

# DWDM MUX

## 1. GENERAL DESCRIPTION



Multiplexer products combine multiple data signals into one signal for transport over one fiber. De-multiplexers separate the signal at the other end. Wavelength division multiplexing (WDM) greatly increases capacity of systems.

To manage bandwidth and expand capacity of existing fiber optic backbones, Wavelength Division Multiplexing (WDM) works by simultaneously combining and transmitting multiple signals at different wavelengths through the same fiber.

A key advantage of WDM is its protocol and bit-rate independency. WDM-based networks can transmit data in IP, ATM, SONET/SDH, and Ethernet. It can handle bitrates between 100 Mbps and 40 Gbps. Therefore, WDM-based networks can carry different types of traffic at different speeds. It creates a less costly method for quick response to customers' bandwidth demands and protocol changes.

The MUX/DEMUX is deployed in dense wavelength division multiplexing (DWDM). The device is passive when it comes to electricity and measures as 1RU 19" device. The device comes with LC/UPC connectors. The Solid Optics MUX devices are available from 8 to 96 channels.

The 8 channel and 16 version also comes with an upgrade port and 1310W port. The upgrade port is an addition of wavelength 1500-1620. This allows you to add other channels in a later stadium without having the need to replace anything.

Custom versions are available upon request.

## 2. AVAILABLE DEFAULT VERSIONS

PARTNAME	DESCRIPTION
SO-DWDM-MUX-CH28-35+UPG+1310W+MON	8CH DWDM, Mux/Demux, CH28-35 (100GHz ITU Grid C-Band), Duplex,

SO-DWDM-MUX-CH20-35+UPG+1310W+MON

UPG (1500-1620nm), 1310W (Wide for 1/10/40/100G), + MON (Monitor Port), LC/UPC connectors, 19" casing, Solid Optics

SO-DWDM-MUX-40CH+1310W

16CH DWDM, Mux/Demux, CH20-35 (100GHz ITU Grid C-Band), Duplex, + UPG (1500-1620nm), +1310W (Wide for 1/10/40/100G), + MON (Monitor Port), LC/UPC connectors, 19" casing, Solid Optics

SO-DWDM-MUX-96CH-50Ghz  
(\*picture1 general descript.)

40CH DWDM, Mux/Demux, CH20-59 (100GHz ITU Grid C-Band), Duplex, +1310W (Wide for 1/10/40/100G), LC/UPC connectors, 19" casing, Solid Optics

96CH DWDM, Gaussian Mux+Demux, CH17.5-65 (50GHz ITU Grid C-Band), Duplex, LC/UPC connectors, 2RU 19" casing, Solid Optics

### 3. CUSTOM VERSIONS

#### Ordering information

<blank>	Single Mux
MOD4	Modular MUX for SO-CHASSIS-MOD4

SO-xWDM-xx-xx-xx+xx-xx-xx-xx

C: CWDM
D: DWDM

MUX#	Multiplexer, # channels
OADM#	Add/Drop, # channels
EOADM#	Add/Drop, East only, # channels
ULTRAMUX#	Ultra low loss multiplexer, # channels

8CH, 10CH, 18CH	CWDM
CHXX-XX	OADM
CHXX-XX	DWDM

Only for DWDM Mux:	
<blank>	Gaussian Mux+Demux
FLAT	Flattop Mux+Demux

<blank>	19" casing	
ABS	ABS casing (for MUX in Wallmount, SO-3M/TYCO-TRAY in SO-BPEO-1)	
BARE	No casing (for ULTRAMUX in SO-3M/TYCO-TRAY in SO-BPEO-1 only)	
	SO-BPEO-1	Ground Splicing Box
	SO-3M-TRAY	3M Tray
	SO-TYCO-TRAY	Tyco Tray
TUBE	For TFF Filter	

<blank>	LC, UPC connector
SCUPC	SC, UPC connector
LCAPC	LC, APC connector
SCAPC	SC, APC connector
E2000APC	E2000, APC connector

<blank>	For duplex fiber
SIMPLEX	For simplex (mono) fiber

<blank>	No extra ports
+MON (4th pos)	Add monitor port
+UPG (3rd pos)	Add upgrade (1260 - 1460)
+1550W (2nd pos)	Add 1550w (1520 - 1580)
+1310W (1st pos)	Add 1310w (1260-1360)

## 4. PRODUCT SPECIFICATIONS & FEATURES

- ✓ Technique: DWDM
- ✓ Passive; no electricity needed
- ✓ Clear TX and RX prints for easy patching
- ✓ Available in 8 to 96CH in 50Ghz/100Ghz
- ✓ Low attenuation
- ✓ Comes with LC/UPC connectors (other connectors on request)
- ✓ 8 & 16 port MUX comes by default with UPG port (1500-1620nm)& monitor port (1% tap)

## 5. TECHNICAL SPECIFICATIONS

MUX	SYMBOLS	8CH	16CH	40CH	96CH
CHANNEL SPACING	nm	0.8	0.8	0.8	0.4
OPERATION WAVELENGTH RANGE	Thz	Ch28-35 default all combination available	Ch20-35 default all combination available	Ch20-59 default all combination available	Ch17.5-65 default all combination available
CHANNEL CENTER WAVELENGTH (CWL)	nm	ITU +- 0.11	ITU +- 0.11	0,05 average 0,1nm max	0,025 average 0,05nm max
UPG CENTER WAVELEGTH	nm	1500~1600	1500~1600	optional	optional
CHANNEL INSERTION LOSS (with connector)	Max. dB AVG dB	2.5 2.0	3.5 2.7	4 3.5	4.5 3.8
EXTRA INSERTION LOSS MONITOR PORT	1% 5%	0.3 0.3	0.3 0.3	optional	optional
ADJACENT CHANNEL ISOLATION	Min. dB	30	30	27	27
NON ADJACENT	Min. dB	45	45	30	30

CHANNEL ISOLATION					
UPG PORT ISOLATION	Min. dB	13	13	optional	optional
RETURN LOSS @CWL	Min. dB	45	45	45	45
POLARIZATION DEPENDENT LOSS	Max. dB	0.2	0.2	0.5	0.5
POWER HANDING	Max. mW	500	500	500	500

CASING	SYMBOLS	8CH	16CH	40CH	96CH
OPERATING TEMPERATURE	°C	-40~+85	-40~+85	Default -20~+70 Optionally -40~+85	Default -20~+70 Optionally -40~+85
STORAGE TEMPERATURE	°C	-60~+90	-60~+90	-40~+85	-40~+85
Connector type	-	LC/UPC Other conn. on request	LC/UPC Other conn. on request	LC/UPC Other conn. on request	LC/UPC Other conn. on request
BOX DIMENSIONS	mm	1 RU 19" casing	1 RU 19" casing	1 RU 19" casing	2 RU 19" casing

## 6. WARNING & SYMBOLS



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



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

## 7. DISCLAIMER & COPYRIGHT

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