

# INTEGRATED TAP MONITOR ARRAYS

## ITMA Series

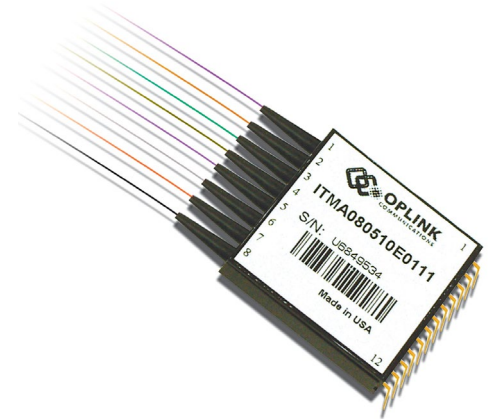
### Product Description

Oplink's Integrated TAP Monitor Array (ITMA) is a compact, multi-channel power-monitoring device. It increases module design flexibility and efficiency by significantly reducing the number of assembly components and facilitating fiber management.

ITMA 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 operating wavelength range.

Easily mounted on a PCB, Oplink's standard 12/14-pin package provides power monitoring for up to ten channels. 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	1520~1620	nm
Through	Insertion Loss (@ $\lambda_{op}$ , Top, All SOP, Exclude Connectors)	2%	< 0.4		dB
		5%	< 0.6		
		10%	< 0.9		
	Polarization Dependent Loss		< 0.05		dB
Return Loss			> 45		dB
Tapped Monitoring	Responsivity (Relative to Nominal Power at Input Port)	2%	10 ~ 23	14 ~ 26	mA/W
		5%	26 ~ 59	36 ~ 65	
		10%	52 ~ 110	70 ~ 120	
	Responsivity Temperature Dependence (@1310nm or 1550nm)		< 0.3		dB
Responsivity Polarization Dependence			< 0.1		dB
PD	PD Dark Current (@ -5V bias, 70°C)	0.5G Bandwidth	< 10		nA
		2.0G Bandwidth	< 2.5		
	Reverse Voltage		< 20		V
Forward Current			< 10		mA
Conditions	Input Optical Power	2%	< 21		dBm
		5%	< 16		
		10%	< 12		
	Operating Temperature Range (<85%RH, Non-condensing)		-5	+70	°C
Storage Temperature Range (<85%RH, Non-condensing)		-40	+85	°C	
Fiber Type			Corning SMF-28		

### Features

- ◆ Standard, 12/14-pin Package Easily Mounted on a PCB
- ◆ 4, 8 and 10 Channel Configurations
- ◆ Wide Operating Wavelength Range
- ◆ Various Tap Ratio Available
- ◆ Low Insertion Loss and PDL
- ◆ Low Dark Current
- ◆ High Temperature Stability

### Applications

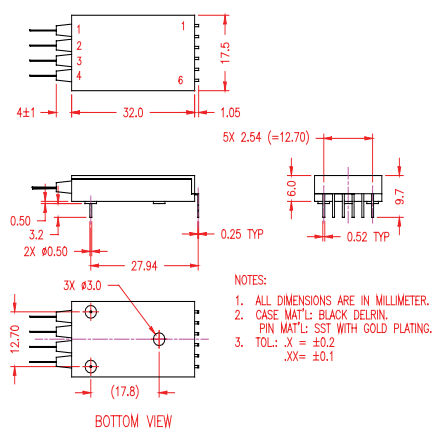
- ◆ DWDM Channel Monitoring
- ◆ Optical Network Switch/Protection Monitoring
- ◆ Re-configurable Optical Add/Drop Multiplexers
- ◆ Gain/Attenuation Monitoring in Amplifier Systems
- ◆ EDFAs and Raman Amplifiers

\* Excluding connectors

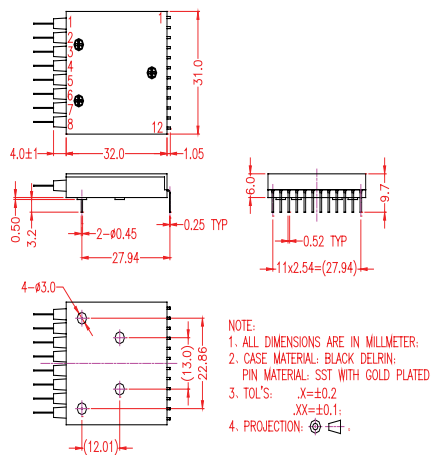
\*\* The maximum IL is under all states of polarization and within the full operating temperature and wavelength ranges specified

Mechanical Drawing / Package Dimensions (dimension in mm)

