SOLID OPTICS

DATASHEET

10 & 100G EDFAMUX SIMPLEX

1. GENERAL DESCRIPTION

The Solid Optics EDFAMUX is a Passive Multiplexer with Active Components, which combines three devices into one rack unit. Typically, long distance projects require a 1RU standalone Passive MUX, separate EDFAs (amplifier), and a separate Dispersion Compensation unit. The Solid Optics EDFAMUX combines all of these features in a 1RU 19" enclosure, which requires less space and less patching.

2. AVAILABLE DEFAULT VERSIONS

PARTNAME 10G	DESCRIPTION
SO-DWDM-10x10G-EDFAMUX-CH28-37-SIMPLEX-80Km SO-DWDM-10x10G-EDFAMUX-CH42-51-SIMPLEX-80Km SO-DWDM-10x10G-EDFAMUX-CH28-37-SIMPLEX-140Km SO-DWDM-10x10G-EDFAMUX-CH42-51-SIMPLEX-140Km	Solid Optics 10CH Active MUX with built-in EDFA and Dispersion Compensator. 10 x 10G to reach a max of 80Km or 140Km, Net Power Budget 26dB (calculation based on 100% population of ports), Channels CH28-37 and CH42-51, Simplex, C-Band 100Ghz with 1% Monitor port, Dual AC 100/240V, ethernet and console management ports, 1RU 19" enclosure.

PARTNAME 100G	DESCRIPTION
SO-DWDM-8x100G-EDFAMUX-CH29-36-SIMPLEX-80Km SO-DWDM-8x100G-EDFAMUX-CH42-49-SIMPLEX-80Km	Solid Optics 8Ch Active MUX with built-in EDFAs and Tunable Dispersion Compensator, 8 x 100G to reach max of 80Km, Net Power Budget 18dB (calculation based on 100% population of ports), Channels 28-35 and 42-49, Simplex, C-Band 100Ghz and 1% Monitor port, Dual AC 100/240V, ethernet and console management ports, 1RU 19" enclosure.

3. PRODUCT SPECIFICATIONS & FEATURES

- ✓ 100G EDFAMUX simplex supports 8 communication lines of 100G from 20Km up to 80Km.

- ✓ The max distance of 140Km for the 10G EDFAMUX models is reached with 80% of the ports populated. With a port population of 100% we are able guarantee a distance of 125Km.

- ✓ Active one rack unit device

- ✓ Default 2 x AC(100-240V), DC optional

- ✓ 8 Channel 100G version comes default with CH28-35 & CH42-49, one for each end of the fiber.

- ✓ 10 Channel 10G version comes default with CH28-37 & CH42-51, one for each end of the fiber.

- ✓ Web, SNMP, SYSLOG and HTTP API monitoring of the EDFAMUX

- ✓ Includes 1% Monitor Port

- ✓ EDFAs are on Auto Gain Control mode (adding same dB when extra channels are plugged in). If needed, the user can adjust settings.

- ✓ Default LC/UPC with auto dust shutters

- ✓ Mix of 1/10G optics and/or Fiber Channel possible in the 10G EDFAMUX

4. TECHNICAL SPECIFICATIONS

MUX	SYMBOLS	100G 80Km	10G 80Km	10G 140Km
CHANNEL SPACING	Nm	0.8	0.8	0.8
OPERATION WAVELENGTH RANGE	ITU 100 GHz	Default CH 29-36 CH 42-49	10CH: Default CH 28-37 CH 42-51	10CH: Default CH 28-37 CH 42-51
CHANNEL CENTER WAVELENGTH (CWL)	Nm	ITU ± 0.11	ITU ± 0.11	ITU ± 0.11
MAX CHANNEL INSERTION LOSS	dB	2.5	2.5	2.5
ADJACENT CHANNEL ISOLATION	dB	30	30	30
NON-ADJACENT CHANNEL ISOLATION	dB	45	45	45
RETURN LOSS @ CWL	dB	45	45	45
MONITOR PORT	%	1%	1%	1%

