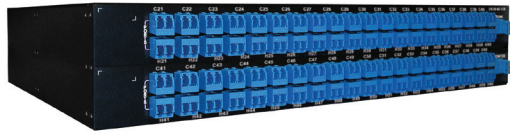


DWDM Fiber Optic Multiplexer and De-Multiplexer

RD-DMDXA80M



Overview

The RD-DMDXA80M from MRV is a combined passive eighty-channel 50GHz DWDM multiplexer and de-multiplexer (MUX & DeMUX) in a single 2U solution. It combines standard 50GHz DWDM ITU grid channels C and H, 21 through 60, and it may be used in pairs.

The RD-DMDXA80M is ideal for increasing the fiber capacity between two sites without the need for installing or leasing additional fibers.

The complete passive solution requires no power cabling and no configuration; it is a true plug and play solution.

The RD-DMDXA80M enables separation of the active equipment from wavelength multiplexing components. It may be used in conjunction with active optical devices from MRV or from any other DWDM-compliant manufacturers.

The RD-DMDXA80M may be used as a standalone tabletop device or mounted in 2-unit space of a 19" data rack. Rack mounting options include standard flush front mount or mid-chassis NEBS level 3 configurations. The RD-DMDXA80M front panel features dual LC (DLC) fiber connectors for the 80 DWDM channels as well as a DLC fiber port pair for the multiplexed DWDM trunk link.

With front accessible connections and no need for power, the unit may be fully operational in minutes after unpacking the box.

Highlights

- 80 Channel 50 GHz DWDM combined Multiplexer and De-multiplexer (MUX & DeMUX)
- Integrated monitor port
- Standalone compact form factor – 2U
- Plug'n play: requires no configuration
- Green product: completely passive, needs no power and no cooling
- Installation friendly: front accessible Dual LC (DLC) connectors for the multiplexed channels and for the aggregated optical link
- Fully transparent at all data rates and protocols from T1 to 40 Gbps
- Uniform insertion loss variation over the 80-channels - less than 1.5dB (typical 0.75dB) per MUX or DeMUX
- Compatible with 50 and 100 GHz ITU Grid DWDM active transponders and transceivers from MRV and other third parties
- High reliability, MTBF of 100 years
- Designed for Telcordia / Bellcore GR-1209 and GR-1221

Applications

- Point-to-point DWDM fiber optimization
- Linear add/drop DWDM fiber optimization

Datasheet

Optical Specifications						
Parameter	Symbol	Specifications			Unit	Comments
		Min.	Typ.	Max.		
Number of Channels	-	80			-	-
Channel Spacing	-	50			GHz	-
Channel Frequencies	f_C	192.10 ~ 196.05			THz	1529.163 ~ 1560.606 nm
Wavelength Accuracy	$\Delta\lambda_C$	-	±30	±50	pm	Offset from ITU Frequencies
ITU Band	PB	-6.25	-	6.25	GHz	Centered at Each ITU Channel Frequency, f_C
Insertion Loss (Passband)	IL_{MAX}	-	6.0	-	dB	Per MUX or DeMUX
	IL_{MAX}	-	12.0	-	dB	Per Link
Insertion Loss at Monitor Port	IL_{MT}	-	20	-	dB	Trunk to Monitor Port, with 2:98 Tap
	IL_{MT}	-	26	-	dB	Monitor Port to Channel, with 2:98 Tap
Insertion Loss Uniformity	ΔIL	-	0.7	1.5	dB	Over All Channels and PDL
Ripple	R	-	0.4	1.0	dB	Loss Variation within ITU Band
Polarization Dependent Loss	PDL	-	0.3	0.7	dB	Maximum within ITU Band
1 dB Passband	$\delta 1dB$	0.190	0.200	-	nm	Measure 1dB down from Min IL, Unpolarized
3 dB Passband	$\delta 3dB$	0.275	0.300	-	nm	Measure 3dB down from Min IL, Unpolarized
Adjacent Channel Isolation	AX	16	28	-	dB	Worst-case within ITU Band
Non-Adjacent Channel Isolation	NX	16	40	-	dB	Worst-case within ITU Band
Return Loss	RL	45	55	-	dB	Over All Channels and PDL
Chromatic Dispersion	CD	-25	-	+25	ps/nm	Over ITU Band , Guaranteed by Design
Polarization Mode Dispersion	PMD	-	-	0.5	ps	Over ITU Band, GBD

