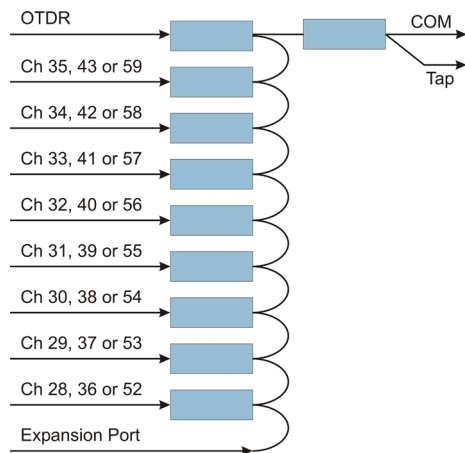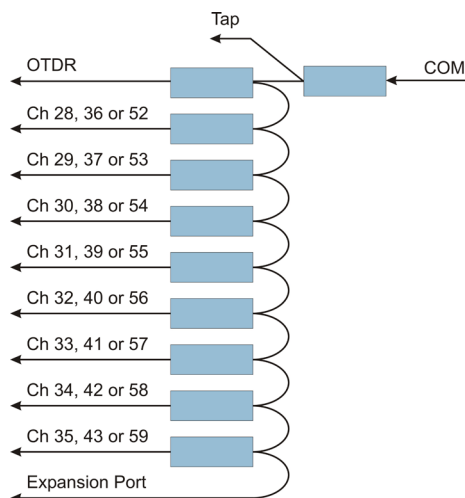## *OmniLight*® 8-Channel DWDM Multiplexer/Demultiplexer
with Expansion, Tap and optional OTDR Ports

OmniLight® 8-Channel LGX Dual Fiber DWDM MUX/DEMUX modules support DWDM channels 28 through 35, 36 through 43 and 52 through 59 in 100GHz spacing. An expansion port is available to cascade multiple DWDM MUX/DEMUX modules, doubling the capacity of the common fiber link to 16 channels or tripling the capacity to 24 channels. Tap ports are available to monitor the optical levels of the incoming and outgoing common channels.   An optional Optical Time Domain Reflectometer (OTDR) port is available which provides the ability to test the integrity of the fiber optic link without disturbing the wavelength channels.

Functional diagram DWDM MUX
with Tap, Expansion and optional OTDR Ports

Functional diagram DWDM DEMUX
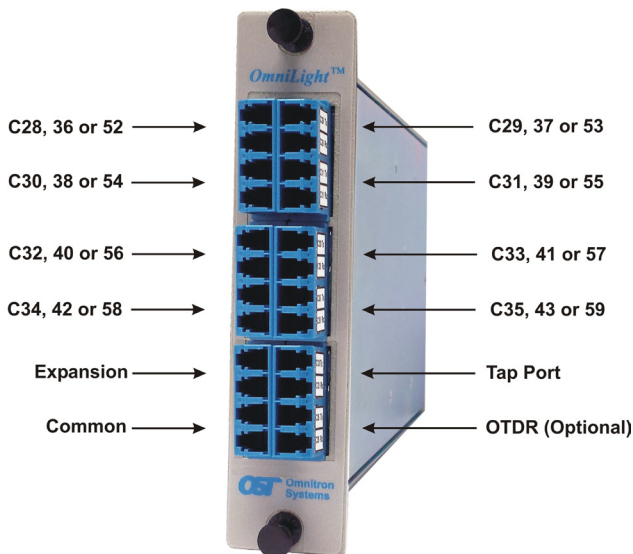*with Tap, Expansion and optional OTDR Ports*

KEY FEATURES

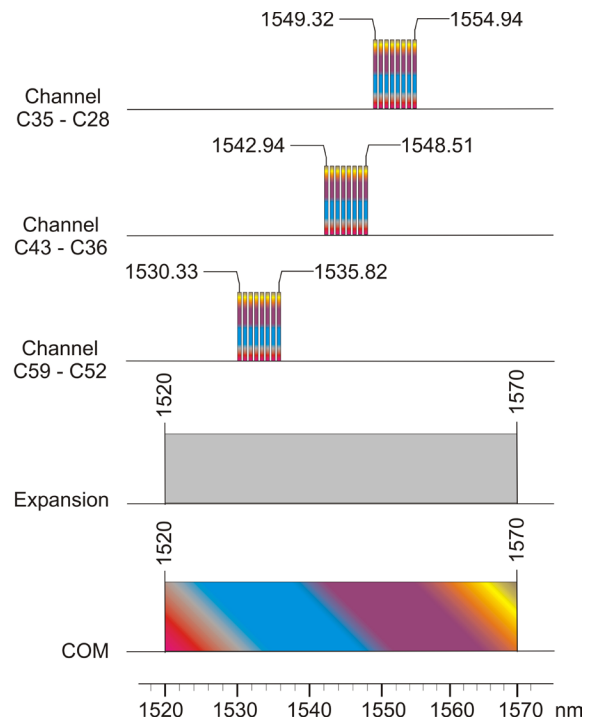■ 8-Channel DWDM MUX/DEMUX with Tap and Expansion Ports

