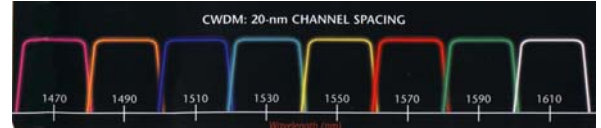


# CWDM-2000

## Coarse Wave-Division Multiplexer for 4, 8, 16 & 18 Channels



- Support for **4, 8, 12, 16 and 18 optical channels** over **ONE fiber**.
- 20 nm channels spacing for standard CWDM.
- Epoxy-free optical path for durability and reliability.
- Thin-film filter technology used for low insertion loss and high isolation.
- Supported wavelengths include **1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590 and 1610 nm**.
- By using **TWO de-multiplexers**, the system will support **up to 18 wavelengths** in **ANY direction**.
- Optical performance guaranteed over the temperature range 0 to 70 degrees C.
- The Laser wavelength drift is less than +/- 3 nm over temperature.



### DESCRIPTION

The MULTIDYNE fiber optic product line is available with Coarse Wave-division Multiplexing technology. For applications in metropolitan areas or for long-haul feeds, the more bandwidth available per fiber the higher the return on investment. It is less expensive to add an additional wavelength than it is to install another fiber. The increase in bandwidth is up to 18 times.

Advances in laser and thin film technology have made it economically possible to provide more than 1 or 2 wavelengths per optical fiber. We can now multiplex 4, 8, 16 or 18 wavelengths on a single fiber.

For the highest performance and isolation it is recommended to use a Multiplexer at both the transmission side and the receiver side. If a Multiplexer is not used to filter the different wavelengths, an optical receive may receive more than one wavelength as an input and become inoperative.

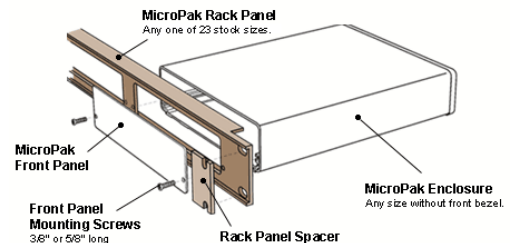
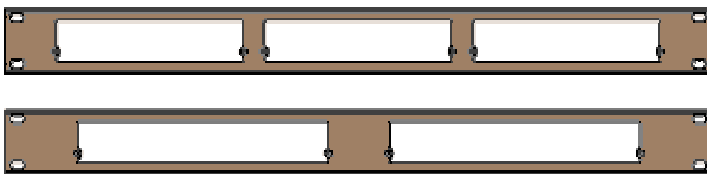
It is desirable in many application to utilize the different wavelengths bi-directionally. For example, you may have 4 wavelengths in an East bound direction and 4 wavelengths in a West bound direction. This is easily accomplished by using a Demultiplexer on both sides of the link. **Unless otherwise stated, all MULTIDYNE CWDM systems are design for bi-directional operation utilizing demultiplexers.**

Just about every Multidyne fiber optic product is available with an option for a CWDM compliant laser. The supported wavelengths include 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590 and 1610 nano-meters. The Laser wavelength drift is less than +/- 3nm from 0 to 70 degrees Centigrade. Multidyne offers 4, 8, 16 and 18 channel Mux and Demux modules for CWDM applications. The 16 and 18 channel CWDMs require the new Corning Metro Optimized SMF-28e fiber. It has a more uniform attenuation characteristic over the extended CWDM spectrum. Add and Drop Mux and Demux modules are also available.

When ordering MULTIDYNE equipment you will note the “-7-xxxx” option. This is the CWDM laser option. The xxxx designates the desired wavelength. For example, if you would like a DVM-2000 fiber optic transmitter with a 1610nm CWDM laser. The correct part number would be DVM-2000-FTX-7-1660.

