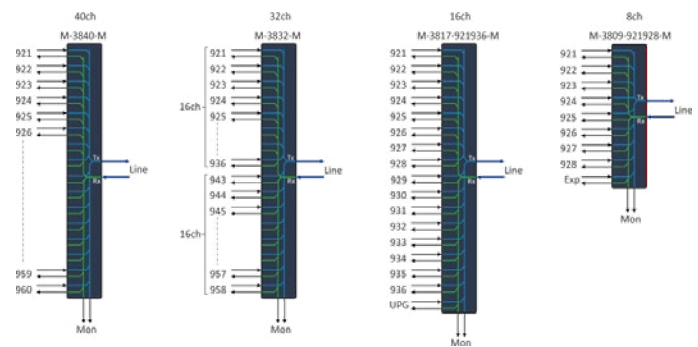


DATASHEET 5.0

M-38XX-XXXYY DWDM MUX/DEMUX SERIES

100GHz, 40, 32, 16, 8 channel DWDM Multiplexers


OVERVIEW

The most commonly used DWDM grid is 100GHz. The M-Filter Series has two such units providing 40ch DWDM channels:

- M-3840-M 40ch Mux/Demux covering channels 921-960, plus a Monitor port.
- M-3840-LL 40ch Mux/Demux, a low-loss option without a Monitor port.

The M-Filter Series also has a 32ch DWDM Mux/Demux option as well as two 16ch options:

- M-3832-M 32ch Mux/Demux with Monitor port
- M-3817-921936-M 16ch Mux/Demux with Upgrade & Monitor port.
- M-3817-943958-M 16ch Mux/Demux with Upgrade & Monitor port.

The two 16ch filters can be connected via the Upgrade port to provide the full 32ch count, having the same DWDM

channels as the 32ch M-3832-M unit.

The four 8ch DWDM filters belong to the same “family” as the 32ch and 16ch filters, i.e. they cover the same DWDM channels.

The Expansion port provides an upgrade path by connecting two or more 8ch filters, or optionally be used together with the 16ch filters in order to provide a more granular upgrade in capacity.

- M-3809-921928-M 8ch Mux/Demux with Upgrade & Monitor port

- M-3809-929936-M "

- M-3809-943950-M "

- M-3809-951958-M "

The monitor ports tap off about 1% of the transmitted and received line signal. This provides the ability to monitor the channel power levels via a connected Optical Channel Monitoring (OCM) device or an optical spectrum analyzer.

PRODUCT FEATURES

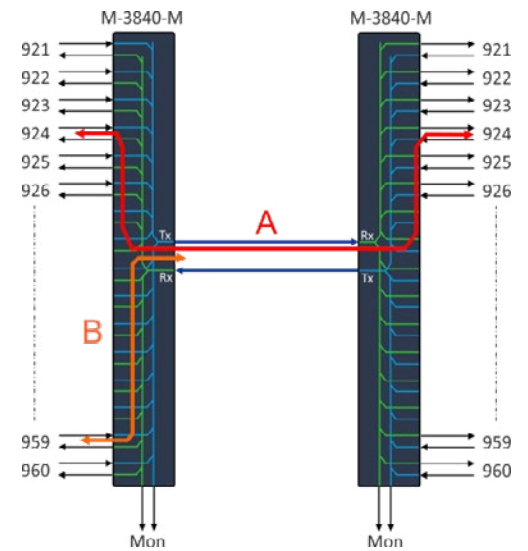
- Multiplexing of up to 40 channels on fiber pair
- Follows M-Series wavelength plan
- Compliant to ITU G.694.1
- 1U Low profile modular design
- Passive, no electric power required. (MTBF ca. 500 years)

