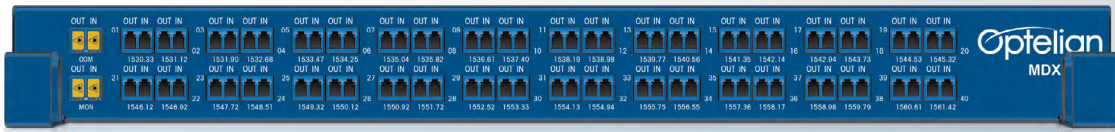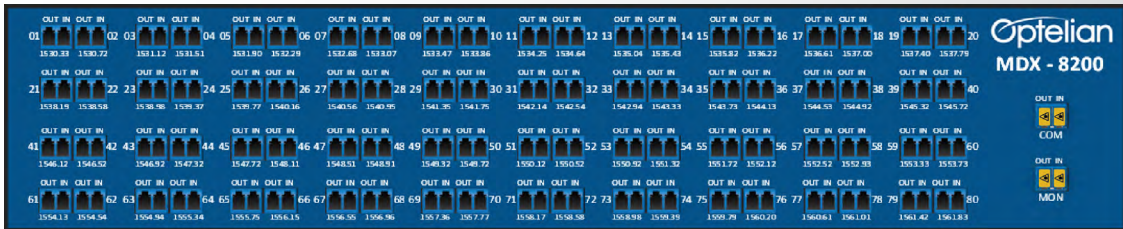**DZS**

MDX Shelf Series
40-channel and 80-channel Multiplexer and Demultiplexer Shelves

The MDX shelf series provides up to 80 channels of terminal multiplexing and demultiplexing in a single unit onto a common DWDM line. These passive DWDM MDX shelves provide a simple yet highly reliable solution for terminating 40-channel or 80-channel systems in a single package. A single bidirectional unit provides all client connectivity at one end of a point-to-point configuration, or in one direction of a ROADM-based distributed network. They are compatible with any ITU-T DWDM transmission equipment.

MDX-4200 40-channel MUX and DEMUX

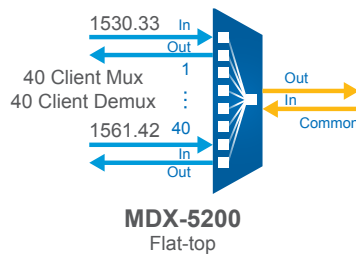MDX-8200 80-channel MUX and DEMUX

Features
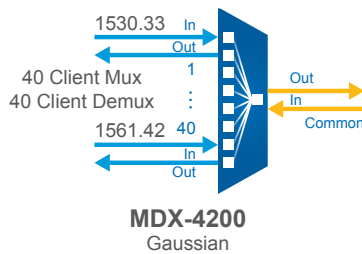
- 40 wavelengths at 100-GHz spacing in a 1RU shelf
- 80 wavelengths at 50-GHz spacing in a 2RU shelf
- Common input and output monitor port
- Fully passive (unpowered)
- Gaussian and Flat-top versions
- Install in standard 19-inch and 23-inch racks
- Integrated fiber management

The MDX family includes versions supporting 40 wavelengths at 100-GHz spacing, and 80 wavelengths at 50-GHz spacing.
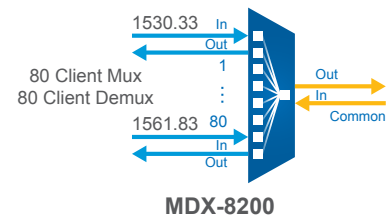
MDX Shelf Series

40-channel configuration

Combined mux and demux units

MDX-4200
Gaussian

MDX-5200
Flat-top

80-channel configuration

Combined mux and demux unit

MDX-8200

MDX-4000 and MDX-4200 (Gaussian) specifications

Parameter	Value
Clear passband	±12.5 GHz
Insertion loss at ITU-T[1]	3.75 dB (maximum)
Insertion loss within clear passband	5.0 dB (maximum)
Adjacent channel crosstalk	-24 dB (minimum)
Non-adjacent channel crosstalk	-30 dB (minimum)
Uniformity at ITU-T	1.5 dB (maximum)
1 dB bandwidth	0.2 nm (minimum)
3 dB bandwidth	0.4 nm (minimum)

[1] Includes one connector.
The MDX-4000 functions as a mux or demux only; the MDX-4200 functions as a mux and demux.