Epoxy-free optical paths are used for increased durability and reliability. Thin-film filter technology is used for low insertion loss and high isolation. Optical performance guaranteed over the temperature range 0 to 70 degrees C.

### RACK-MOUNT KITS, -RMT TRIPLE RM, -RMD DUAL RM:



In the USA and Canada call **1-(800)-4TV-TEST**  
 191 Forest Avenue, Locust Valley, NY 11560-2132 USA  
 1-(800)-488-8378, (516)-671-7278, FAX (516)-671-3362  
**E-Mail: [sales@multidyne.com](mailto:sales@multidyne.com)**  
**Web Site: [www.multidyne.com](http://www.multidyne.com)**

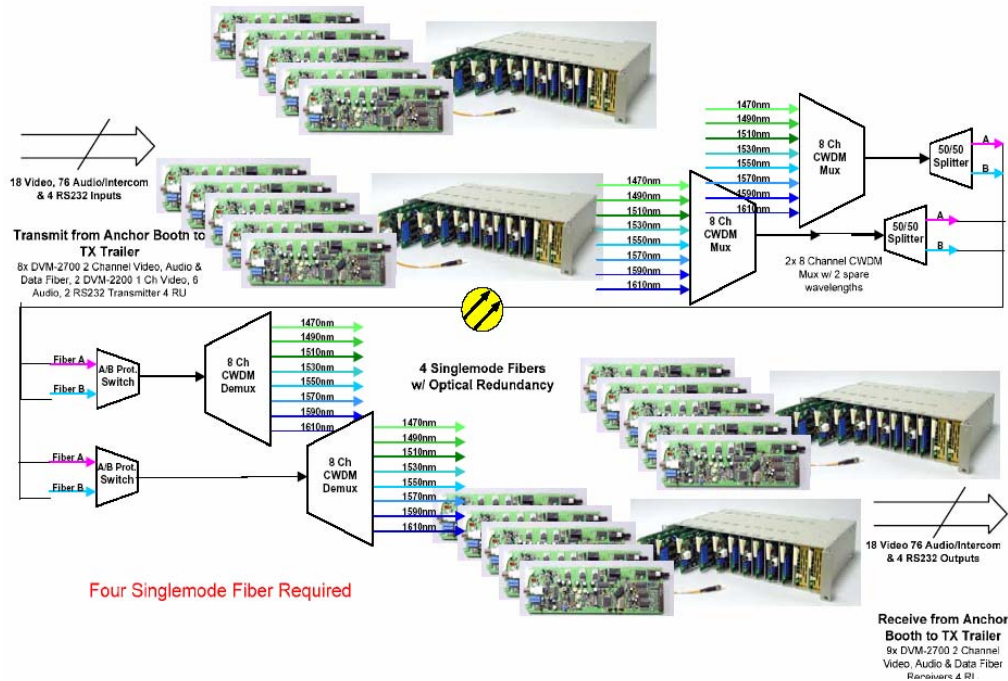
# SPECIFICATIONS:

Parameter	Unit	Thin Film Coarse WDM	
Type		Mux	Demux
Operating Wavelength	nm	1470/1490/1510/1530/1550/1570/1590/1610	
Central Wavelength Accuracy	nm	<±1	
In-band Ripple	dB	0.5	
Pass-band Width @ 0.5dB	nm	>13	
Insertion Loss for 8 channel	dB	≤3.6	≤4.0
Adjacent Channel Isolation	dB	≥15	≥25
Non-adjacent Channel Isolation	dB	N/A	≥40
Uniformity	MAX. dB	3	
Polarization Dependent Loss	MAX. dB	0.15	
Polarization Mode Dispersion	MAX. ps	0.1	
Return Loss	MIN. dB	50	
Directivity	MIN. dB	50	
Temperature Stability	MAX. dB/°C	0.007	
Temperature Wavelength Drift	MAX. nm/°C	0.005	
Power Handling	MAX. mW	300	
Tensile Load	MAX. N	5	
Operating Temperature	°C	0~70	
Storage Temperature	°C	-40~85	