ORDERING INFORMATION

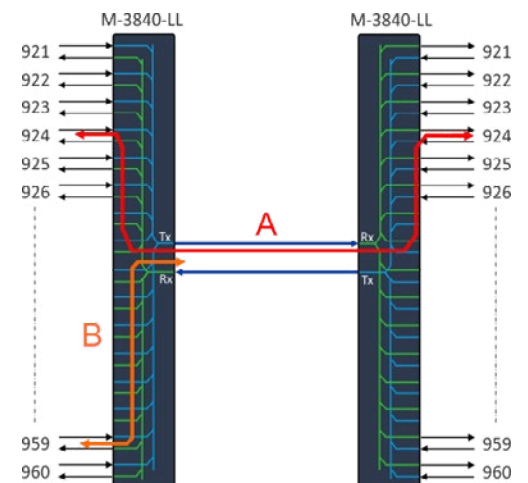
Part Number	Description
40ch DWDM Mux/Demux units	
M-3840-M	1RU, 19", D=191.5mm, 40ch DWDM Mux/Demux, Mon-port, 100GHz D921-D960, Link-loss ch=12.2dB, Insertion-loss ch=6.4dB, LC/UPC
M-3840-LL	1RU, 19", D=191.5mm, 40ch DWDM Mux/Demux LowLoss, 100GHz D921-D960, Link-loss ch=7.5dB,, Insertion-loss ch=6.0dB, LC/UPC
32ch DWDM Mux/Demux units	
M-3832-M	1RU, 19", D=191.5mm, 32ch DWDM Mux/Demux, 100GHz D921-D936 & D943-D958, Mon-port, Link-loss ch=6.4dB, Insertion-loss ch=5.0dB, LC/UPC
16ch DWDM Mux/Demux units	
M-3817-921936-M	1RU, 19", D=191.5mm, 16ch DWDM Mux/Demux with Upg/Mon-port, 100GHz D921-D936, Link-loss ch=5.65dB, Insertion-loss ch=4.0dB, Link-loss Upg=2dB, LC/UPC
M-3817-943958-M	1RU, 19", D=191.5mm, 16ch DWDM Mux/Demux with Upg/Mon-port, 100GHz D943-D958, Link-loss ch=5.65dB, Insertion-loss ch=4.0dB, Link-loss Upg=2dB, LC/UPC
8ch DWDM Mux/Demux units	
M-3809-921928-M	1 RU plug-in module, W=212mm, D= 191.6mm, 8ch DWDM Mux/Demux with Exp/Mon port, 100GHz D921-D928, Link-loss ch=4.8dB, Insertion-loss ch=2.8dB, Link-loss Exp=1.7dB, LC/UPC
M-3809-929936-M	1 RU plug-in module, W=212mm, D= 191.6mm, 8ch DWDM Mux/Demux with Exp/Mon port, 100GHz D929-D936, Link-loss ch=4.8dB, Insertion-loss ch=2.8dB, Link-loss Exp=1.7dB, LC/UPC
M-3809-943950-M	1 RU plug-in module, W=212mm, D= 191.6mm, 8ch DWDM Mux/Demux with Exp/Mon port, 100GHz D943-D950, Link-loss ch=4.8dB, Insertion-loss ch=2.8dB, Link-loss Exp=1.7dB, LC/UPC
M-3809-951958-M	1 RU plug-in module, W=212mm, D= 191.6mm, 8ch DWDM Mux/Demux with Exp/Mon port, 100GHz D951-D958, Link-loss ch=4.8dB, Insertion-loss ch=2.8dB, Link-loss Exp=1.7dB, LC/UPC

