

TSPMD6-I



TSPMD6-O



12 Channel Single Fiber CWDM MUX/DEMUX CWDM 12CH SPMD6-I/SPMD6-O

Product Description:

TSPMD6-I and TSPMD6-O are part of our passive CWDM Mux/Demux series and supports 12 CWDM Channel interconnection over single fiber using 1271-1371nm and 1471-1571nm wavelength from ITU-T G.694.2 grid. TSPMD6-O unit is for harsh outdoor environments supporting IP55- water dust resistance, -5 to 70C temperature, telecom pole or wall installation options and comes with LC/UPC or customer specified for easy fiber connection. Unit is small in size, light in weight, is simple to install, requires zero configuration or maintenance and is fully passive - no power supply or cooling required. TSPMD6-O is used together with TSPMD6-I. This solution is designed for scenarios where single fiber passive CWDM connections on both sides of the link are deployed in harsh outdoor or one of sides is deployed in Indoor environments.

TSPMD6 uses Compact CWDM filter technology and provides ≤ 1.8 dB insertion loss.

CWDM Mux/Demux are data rate or line protocol neutral and are used in combination with colored optical transceivers which ensure desired application and data rate. Typical use case for TSPMD6 Mux/Demux are 5G/4G/3G Mobile Fronthaul Network Baseband Unit (BBU) and Remote Radio Head (RRH) interconnection (CPRI/eCPRI protocol), Enterprise Network 25G/10G Ethernet links or Datacenter 32/16/8G Fiber Channel connections.

Key Highlights:

- 12CH CWDM Data services over Single SMF
- IP55 Water, Dust resistant
- LC/UPC connectors
- Rack, telecom Pole or Wall installation
- Small size and lightweight
- Low Insertion Loss: ≤ 1.8 dB
- Compact CWDM filters
- Temperature: $-5^{\circ}\text{C} - +70^{\circ}\text{C}$
- Zero configuration or maintenance
- Fully passive (No Power Supply or Cooling)
- Protocol & Data Rate neutral
- MTBF: 100+ Years
- 1 Year Warranty

Product Specification: TSPMD6-O

Parameter		Unit	Value
Product Type:			Single Fiber CCWDM Outdoor unit
Number of Data Channels:			12
Number of Wavelength			12 CWDM Channels According ITU-T G.694.2
Transport Media:			One strand of Fiber Single Mode Fiber (SMF)
Operating Wavelengths:		center nm	<ul style="list-style-type: none"> • Ch1-Tx: 1291nm • Ch1-Rx: 1271nm • Ch2-Tx: 1331nm • Ch2-Rx: 1311nm • Ch3-Tx: 1371nm • Ch3-Rx: 1351nm • Ch4-Tx: 1491nm • Ch4-Rx: 1471nm • Ch5-Tx: 1531nm • Ch5-Rx: 1511nm • Ch6-Tx: 1571nm • Ch6-Rx: 1551nm
Filter Technology:			CCWDM (Compact CWDM - Free Space Technology)
Passband:		λ_{center} nm	± 6.5 nm
Channel Spacing:		nm	20 nm
Insertation Loss <small>Passband:</small>		Max dB	≤ 1.8 dB
Isolation Adjacent Channels:		Min dB	30 dB
Isolation Non-Adjacent Channels:		Min dB	45 dB
Channel Passband Ripple:		Min dB	0.5 dB
Polarization Dependant Los (PDL):		Max dB	< 0.2 dB
Polarization Mode Dispersion (PMD):		Max ps/nm	< 0.2 ps/nm
Directivity:		Min dB	> 50 dB
Return Loss:		Min dB	> 45 dB
Maximum Power Handling:		Max mW	500mW = 26.98dBm maximum power pass
Connectors:			LC/UPC or customer specified
Operating Temperature:		(°C)	-5~+70 (°C)
Storage Temperature:		(°C)	-40~+85 (°C)
Dimensions (W x H x D):		mm	Customer specified, for pole/wall-Mounted
Protection Class:		%	IP55 - Water, Dust resistant
Compliance:			ITU-T G.694.2, CE, RoHS, IP55

Product Specification: TSPMD6-I

Parameter		Unit	Value
Product Type:			Single Fiber CWDM Indoor unit
Number of Data Channels:			12
Number of Wavelength			12 CWDM Channels According ITU-T G.694.2
Transport Media:			One strand of Fiber Single Mode Fiber (SMF)
Operating Wavelengths:		center nm	<ul style="list-style-type: none"> • Ch1-Tx: 1271nm • Ch1-Rx: 1291nm • Ch2-Tx: 1311nm • Ch2-Rx: 1331nm • Ch3-Tx: 1351nm • Ch3-Rx: 1371nm • Ch4-Tx: 1471nm • Ch4-Rx: 1491nm • Ch5-Tx: 1511nm • Ch5-Rx: 1531nm • Ch6-Tx: 1551nm • Ch6-Rx: 1571nm
Filter Technology:			CCWDM (Compact CWDM - Free Space Technology)
Passband:		λ_{center} nm	± 6.5 nm
Channel Spacing:		nm	20 nm
Insertation Loss <small>Passband:</small>		Max	≤ 1.8 dB
Isolation Adjacent Channels:		Min	30 dB
Isolation Non-Adjacent Channels:		Min	45 dB
Channel Passband Ripple:		Min	0.5 dB
Polarization Dependant Los (PDL):		Max	< 0.2 dB
Polarization Mode Dispersion (PMD):		Max	< 0.2 ps/nm
Directivity:		Min	> 50 dB
Return Loss:		Min	> 45 dB
Maximum Power Handling:		Max	500mW = 26.98dBm maximum power pass
Connectors:			LC/UPC or customer specified
Operating Temperature:		(°C)	-5~+70 (°C)
Storage Temperature:		(°C)	-40~+85 (°C)
Dimensions (W x H x D):		mm	Customer specified, 19" Rack Mount
Protection Class:		%	IP25 - Water, Dust resistant
Compliance:			ITU-T G.694.2, CE, RoHS, IP25

Functional Diagram:

