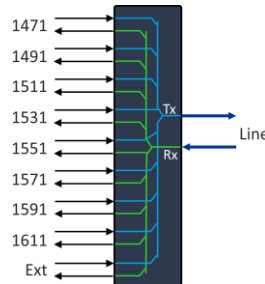
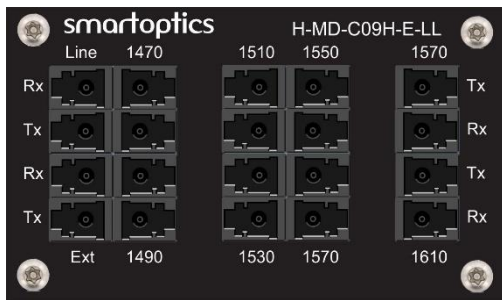


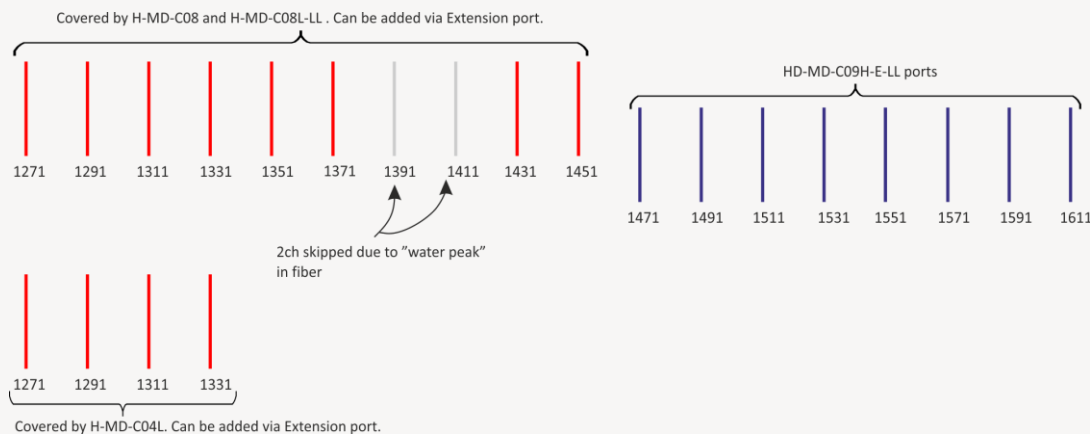
H-MD-C09H-E-LL

Low-loss 8-channel CWDM High Band Mux/Demux with Extension port



OVERVIEW

The H-MD-C09H-E-LL is an 8ch CWDM low-loss Mux/Demux operating on the high CWDM channels. The filter has an Extension port where additional channels can be added. This filter is best used to fully utilize the upper CWDM channels in the region where the SM fiber attenuation is the lowest.



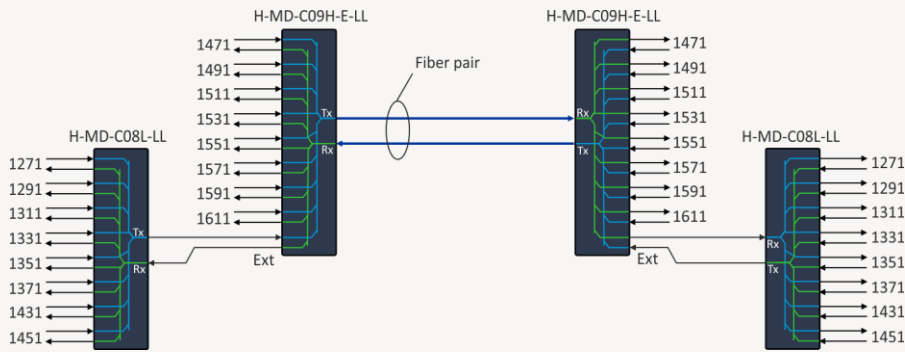
The table below lists H-Series filters that can be connected to the Extension port.

Parameter	
Extension port wavelength band	1264 – 1458nm
Filters matching Ext port	H-MD-C04L (CWDM channels 1271 – 1331nm)
	H-MD-C08 (CWDM channels 1271 – 1451nm)
	H-MD-C08L-LL (CWDM channels 1271 – 1451nm)

The H-MD-C09H-E-LL 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.

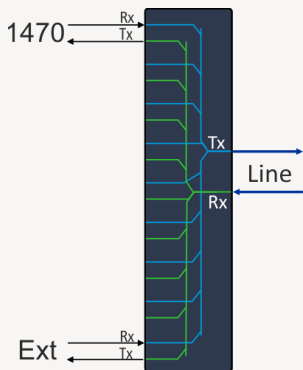
The H-Series filters are mounted in a 1 RU mounting bracket solution, and the filter module sizes vary depending on type of filter.