GENERAL SPECIFICATIONS

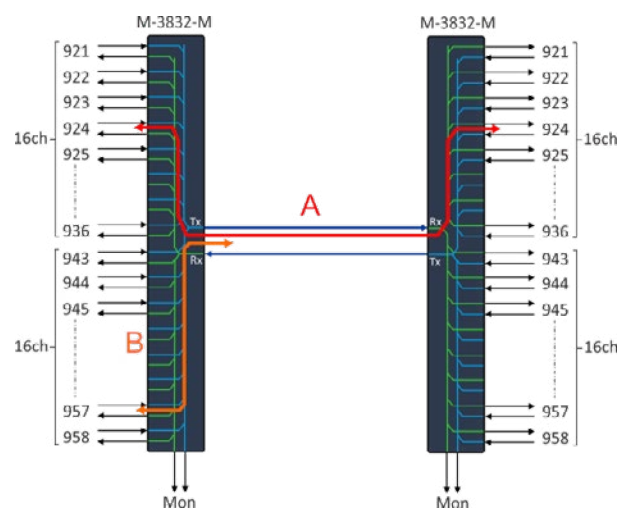
M-3840-M	Unit	Value
Channels	THz	192.1 to 196.0
Number of channels	-	40
Channel spacing	GHz	100
Link loss, per channel (A)	dB	< 12.2
Insertion loss, per channel (B)	dB	< 6.4
Insertion loss, Tx monitor port	dB	24 - 27 (1%)
Insertion loss, Rx monitor port		12 - 14 (5%)
Module width	mm	1RU, 19" rack mount
Connector type	-	LC/UPC
Mounting bracket	-	NA
Operating temperature	° C	-5 to +70



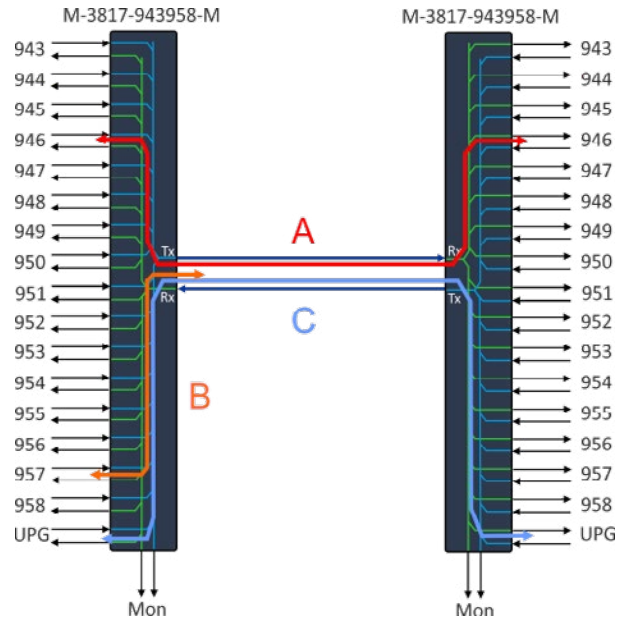
M-3840-LL	Unit	Value
Channels	THz	192.1 to 196.0
Number of channels	-	40
Channel spacing	GHz	100
Link loss, per channel (A)	dB	< 7.5
Insertion loss, per channel (B)	dB	< 6.4
Module width	mm	1RU, 19" rack mount
Connector type		LC/UPC
Mounting bracket	mm	NA
Operating temperature	° C	0 to +70



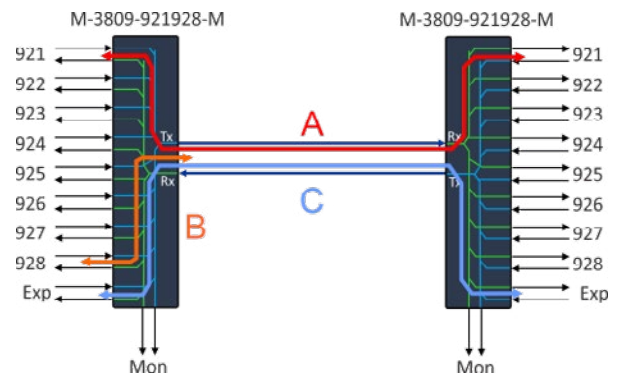
M-3832-M	Unit	Value
Channels	THz	192.1 to 193.6 194.3 to 195.8
Number of channels	-	32
Channel spacing	GHz	100
Link loss, per channel (A)	dB	< 6.4
Insertion loss, per channel (B)	dB	< 5.0
Module width	mm	1RU, 19" rack mount
Connector type		LC/UPC
Mounting bracket	mm	NA
Operating temperature	° C	0 to +70