	SYMBOLS	100G 80Km	10G 80Km	10G 140Km
EDFA BOOSTER				
EDFA OPERATING MODE		AGC	N/A	N/A
INPUT POWER RANGE	dBm	-15 - +8	N/A	N/A
TYPICAL NOISE FIGURE	dB	4.5	N/A	N/A
TYPICAL PUMP POWER	dB	Tunable 6-12	N/A	N/A
SATURATION	dBm	20	N/A	N/A

EDFA PRE Amp	SYMBOLS	100G 80Km	10G 80Km	10G 140Km
EDFA OPERATING MODE		AGC	AGC	AGC
INPUT POWER RANGE	dBm	-15 to +8	-30 to -5	-30 to -5
TYPICAL NOISE FIGURE	dB	4.5	4.5	4.5
TYPICAL PUMP POWER	dB	Adjustable 12-18	Adjustable 15-21	Adjustable 15-21
SATURATION	dBm	20	20	20

DISPERSION COMPENSATOR	SYMBOLS	100G 80Km	10G 80Km	10G 140Km
DCM TYPE		Fiber Bragg Grating	N/A	Fiber Bragg Grating
DISPERSION COMPENSATING	Ps/nm	0 to -1300	N/A	-1000
INSERTION LOSS	dB	4	N/A	3

ENCLOSURE	SYMBOLS	100G 80Km	10G 80Km	10G 140Km
INPUT POWER	AC/V DC/V	100-240 36-72	100-240 36-72	100-240 36-72
DIMENSIONS	Mm	482.6*300*44mm	482.6*300*44mm	482.6*300*44mm
OPERATING TEMPERATURE	°C	-5~60	-5~60	-5~60
POWER CONSUMPTION	W	<11	<8	<8
AIRFLOW		Side to Side	Side to Side	Side to Side

5. PATCHES

100G EDFAMUX	100G DWDM	MON	EXT
SO-DWDM-8x100G-EDFAMUX-SIMPLEX-80Km	CH 28-35 CH 42-49	1%	N/A

10G EDFAMUX	10G DWDM	MON	EXT
SO-DWDM-10x10G-EDFAMUX-SIMPLEX-140Km	CH 28-37 CH 42-51	1%	N/A

6. MANAGEMENT MODULE

The EDFAMUX comes standard with an integrated management module with LAN and console connectivity. By using LAN, you can configure and monitor the system over GUI, SNMP, syslog or HTTP API.

The operating settings are stored in the device itself. Rebooting the management module or upgrading its firmware won't interrupt the communication.

For information about how to configure the EDFAMUX please refer to the EDFAMUX manual provided with the unit or download it from download.solid-optics.com.

7. RECOMMENDED TRANSCEIVERS

10G	DESCRIPTION
SFP-10G-DWDMXX-ZR-SO	10G DWDM SFP, (100GHz ITU grid), 80Km/24dB, DOM, Solid Optics
SFP-8G-FC-DWDMXX-ZR-SO	8G-FC DWDM SFP, (100GHz ITU grid), 80Km/24dB, DOM, Solid Optics
SFP-10G-DWDM-TUN-ZR-SO	10G-DWDM, tunable (100/50-GHz ITU grid), 80Km/24dB, Solid Optics

QSFP-100G-DWDMxx-EZR1-SO	100G-DWDM, QSFP28, Chxx, for single mode fiber, 100GHz ITU Grid, require EDFA and DCM to work, LC duplex connectors, DOM, Solid Optics

8. WARNING & SYMBOLS

CE   Solid Optics EU N.V. has tested the equipment based on European legislation. It is safe to use, doesn't intervene with other electronic devices and it is not affected by interference from other Electronic devices.

RoHS   Hazardous Goods; Our equipment complies with Directive 2011/65/EU (RoHS II) and 2002/95 EC (RoHS I)

Only (dis)connect the equipment in a EPA (ESD Protected Area) while using only certified equipment and taking all necessary precautions.

9. DISCLAIMER & COPYRIGHT

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