

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

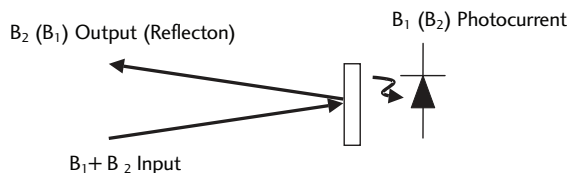
- ◆ DWDM Channel Monitoring
- ◆ Optical Network Switch/Protection Monitoring
- ◆ Re-configurable Optical Add/drop Multiplexers
- ◆ Gain/attenuation Monitoring in Amplifier Systems

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 ^{1,2} | | | 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 ² | 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 | | | |

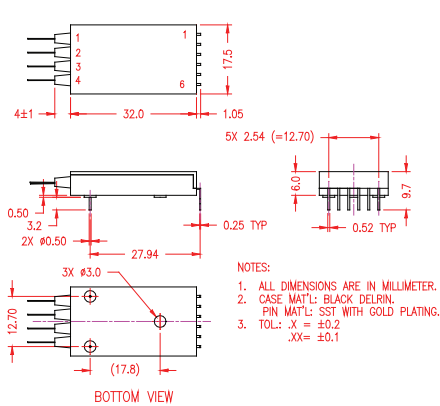
Notes:

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

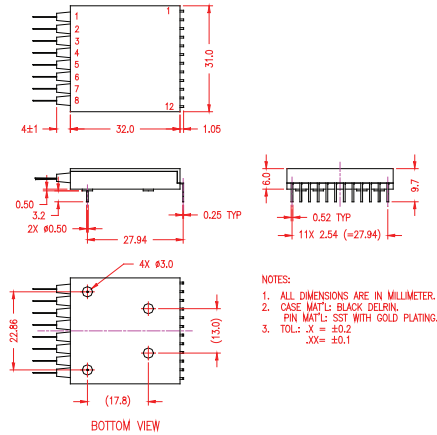


Mechanical Footprint Dimension (unit: mm)

1) 4-ch IWMA



2) 8-Ch IWMA



Electrical Pin Assignment

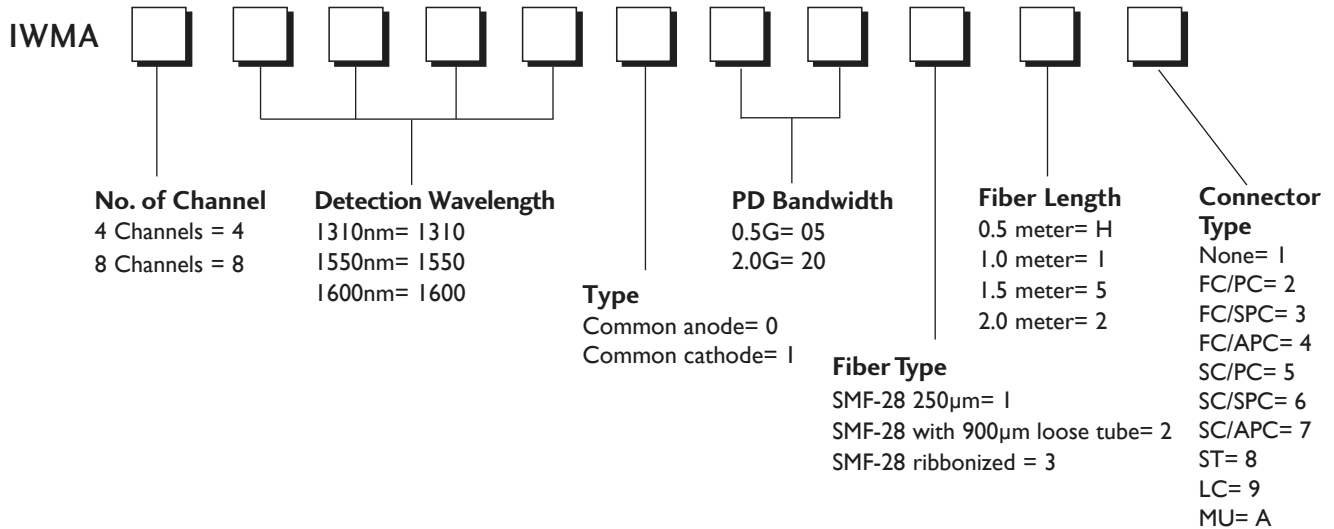
| Pin#: | Common Cathode Assignment | Common Anode Assignment |
|-------|----------------------------|--------------------------|
| Pin1: | Common Cathode for Ch1 & 2 | Common Anode for Ch1 & 2 |
| Pin2: | Anode Ch1 | Cathode Ch1 |
| Pin3: | Anode Ch2 | Cathode Ch2 |
| Pin4: | Common Cathode for Ch3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

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| Pin#: | Common Cathode Assignment | Common Anode Assignment |
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| Pin1: | Common Cathode for Ch1 & 2 | Common Anode for Ch1 & 2 |
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| 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.