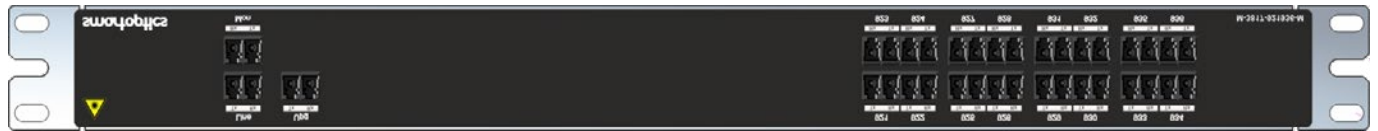
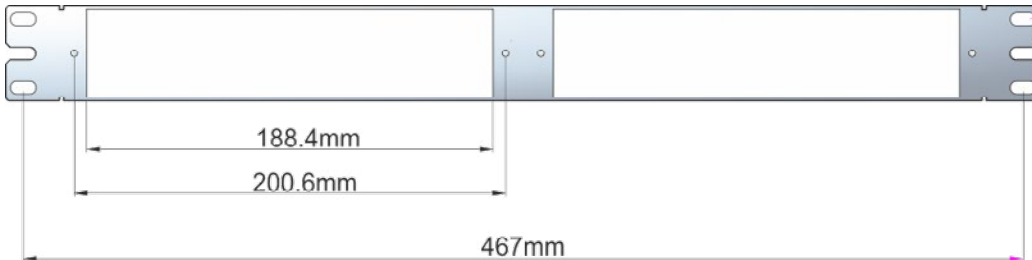
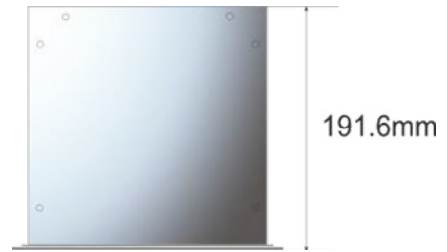
M-3817-xxxxyy-M		Unit	Value
Channels	M-3817-921936-M	THz	192.1 to 193.6
	M-3817-943958-M	THz	194.3 to 195.8
Number of channels	-		16
Channel spacing		GHz	100
Link loss, per channel (A)		dB	< 5.65
Insertion loss, per channel (B)		dB	< 4.0
Link loss UPG port (C)		dB	< 2.0
Insertion loss, monitor port			19 - 22
Module width		mm	1RU, 19" rack mount
Connector type		-	LC/UPC
Mounting bracket		-	NA
Operating temperature		° C	0 to +70



M-3809-xxxxyy-M		Unit	Value
Channels	M-3809-921928-M	THz	192.1 to 192.8
	M-3809-929936-M	THz	192.9 to 193.6
	M-3809-943950-M	THz	194.3 to 195.0
	M-3809-951958-M	THz	195.1 to 195.8
Number of channels	-		8
Channel spacing		GHz	100
Link loss, per channel (A)		dB	< 4.8
Insertion loss, per channel (B)		dB	< 2.8
Link loss UPG port (C)		dB	< 1.7
Insertion loss, monitor port			18 - 22
Module width		mm	see separate figure
Connector type		-	LC/UPC
Mounting bracket		-	M-ADJ-19
Operating temperature		° C	0 to +70



Mounting bracket M-ADJ-19	Unit	Value
Rack mount	-	19"
Mounting depth (flush mount)	mm	191.6
Height	mm	44.45 (1 RU)
Slot width	mm	188.4



The 40ch, 32ch and 16ch filter units are 19" rack mounted devices



The 8ch filter units are plug-in modules that shall be mounted in the M-ADJ-19 mounting bracket. The above example shows a M-3809-921928-M filter module in the M-ADJ-19 mounting bracket.