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.
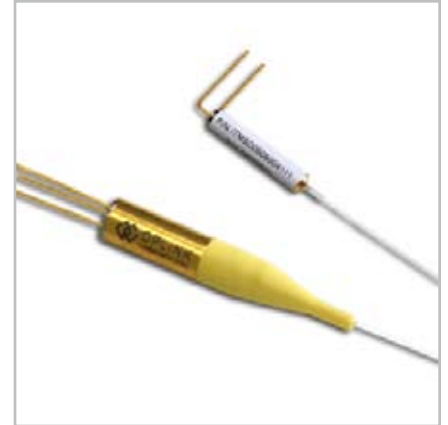
Performance Specification

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

OPLINK
your DESIGN & OMS partner

Mechanical Drawing / Package Dimensions   (dimension in mm)

Standard Package (P1, Bare Fiber or Loose Tube)

output
input

φ5.6mm
27mm
32mm
φ0.45 mm Lead, ≥12mm

3
2   1
φ2.5 mm

1 →|— 2
3 ——⏚
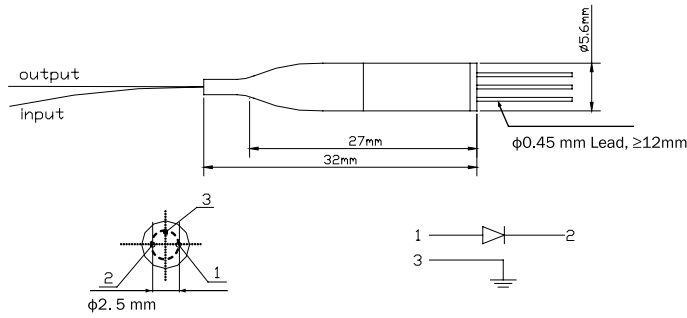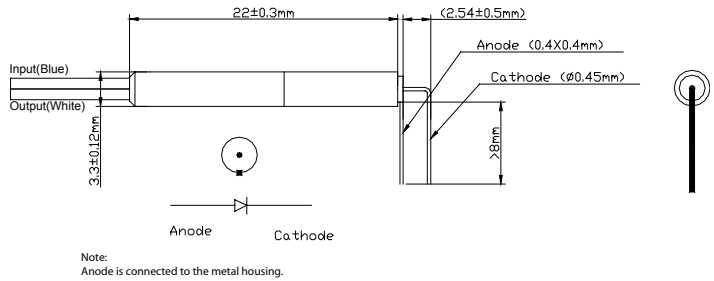
Standard Package Pin Assignment

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

Miniature Package (P4, Bare Fiber only)

21.0±1mm
17.0±0.3mm
(2.54±0.5mm)
Input(Black)
Anode (0.4X0.4mm)
Cathode (Ø0.45mm)
3.3±0.12mm
≥8mm

Anode —|◁— Cathode

Note:
Anode is connected to the metal housing.
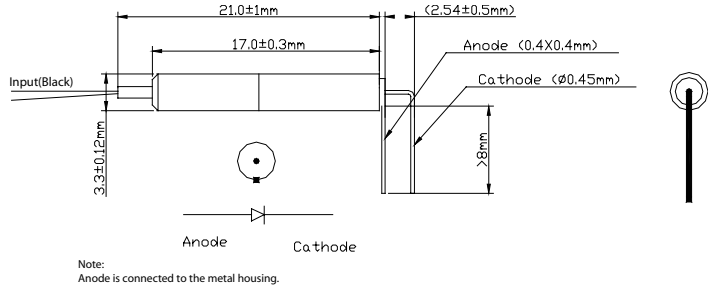
Miniature Package (P5, Loose Tube only)

22±0.3mm
(2.54±0.5mm)
Input(Blue)
Output(White)
Anode (0.4X0.4mm)
Cathode (Ø0.45mm)
3.3±0.12mm
≥8mm

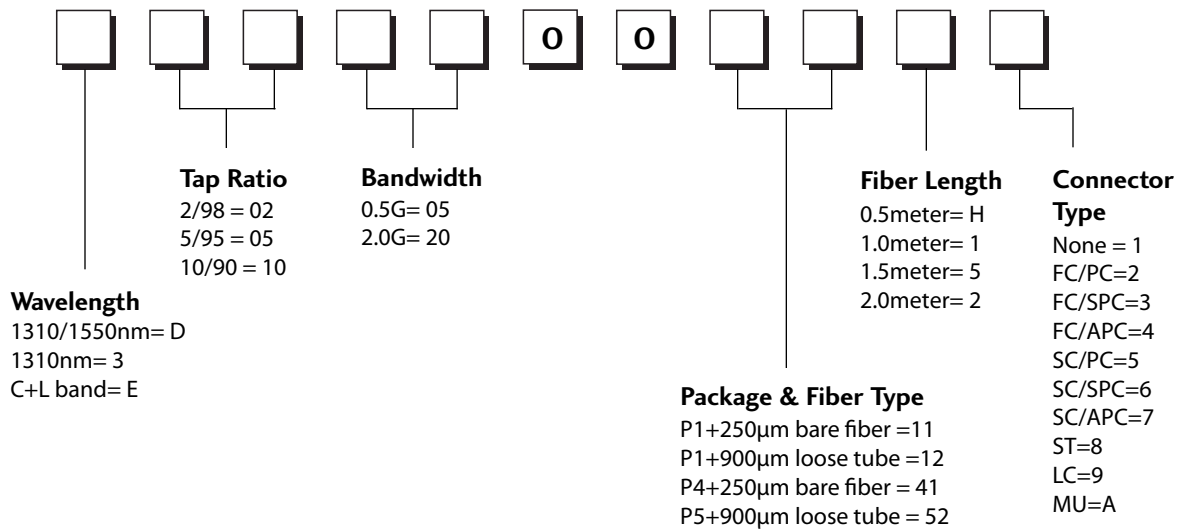Anode —◁|— Cathode

Note:
Anode is connected to the metal housing.

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.

www.DataSheet4U.com

ITMS ☐ ☐ ☐ ☐ ☐ **0** **0** ☐ ☐ ☐ ☐

Tap Ratio
2/98 = 02
5/95 = 05
10/90 = 10

Bandwidth
0.5G= 05
2.0G= 20

Wavelength
1310/1550nm= D
1310nm= 3
C+L band= E

Package & Fiber Type
P1+250µm bare fiber =11
P1+900µm loose tube =12
P4+250µm bare fiber = 41
P5+900µm loose tube = 52

Fiber Length
0.5meter= H
1.0meter= 1
1.5meter= 5
2.0meter= 2

Connector Type
None = 1
FC/PC=2
FC/SPC=3
FC/APC=4
SC/PC=5
SC/SPC=6
SC/APC=7
ST=8
LC=9
MU=A

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

46335 Landing Pkwy Fremont, CA 94538 Tel: (510) 933-7200 Fax: (510) 933-7300 Email: Sales@Oplink.com • www.oplink.com

R06.20080813

Product Lines: ❖ Mux/Demux ❖ Switching/Routing ❖ Coupling/Splitting ❖ Monitoring/Conditioning ❖ Amplification ❖ Transmission ❖ Interconnect ❖ RGB Laser Modules