

UNIDIRECTIONAL SINGLE CHANNEL INTEGRATED TAP MONITORS

UTMS Series

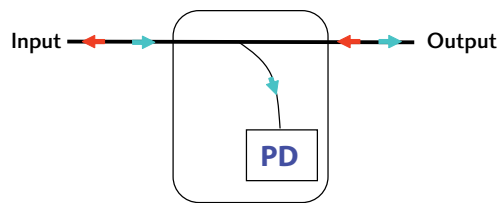
Product Description

Oplink's Single Channel Unidirectional Integrated Tap Monitor (UTMS) 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 Unidirectional feature allows power monitoring from input port only. UTMS minimizes component assembly costs and module footprint while increasing module design efficiency by facilitating fiber management.

The UTMS 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.

Functional Diagram



Performance Specification

Parameters			Specification		Unit
Operating Wavelength Range			1260~1360	1510~1610	nm
Through	Insertion Loss (@ λ_{Op} , T_{Op} , All SOP, exclude connector)	2%	≤ 0.5		dB
		5%	≤ 0.7		
		10%	≤ 1.0		
	Polarization Dependent Loss		≤ 0.1		dB
	Return loss (exclude connector)		≥ 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		≤ 0.15		dB
Directivity ⁽¹⁾	P1 Package		≥ 25		dB
	P2 Package		≥ 33		dB
PD	PD Dark Current (@ 70°C, -5V bias)		≤ 5		nA
	Bandwidth (50 ohm, 5V, -3dB)		≥ 1		GHz
	Reverse Voltage		≤ 20		V
	Forward Current		≤ 5		mA
Conditions	Input Optical Power	2%	≤ 21		dBm
		5%	≤ 16		
		10%	≤ 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. Directivity is defined as $-10 \log(\mathfrak{R}_{Out \rightarrow PD} / \mathfrak{R}_{In \rightarrow PD})$ where \mathfrak{R} stands for responsivity.

Features

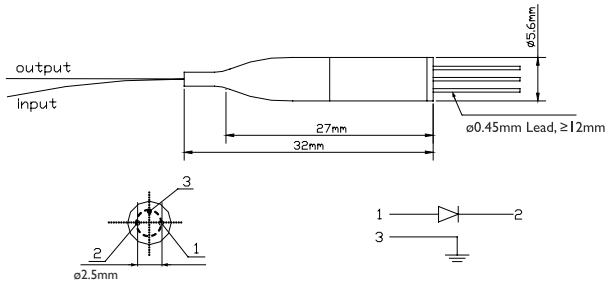
- ◆ 2-/3-pin Package Easily Mounted on a PCB
- ◆ Flat and Broad Operating Wavelength Range
- ◆ Low Insertion Loss and PDL
- ◆ Low Dark Current
- ◆ Various Tap Ratios Available
- ◆ High Temperature Stability with Hermetically Sealed Photodiode
- ◆ Monitor Optical Signal from One Direction Only

Applications

- ◆ EDFAs and Raman Amplifiers
- ◆ Add/Drop and Optical Protection Monitoring
- ◆ DWDM/CWDM Systems

Mechanical Drawing / Package Dimensions (dimension in mm)

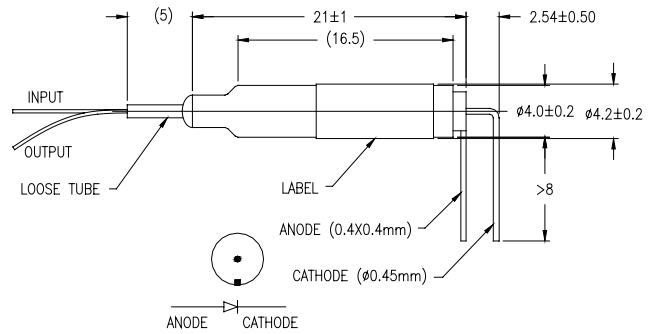
Standard Package (P1, Bare Fiber or Loose Tube)



Standard Package Pin Assignment

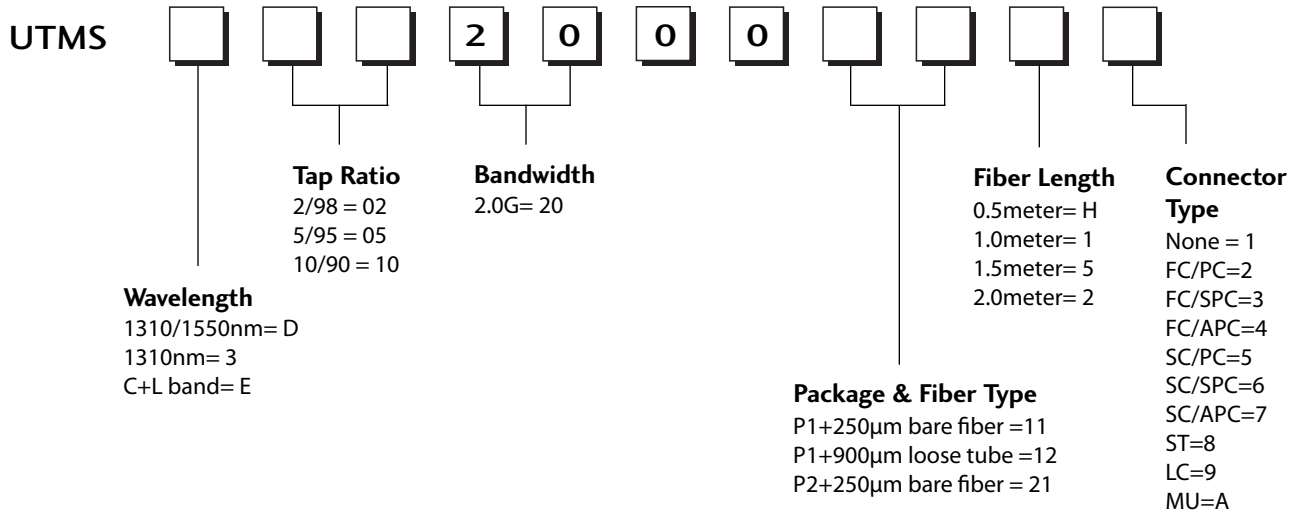
- Pin 1: Anode
- Pin 2: Cathode
- Pin 3: Case Ground

Miniature Package (P2, Bare Fiber)



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) UTMS in P1 package is RoHS 5 compliant (RoHS permitted Lead in solder exemption is applied).
- 2) UTMS in P2 package is RoHS 6 compliant. Add "G" to the end of the above PN for RoHS 6.