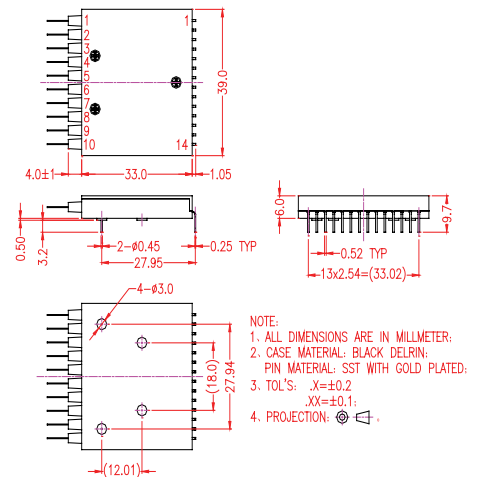
1) 4-ch ITMA



2) 8-ch ITMA



3) 10-ch ITMA



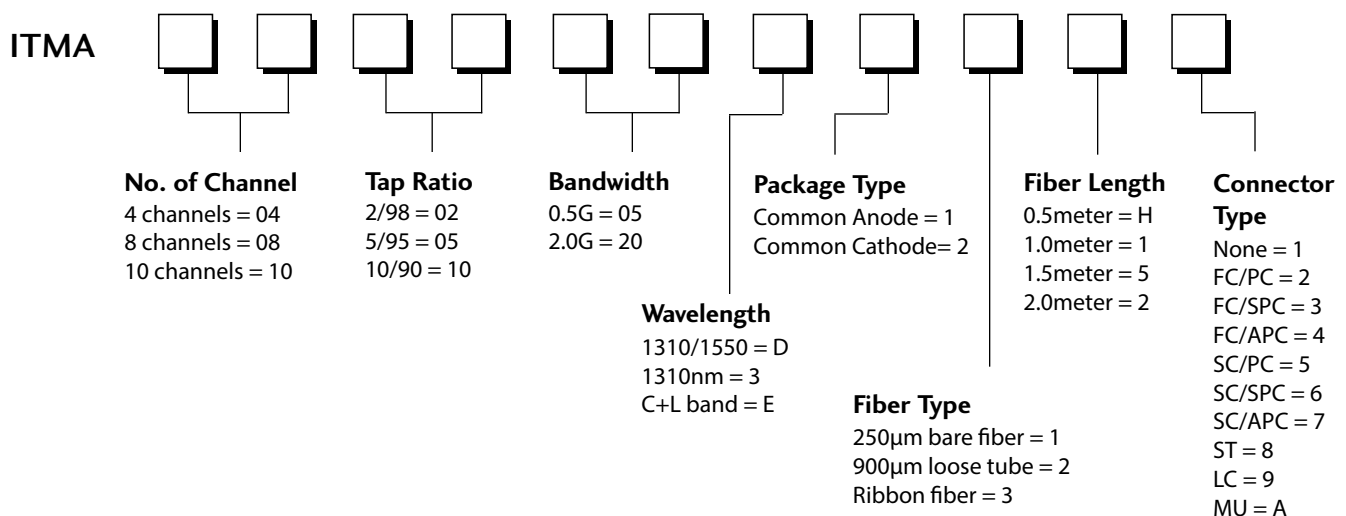
Electrical Pin Assignment		
Pin#:	Common Cathode Assignment	Common Anode Assignment
Pin1:	Common Cathode for Ch1 & 2	Common Anode for Ch1 & 2
Pin2:	Anode Ch1	Cathode Ch1
Pin3:	Anode Ch2	Cathode Ch2
Pin4:	Common Cathode for Ch3 & 4	Common Anode for Ch3 & 4
Pin5:	Anode Ch3	Cathode Ch3
Pin6:	Anode Ch4	Cathode Ch4

Electrical Pin Assignment		
Pin#:	Common Cathode Assignment	Common Anode Assignment
Pin1:	Common Cathode for Ch1 & 2	Common Anode for Ch1 & 2
Pin2:	Anode Ch1	Cathode Ch1
Pin3:	Anode Ch2	Cathode Ch2
Pin4:	Common Cathode for Ch3 & 4	Common Anode for Ch3 & 4
Pin5:	Anode Ch3	Cathode Ch3
Pin6:	Anode Ch4	Cathode Ch4
Pin7:	Anode Ch5	Cathode Ch5
Pin8:	Common Cathode for Ch5 & 6	Common Anode for Ch5 & 6
Pin9:	Anode Ch6	Cathode Ch6
Pin10:	Anode Ch7	Cathode Ch7
Pin11:	Common Cathode for Ch7 & 8	Common Anode for Ch7 & 8
Pin12:	Anode Ch8	Cathode Ch8

Electrical Pin Assignment		
Pin#:	Common Cathode Assignment	Common Anode Assignment
Pin1:	Common Cathode for Ch1 to 4	Common Anode for Ch1 to 4
Pin2:	Anode Ch1	Cathode Ch1
Pin3:	Anode Ch2	Cathode Ch2
Pin4:	Anode Ch3	Cathode Ch3
Pin5:	Anode Ch4	Cathode Ch4
Pin6:	Anode Ch5	Cathode Ch5
Pin7:	Common Cathode for Ch5 to 8	Common Anode for Ch5 to 8
Pin8:	Anode Ch6	Cathode Ch6
Pin9:	Anode Ch7	Cathode Ch7
Pin10:	Anode Ch8	Cathode Ch8
Pin11:	Anode Ch9	Cathode Ch9
Pin12:	Common Cathode for Ch9 & 10	Common Anode for Ch9 & 10
Pin13:	Anode Ch10	Cathode Ch10
Pin14:	Not connected	Not connected

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:

- ITMA is RoHS 5 compliant (RoHS permitted Lead in solder exemption is applied).
- Add "G" to the end of the above PN for RoHS 6 Requirement.