

# INTEGRATED WDM MONITOR ARRAYS

## IWMA Series

### Features

- ◆ Standard, 12-pin Package Easily Mounted on a PCB
- ◆ 4 or 8 Channel Configurations
- ◆ Wide Operating Wavelength Range
- ◆ Low Insertion Loss and PDL
- ◆ Low Dark Current
- ◆ High Temperature Stability

### Applications

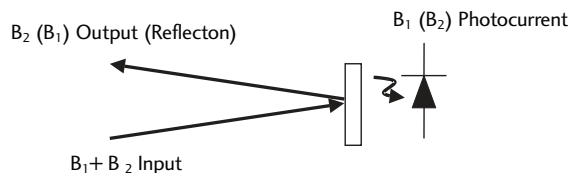
- ◆ DWDM Channel Monitoring
- ◆ Optical Network Switch/Protection Monitoring
- ◆ Re-configurable Optical Add/drop Multiplexers
- ◆ Gain/attenuation Monitoring in Amplifier Systems

### Integrated WDM Monitor Arrays

- Oplink's Integrated WDM Monitor Array (IWMA) is a compact, multi-channel WDM power-monitoring device. It allows power monitoring at one set of wavelengths while transmitting another set of wavelengths.
- IWMA integrates the functionality of a WDM filter and a photodiode and delivering low insertion loss and low dark current with high temperature stability over a wide wavelength range. It increases module design flexibility and efficiency by significantly reducing the number of assembly components and facilitating fiber management.
- Easily mounted on a PCB, Oplink's standard 12-pin package provides power monitoring for up to eight 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.

### Functional Diagram



### Performance Specifications

Parameter	Min	Typical	Max	Units
Number of Channels		4 or 8		
$B_1$ Wavelength Range	1310 band	1260 ~ 1360		nm
$B_2$ Wavelength Range	C-band	1525 ~ 1570		nm
	L-band	1570 ~ 1620		nm
Insertion Loss for Transmitted Signal <sup>1,2</sup>			0.6	dB
Polarization Dependent Loss		0.03	0.05	dB
$B_2$ Output Isolation at $B_1$	15			dB
$B_1$ Output Isolation at $B_2$	35			dB
Return Loss <sup>2</sup>	45			dB
PD Responsivity	0.6			A/W
Input Optical Power			10	dBm
Dark Current@ -5V bias, 70°C	PD Bandwidth = 0.5G		10	nA
	PD Bandwidth = 1.0G		5	nA
Operating Temperature	-5		70	°C
Storage Temperature	-40		85	°C
Fiber Type	Corning SMF-28			

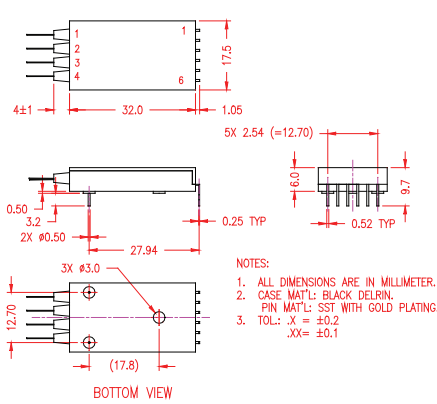
Notes:

1. Within operating wavelength range and temperature ranges specified, under all states of polarization.
2. Excluding connectors



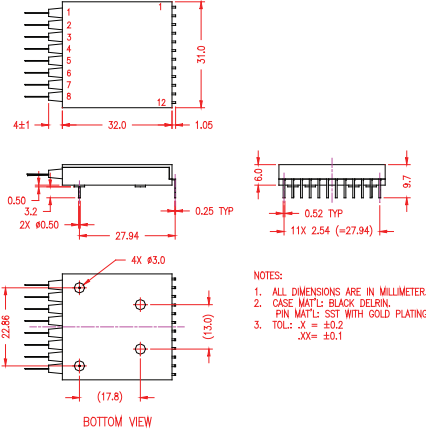
**Mechanical Footprint Dimension (unit: mm)**

1) 4-ch IWMA



NOTES:  
 1. ALL DIMENSIONS ARE IN MILLIMETER.  
 2. CASE MAT'L: BLACK DELRIN.  
 PIN MAT'L: SST WITH GOLD PLATING.  
 3. TOL: .X = ±0.2  
 .XX = ±0.1

2) 8-Ch IWMA



NOTES:  
 1. ALL DIMENSIONS ARE IN MILLIMETER.  
 2. CASE MAT'L: BLACK DELRIN.  
 PIN MAT'L: SST WITH GOLD PLATING.  
 3. TOL: .X = ±0.2  
 .XX = ±0.1

**Electrical Pin Assignment**

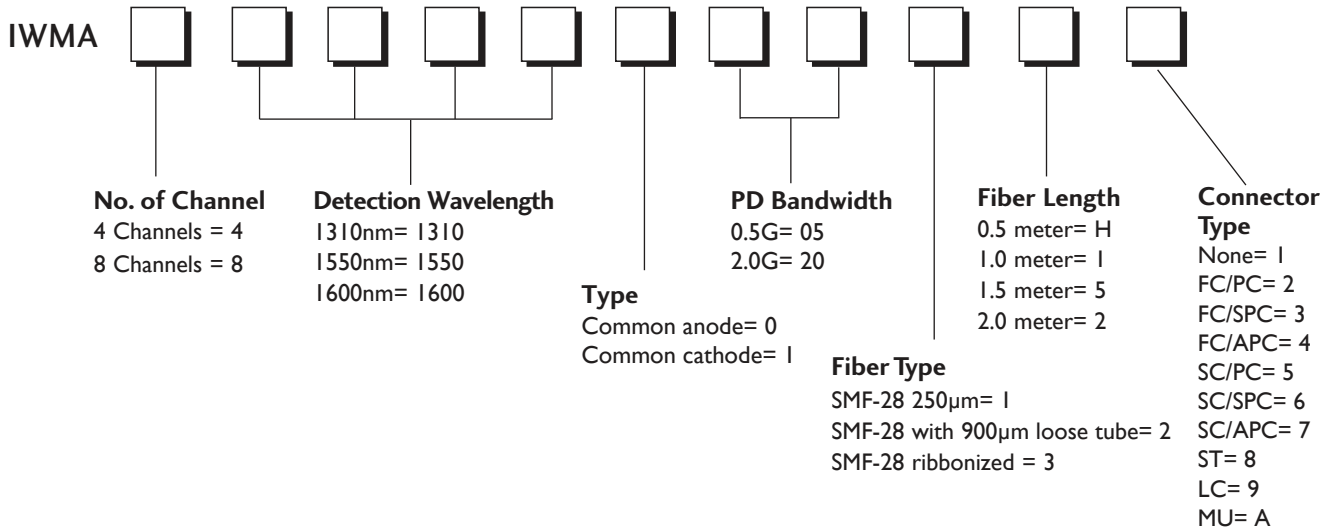
Pin#:	Common Cathode Assignment	Common Anode Assignment
Pin1:	Common Cathode for Ch1 & 2	Common Anode for Ch1 & 2
Pin2:	Anode Ch1	Cathode Ch1
Pin3:	Anode Ch2	Cathode Ch2
Pin4:	Common Cathode for Ch3 & 4	Common Anode for Ch3 & 4
Pin5:	Anode Ch3	Cathode Ch3
Pin6:	Anode Ch4	Cathode Ch4

**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 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

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