Operating Specifications	
Operating Temperature Range	-5°C to 65°C (23°F to 149°F)
Operating Relative Humidity	85% maximum, non-condensing
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Storage Relative Humidity	5 to 95% maximum, non-condensing
Physical Dimensions	88 mm x 439 mm x 305 mm deep (3.4" x 17.3" x 12" deep)
Weight	Approximately 2.0 kg (4.4 lb)
Regulatory Compliances	RoHS Directive; China RoHS; WEEE Directive: Wheelie Bin Mark

Ordering Info	Model	Function	Connectors Port/Link	Wavelength (nm)
		RD-DMDXA80M	DWDM Passive eighty-channel multiplexer and de-multiplexer.	DLC / DLC



Datasheet

Channel Frequencies and Wavelengths (ITU Frequencies)					
Label	Frequency (THZ)	Wavelength (nm)	Label	Frequency (THZ)	Wavelength (nm)
H60	196.05	1529.163	H40	194.05	1544.924
C60	196.00	1529.553	C40	194.00	1545.322
H59	195.95	1529.944	H39	193.95	1545.720
C59	195.90	1530.334	C39	193.90	1546.119
H58	195.85	1530.725	H38	193.85	1546.518
C58	195.80	1531.116	C38	193.80	1546.917
H57	195.75	1531.507	H37	193.75	1547.316
C57	195.70	1531.898	C37	193.70	1547.715
H56	195.65	1532.290	H36	193.65	1548.115
C56	195.60	1532.681	C36	193.60	1548.515
H55	195.55	1533.073	H35	193.55	1548.915
C55	195.50	1533.465	C35	193.50	1549.315
H54	195.45	1533.858	H34	193.45	1549.715
C54	195.40	1534.250	C34	193.40	1550.116
H53	195.35	1534.643	H33	193.35	1550.517
C53	195.30	1535.036	C33	193.30	1550.918
H52	195.25	1535.429	H32	193.25	1551.319
C52	195.20	1535.822	C32	193.20	1551.721
H51	195.15	1536.216	H31	193.15	1552.122
C51	195.10	1536.609	C31	193.10	1552.524
H50	195.05	1537.003	H30	193.05	1552.926
C50	195.00	1537.397	C30	193.00	1553.329
H49	194.95	1537.792	H29	192.95	1553.731
C49	194.90	1538.186	C29	192.90	1554.134
H48	194.85	1538.581	H28	192.85	1554.537
C48	194.80	1538.976	C28	192.80	1554.940
H47	194.75	1539.371	H27	192.75	1555.343
C47	194.70	1539.766	C27	192.70	1555.747
H46	194.65	1540.162	H26	192.65	1556.151
C46	194.60	1540.557	C26	192.60	1556.555
H45	194.55	1540.953	H25	192.55	1556.959
C45	194.50	1541.349	C25	192.50	1557.363
H44	194.45	1541.746	H24	192.45	1557.768
C44	194.40	1542.142	C24	192.40	1558.173
H43	194.35	1542.539	H23	192.35	1558.578
C43	194.30	1542.936	C23	192.30	1558.983
H42	194.25	1543.333	H22	192.25	1559.389
C42	194.20	1543.730	C22	192.20	1559.794
H41	194.15	1544.128	H21	192.15	1560.200
C41	194.10	1544.526	C21	192.10	1560.606

MRV has more than 50 offices throughout the world. Addresses, phone numbers and fax numbers are listed at www.mrv.com. Please e-mail us at info@mrv.com or call us for assistance.

MRV Los Angeles
20415 Nordhoff Street
Chatsworth, CA 91311
800-338-5316
818-773-0900

MRV Boston
300 Apollo Drive
Chelmsford, MA 01824
800-338-5316
978-674-6800

MRV International
Business Park Moerfelden
Waldeckerstrasse 13
64546 Moerfelden-Walldorf
Germany
Tel. (49) 6105/2070
Fax (49) 6105/207-100

All statements, technical information and recommendations related to the products herein are based upon information believed to be reliable or accurate. However, the accuracy or completeness thereof is not guaranteed, and no responsibility is assumed for any inaccuracies. Please contact MRV Communications for more information. MRV Communications and the MRV Communications logo are trademarks of MRV Communications, Inc. Other trademarks are the property of their respective holders.