The H-MD-C09H-E-LL is compliant with ITU-T G.694.2

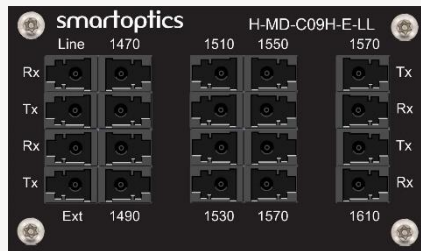


H-MD-C09H-E-LL combined with the H-MD-C08L-LL filters to provide an 8+8 channel configuration.

FILTER OVERVIEW AND PORT ALLOCATION



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



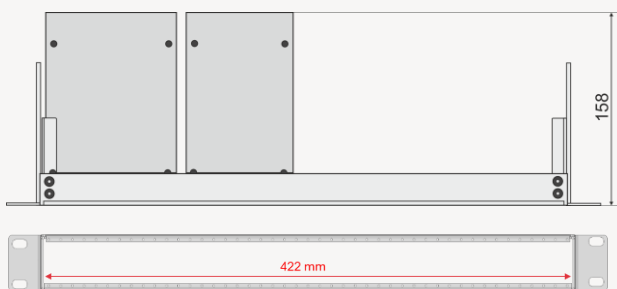
Line Rx	1470 Tx	1510 Rx	1550 Tx	1590 Tx
Line Tx	1470 Rx	1510 Tx	1550 Rx	1590 Rx
Ext Rx	1490 Tx	1530 Rx	1570 Tx	1610 Tx
Ext Tx	1490 Rx	1530 Tx	1570 Rx	1610 Rx

Note: The channel labels "1470", "1490" etc on the overlay are not representing the actual center wavelengths. The actual center wavelengths are at 1471nm, 1491nm etc. as listed in the table below. Note column dependent location of Tx and Rx ports.

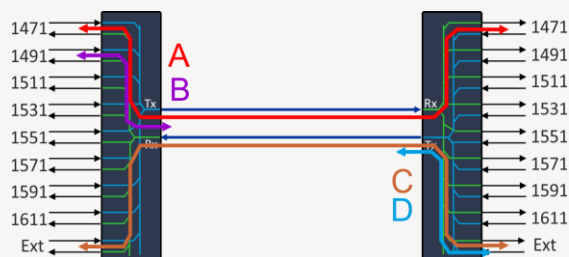
TECHNICAL SPECIFICATIONS

Parameter	C-temp conditions	I-temp Conditions
Channels	1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611nm	⇐
Channel spacing	20nm	⇐
Channel passband	ITU±7nm	⇐
Passband Extension port	1264-1458nm	⇐
Insertion loss, channels (B)	Typical 2.4dB Max 2.6dB	Typical 2.6dB Max 2.8dB
Link loss, channels (A)	Typical 2.6dB Max 3.2dB	Typical 2.8dB Max 3.4dB
Link loss, 1551nm	Typical 1.8dB Max 2.0dB	Typical 2.0dB Max 2.2dB
Insertion loss, extension port (D)	Typical 0.7dB Max 0.8dB	Typical 0.9dB Max 1.0dB
Link loss, extension ports (C)	Typical 1.5dB Max 1.6dB	Typical 1.7dB Max 1.8dB
Isolation, adjacent channel	Min 35dB	⇐
Isolation, non-adjacent channel	Min 40dB	⇐
Ripple, passband	Max 0.5dB	⇐
Directivity	Min 45dB	⇐
Return loss	Min 40dB	⇐
Polarization dependent loss	Max 0.2dB	⇐
Polarization mode dispersion	Max 0.20ps	⇐
Max optical power	Max 500mW	⇐
Operating temperature	0°C to +70°C	-40°C to +85°C
Storage temperature	-40°C to +85°C	⇐
Connector type	LC/UPC	⇐
Module width	75 mm	⇐

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.



Mounting bracket dimensions with two example filters.



ORDER INFORMATION

Part number	Description
H-MD-C09H-E-LL	H-Series: 8ch CWDM High band Low Loss Mux/Demux + Ext-port, 1471-1611nm, 75mm, LC/UPC

Smartoptics makes no warranties or representations, expressed or implied, of any kind relative to the information or any portion thereof contained in this document or its adaptation or use, and assumes no responsibility or liability of any kind, including, but not limited to, indirect, special, consequential or incidental damages, for any errors or inaccuracies contained in the information or arising from the adaptation or use of the information or any portion thereof. The information in this document is subject to change without notice.

Subject to change without notice.

For more information visit smartoptics.com.