MDX-5000 and MDX-5200 (Flat-top) specifications

Parameter	Value
Clear passband	±12.5 GHz
Insertion loss within clear passband[1]	6.5 dB (maximum)
Insertion loss ripple within clear passband	0.75 dB (maximum)
Adjacent channel crosstalk	-24 dB (minimum)
Non-adjacent channel crosstalk	-30 dB (minimum)
Uniformity at ITU-T	1.2 dB (maximum)
1 dB bandwidth	0.36 nm (minimum)
3 dB bandwidth	0.51 nm (minimum)

[1] Includes one connector.

The MDX-5000 functions as a mux or demux only; the MDX-5200 functions as a mux and demux.

MDX-4000, MDX-4200, MDX-5000 and MDX-5200 common specifications

Parameter	Value
Number of channels and channel spacing	40 channels at 100 GHz spacing
Center frequencies	1530.33 nm (195.9 THz) to 1561.42 nm (192.0 THz)
Passband stability	± 0.05 nm
Polarization dependent loss (PDL)	0.6 dB (maximum)
Polarization mode dispersion (PMD)	0.5 ps (maximum)
Optical input power	23 dBm (maximum)
Optical return loss	40 dB (minimum)
Operating temperature (GR-63-CORE)	-5ºC to 65ºC (23ºF to 150ºF)
Operating humidity (relative, non-condensing)	5% to 95%
Dimensions (H x W x D) (includes integrated fiber management guide in default position)	4.3 cm x 43 cm x 23 cm (1.7 in. x 16.9 in. x 9 in.)
Compliance	GR-63-CORE GR-1221-CORE ITU-T- 694.1 EIA-310-D

MDX Shelf Series

MDX-8200 specifications

Parameter	Value
Number of channels and channel spacing	80 channels at 50 GHz spacing
Center frequencies ITU-T	1530.33 (195.9 THz) to 1561.83 nm (191.95 THz)
Passband stability	± 0.05 nm
Insertion loss	6.5 dB (maximum
Adjacent channel crosstalk	-25 dB (minimum)
Non-adjacent channel crosstalk	-25 dB (minimum)
Polarization dependent loss (PDL)	0.5 dB (maximum)
Insertion loss uniformity	1.5 dB (maximum)
1 dB bandwidth	0.18 nm (minimum)
3 dB bandwidth	0.28 nm (minimum)
Polarization mode dispersion (PMD)	1.0 ps (maximum)
Optical input power	23 dBm (maximum)
Optical return loss	40 dB (minimum)
Operating temperature (GR-63-CORE)	-5ºC to 65ºC (23ºF to 150ºF
Operating humidity (relative, non-condensing)	0% to 90%
Dimensions (H x W x D)	8.4 cm x 43 cm x 23 cm (3.3 in. x 16.9 in. x 9 in.)
Compliance	GR-63-CORE GR-1221-CORE ITU-T- 694.1 EIA-310-D

Ordering information

Model number	Part number	Description
MDX-4000	1014-6700	MUX/DMX, 1RU, Gaussian, 40 CH, 2% monitor, LC/PC
MDX-4200	1014-6730	MUX and DMX, 1RU, Gaussian, 40 CH, 2% monitor, 84 LC
MDX-5000	1025-6000	MUX/DMX, 1RU, Flat-top, 40 CH, 2% monitor, LC/PC
MDX-5200	1025-6010	MUX and DMX, 1RU, Flat-top, 40 CH, 2% monitor, 84 LC
MDX-8200	1027-0600	MUX and DMX, 2RU, 80 CH, 2% monitor, 164 LC

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