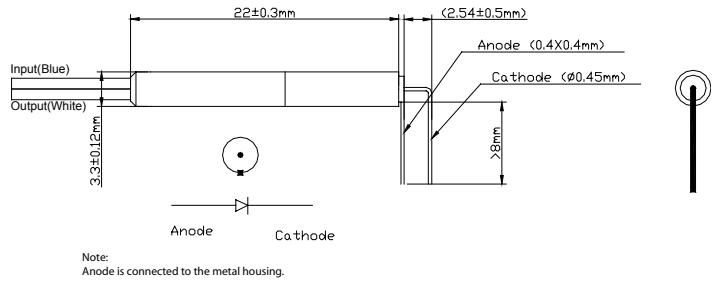
Standard Package Pin Assignment

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

**Miniature Package (P2, Bare Fiber)**

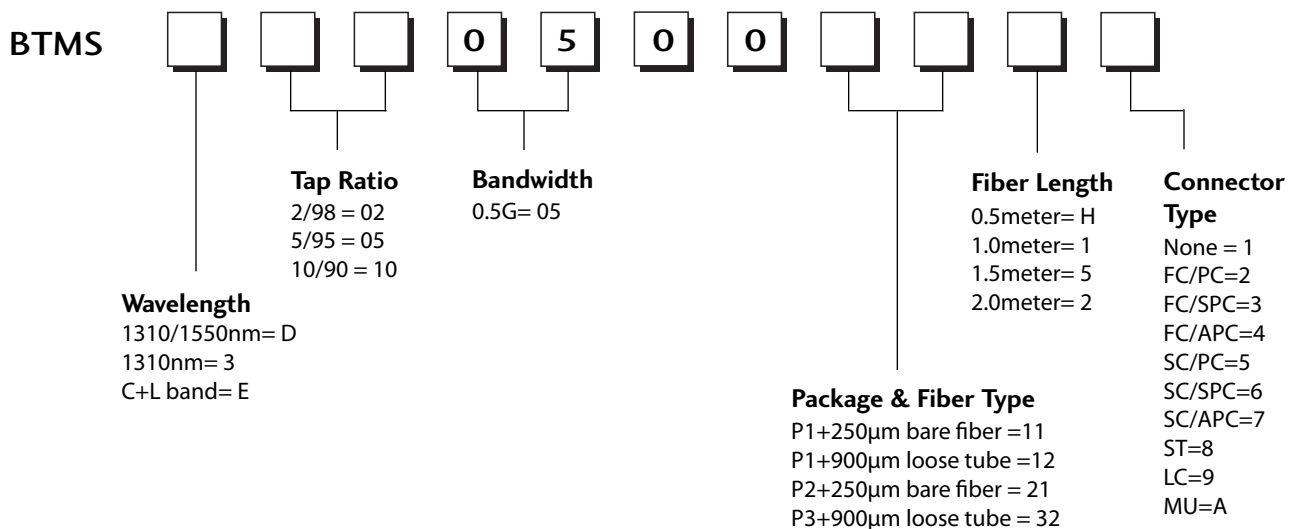


**Miniature Package (P3, Loose Tube)**



**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.