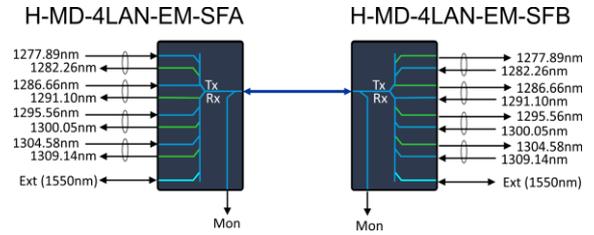
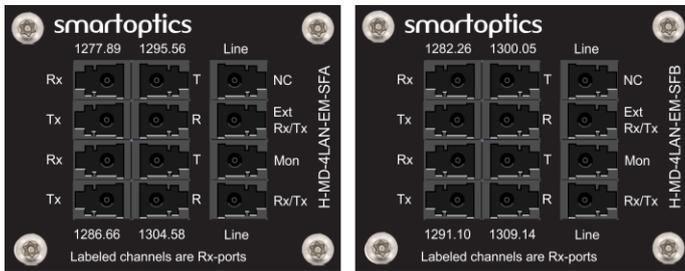


H-MD-4LAN-EM-SFx

4-channel Single-fiber LANWDM Mux/Demux with Extension and Monitor ports



OVERVIEW

The H-MD-4LAN-EM-SFx filters are two LANWDM-filters for single-fiber configurations. The LANWDM channels are located in the 1300nm region where the dispersion properties are the lowest for standard single-mode fiber. As an example, this enables longer distances for 25G Ethernet services in a 5G network. See datasheet on the 25G transceivers SO-SFP28-LWDM-x-E for more information on the optical performance on 25G Ethernet LANWDM transceivers.

There are eight LANWDM channels defined and the H-MD-4LAN-EM-SFx filters are using one channel in uplink and another in downlink, providing 4 bi-directional channels in total. Consequently, there are two different filters, denoted “A” and “B” where the difference lies in the transmitted and received channels.

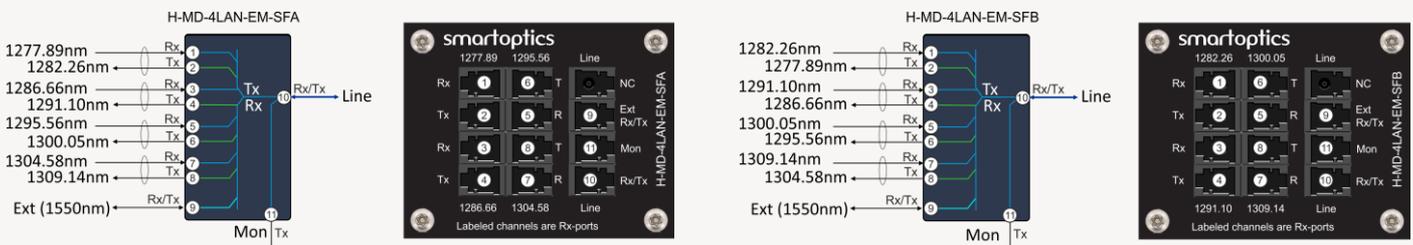
The H-MD-4LAN-EM-SFx filters have an Extension port intended for single-fiber DWDM filters. In 5G networks there is typically a need to transport e.g. 10G Ethernet services together with 25G Ethernet services. This Extension port covers the complete C-band which provides a flexible addition of any DWDM channel combination.

The H-MD-4LAN-EM-SFx filters have a Monitor port that tap off 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.

The H-MD-4LAN-EM-SFx filters support 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.

FUNCTIONAL OVERVIEW AND PORT DESCRIPTION

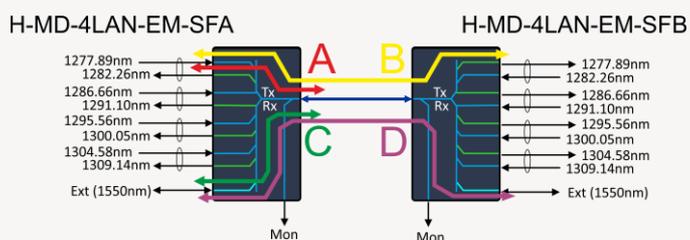
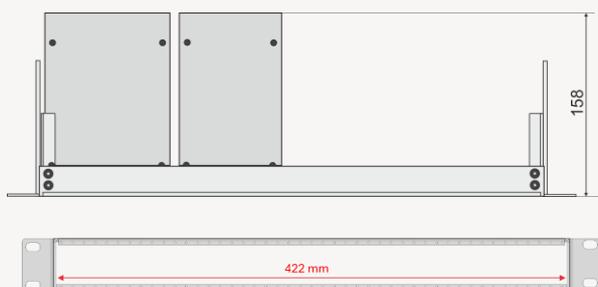
Client and Line signals entering the filter are denoted “Rx”.
Client and Line signals exiting the filter are denoted “Tx”.



TECHNICAL SPECIFICATIONS

Parameter	C-temp conditions	I-temp Conditions
Transmitted channels H-MD-4LAN-EM-SFA	1277.89nm 1286.66nm 1295.56nm 1304.58nm	⇐
Transmitted channels H-MD-4LAN-EM-SFB	1282.26nm 1291.10nm 1300.05nm 1309.14nm	⇐
Passband Ext-port	1528.66 to 1561.53nm / 192.0 to 196.10THz	⇐
Channel spacing	800GHz	⇐
Insertion loss, per LANWDM channel (A)	Typ 3.0dB Max 3.3dB	Typ 3.0dB Max 3.5dB
Link loss, per LANWDM channel (B)	Typ 4.0dB Max 4.5dB	Typ 4.0dB Max 4.9dB
Insertion loss, Extension port (C)	Typ 0.9dB Max 1.2dB	Typ 1.0dB Max 1.4dB
Link loss, Extension port (D)	Typ 1.8dB Max 2.4dB	Typ 2.0dB Max 2.8dB
Insertion loss, monitor	Min 19dB Max 22dB	⇐
Isolation, adjacent channel Line Tx/Rx ⇒ channels Rx/Tx	Min 25dB	⇐
Isolation, non-adjacent channel Line Tx/Rx ⇒ channels Rx/Tx	Min 40dB	⇐
Isolation, non-adjacent channel Line Tx/Rx ⇒ Ext Rx/Tx	Min 25dB	⇐
Ripple, passband	Max 0.5dB	⇐
Directivity	Min 45dB	⇐
Return loss	Min 40dB	⇐
Polarization dependent loss	Max 0.2dB	⇐
Polarization mode dispersion	Max 0.20ps	⇐
Operating temperature	0°C to +70°C	-40°C to +85°C
Storage temperature	-40°C to +85°C	⇐
Max optical power	Max 300mW	⇐
Connector type	LC/UPC	⇐
Module width	55mm	⇐

¹⁾ 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.



ORDERING INFORMATION

Parameter	Value
H-MD-4LAN-EM-SFA	4-channel Single-fiber LANWDM Mux/Demux with Extension and Monitor ports, A-side
H-MD-4LAN-EM-SFB	4-channel Single-fiber LANWDM Mux/Demux with Extension and Monitor ports, B-side

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