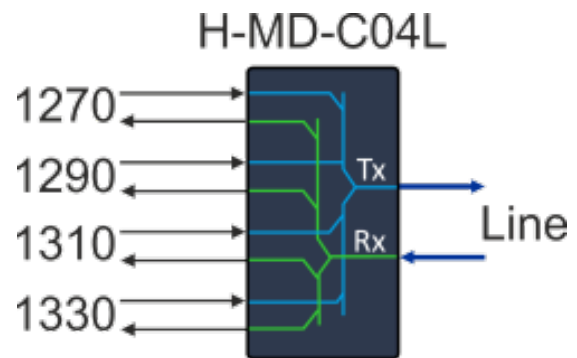


DATASHEET 5.1

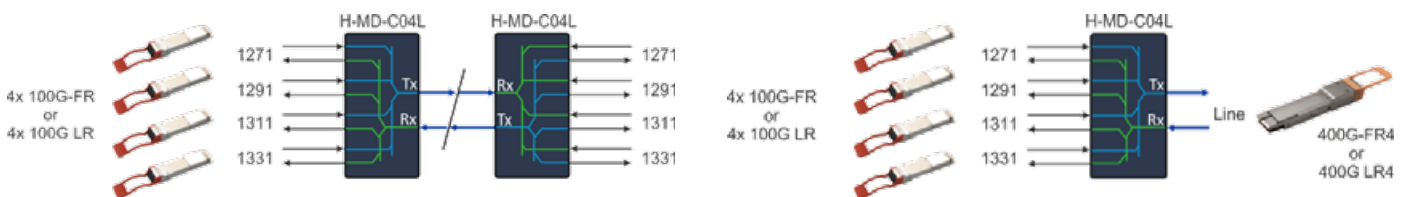
H-MD-C04L

4-channel CWDM Low-band Mux/Demux



OVERVIEW

The H-MD-C04L is a low insertion loss CWDM Mux/Demux unit covering four channels in the lower CWDM band, 1270 to 1330nm. The H-MD-C04L can as an example be used for 4x 100G configurations using single-lambda 100G transceivers based on the 100G-BASE-LR or -FR MSA's shown in the figure below.



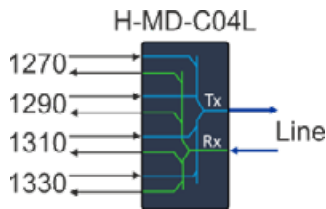
Another example configuration is for 400G to 4x 100G breakout configurations where the single-lambda 100G transceivers are connected to the corresponding 400GBASE-FR4 and -LR4 MSA transceivers.

The H-MD-C04L filter supports the industrial temperature (I-temp) range of -40°C to +85°C (-40°F to +185°F) which gives an extended application range into sites without temperature control. If the operating temperature is kept within 0 to +70°C (+32 to +158°F) some of the worst-case loss values will be reduced. The listed loss values in the below table are for 0 to +70°C operation. Loss values increased at I-temp conditions are marked.

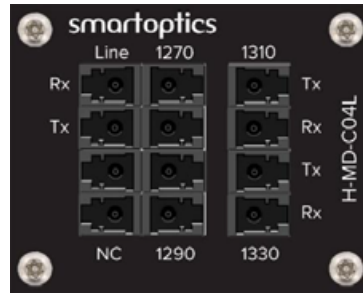
The H-Series filters are mounted in a 1 RU mounting bracket solution, and the filter module sizes vary depending on type of filter.

The H-MD-C04L filter is compliant with ITU-T G.694.2.

FUNCTIONAL OVERVIEW AND PORT DESCRIPTION



Client and Line signals entering the filter is denoted "Rx".
Client and Line signals exiting the filter is denoted "Tx".



Line Rx	1270 Tx	1310 Rx
Line Tx	1270 Rx	1310 Tx
NA	1290 Tx	1330 Rx
NA	1290 Rx	1330 Tx

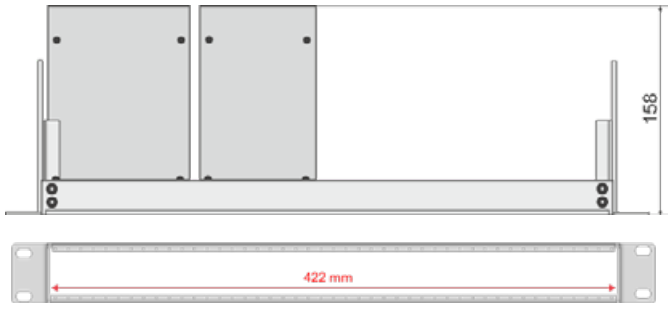
Note: The channel labels "1270", "1290" etc on the overlay are not representing the actual center wavelengths. The actual center wavelengths are at 1271nm, 1291nm etc. as defined in ITU-T G.694.2 and listed in the table below.

TECHNICAL SPECIFICATIONS

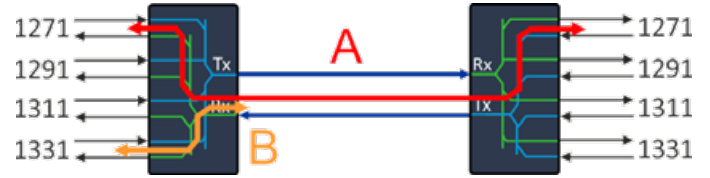
Parameter	Min	Max
Channels	1271, 1291, 1311, 1331	
Channel spacing	20nm	
Channel passband	ITU±7nm	
Link loss, per channel (A)	1.8dB typical ¹⁾	2.0dB typical ¹⁾
Insertion loss, per channel (B)	1.2dB typical ¹⁾	1.3dB typical ¹⁾
Isolation, adjacent channel	30dB	
Isolation, non-adjacent channel	40dB	
Ripple, passband		0.5dB
Directivity	45dB	
Return loss	40dB	
Polarization dependent loss		0.2dB
Polarization mode dispersion		0.20ps
Connector type	LC/UPC	
Module width	55mm	
Normal operating temperature	0 °C	+70 °C
Extended operating temperature (I-temp) ¹⁾	-40 °C	+85 °C
Storage temperature	-40 °C	+85 °C
Mounting bracket	H-Chassi-1RU (19"), 422 mm slot width	
Mounting depth (flush mount)	158mm	

Note! A typical loss value is to be seen as a value that ~90% of a population has at beginning of life and at room temperature. The max value is the guaranteed worst-case value over time and over temperature.

1) The given loss values are for "normal operating temperature" conditions. When used in "extended operating temperature" i.e. I-temp conditions, the values shall be increased by 0.2dB.



Mounting bracket dimensions with two example filters.



ORDERING INFORMATION

The table below shows part number and a short description.

Part number	Description
H-MD-C04L	H-Series: 4ch CWDM Low band Mux/Demux, 1271, 1291, 1311, 1331nm, 55mm, Link-loss channel=2.0dB, LC/UPC