# ORDERING INFORMATION:

	<b>Fiber Optic Accessories; WDM's, CWDM's, Add/Drop &amp; Protection Switches (SIN 58-6)</b>
CWDM-2000-18	Coarse Wave Division Multiplexer for 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610nm. Supports up to 18 wavelengths or channels per fiber optic cable. SC connectors. Requires the NEW coming SMF-28E CWDM enhanced Singlemode Fiber. (May require -RMD, -BLANK)
CWDM-2000-16	Coarse Wave Division Multiplexer for 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610nm. Supports up to 16 wavelengths or channels per fiber optic cable. SC connectors. Requires the NEW coming SMF-28E CWDM enhanced Singlemode Fiber. (May require -RMD, -BLANK)
CWDM-2000-9	Coarse Wave Division Multiplexer for 1310, 1470, 1490, 1510, 1530, 1550, 1570, 1590 and 1610nm. Supports up to 9 wavelengths or channels per fiber optic cable. SC connectors. (May require -RMD, -BLANK)
CWDM-2000-8	Coarse Wave Division Multiplexer for 1470, 1490, 1510, 1530, 1550, 1570, 1590 and 1610nm. Supports up to 8 wavelengths or channels per fiber optic cable. SC connectors. (May require -RMD, -BLANK)
CWDM-2000-4	Coarse Wave Division Multiplexer for 1470, 1490, 1510, 1530 or 1550, 1570, 1590 and 1610nm. Supports up to 4 wavelengths or channels per fiber optic cable. SC connectors. (Specify wavelengths) (May require -RMT, -BLANK)
CWDM-1A-1D-xxxx	Coarse Wave Division Multiplexer, 1 Channel ADD & DROP for 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610nm. Unit will Drop and then Add a CWDM wavelength. SC connectors. (Specify wavelength for xxxx) (May require -RMT, -BLANK)
CWDM-2A-2D-xxxx-xxxx	Coarse Wave Division Multiplexer, 2 Channel ADD & DROP for 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610nm. Unit will Drop and then Add a CWDM wavelength. SC connectors. (Specify wavelength for xxxx) (May require -RMT, -BLANK)
CWDM-1A-xxxx	Coarse Wave Division Multiplexer, 1 Channel ADD for 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610nm. Unit will Drop and then Add a CWDM wavelength. SC connectors. (Specify wavelength for xxxx) (May require -RMT, -BLANK)
CWDM-1D-xxxx	Coarse Wave Division Multiplexer, 1 Channel DROP for 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610nm. Unit will Drop and then Add a CWDM wavelength. SC connectors. (Specify wavelength for xxxx) (May require -RMT, -BLANK)
WDM-MM-ST	Wave Division Multiplexer, 850 and 1300nm Multi-mode, ST Connectors
WDM-SM-FC	Wave Division Multiplexer, 1300 nm and 1550 nm Single Mode, FC Connectors (Optional -ST or -SC connectors)
SPLIT50/50	Optical Splitter, 50/50 Gould
SPLIT50/50CWDM	Optical Splitter, 50/50, CWDM Band
FiberSwitch-1x2	1 by 2 CWDM Fiber Switch, Singlemode, 0 - 5 VDC activation (Specify ST, FC or SC connectors) (May require -RMT, -BLANK)
-RMT	Triple Rack-mount Kit (1 kit)
-RMD	Dual Rack-mount Kit (1 kit)
-BLANK	Blank panel for rack-mounting kit
FSW-KSTST-WB	A/B Protection Switch, ST/UPC Connectors, 1470-1610 nm, CWDM, Single Mode
FVM-19X175	Chassis, 2 FSW plug-in modules 1.75in for 19in rack
ACC-110-48V-A	110 VAC to -48V DC Power Converter Desktop Style

# Application Diagram



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