■ Optional OTDR port available

■ Scalable for new deployments and network upgrades using the expansion port

■ Protocol and rate transparent for applications up to 10Gbps

■ Industry standard LC/UPC connectors

■ LGX Form Factor

■ Can be installed in any OmniLight chassis

■ One (1) Year Warranty and Free 24/7 Technical Support

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SPECIFICATIONS

Optical Characteristics

Parameter	Units	Values
Common Port Operating Wavelength	nm	1520 - 1570
Number of Channels	NA	8 + Expansion
Channel Spacing	GHz	100
DWDM Center Wavelengths (C28 - C35) Model 5520-101	nm	1554.94, 1554.13, 1553.33, 1552.52, 1551.72, 1550.92, 1550.12, 1549.32
DWDM Center Wavelengths (C36 - C43) Model 5520-102	nm	1548.51, 1547.72, 1546.92, 1546.12, 1545.32, 1544.53, 1543.73, 1542.94
DWDM Center Wavelengths (C52 - C59) Model 5520-103	nm	1535.82, 1535.04, 1534.25, 1533.47, 1532.68, 1534.90, 1531.12, 1530.33
Expansion Port	nm	1520 - 1570
OTDR Port	nm	1625 - 1640
DWDM Channel Bandwidth	nm	± 0.12
DWDM Channel Insertion Loss	dB	≤ 3.7
Expansion Port Insertion Loss	dB	≤ 3.4
OTDR Port Insertion Loss	dB	≤ 1.3
Tap Port Insertion Loss (Mux)	dB	≤ 23.3
Tap Port Insertion Loss (DeMux)	dB	≤ 20.0
Adjacent Channel Isolation	dB	≥ 25
Non-adjacent Channel Isolation	dB	≥ 40
Insertion Loss Thermal Stability	dB/°C	≤ 0.005
Wavelength Thermal Stability	nm/°C	≤ 0.002
Polarization Dependent Loss (PDL)	dB	≤ 0.2
Polarization Mode Dispersion (PMD)	ps	≤ 0.2
Return Loss	dB	≥ 45
Directivity	dB	≥ 50
Optical Operating Power	mW	≤ 300

Description	OmniLight DWDM MUX/DEMUX	
	8-Channel Dual Fiber DWDM MUX/DEMUX	
Regulatory Compliances	Telecordia GR-1209, GR-1221 UL, CE, RoHS2 (6/6), WEEE, REACH	
Port Types	Fiber:	8 Channel: LC (UPC)
Cable Types	Fiber:	Single-mode: 9/125µm
		Channel Ports: Dual Fiber Common Port: Dual Fiber
Dimensions	W: 1.162" x D: 6.12" x H: 5.10" L: 29.51 mm x B: 155.45 mm x H: 129.5 mm	
Weight	1.0 lbs.; 453.6 grams	
Operating Temperature	-5 to 65°C	
Storage Temperature	-40 to 85°C	
Humidity	5 to 90% operational (non-condensing) 0 to 95% storage	
Altitude	-100m to 4,000m	
Warranty	One (1) year warranty with 24/7/365 free Technical Support	

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ORDERING INFORMATION

Model Number	Model Type	Channel Port ITU Grid Channel Numbers ITU Center Wavelengths (nm)
5520-101	8-Channel DWDM MUX/DEMUX Channel 28 - Channel 35 with Expansion Port and Tap Ports	C28, C29, C30, C31, C32, C33, C34, C35 1554.94, 1554.13, 1553.33, 1552.52, 1551.72, 1550.92, 1550.12, 1549.32
5520-102	8-Channel DWDM MUX/DEMUX Channel 28 - Channel 35 with Expansion Port, Tap Ports and OTDR	C28, C29, C30, C31, C32, C33, C34, C35 1554.94, 1554.13, 1553.33, 1552.52, 1551.72, 1550.92, 1550.12, 1549.32
5520-103	8-Channel DWDM MUX/DEMUX Channel 36 - Channel 43 with Expansion Port and Tap Ports	C36, C37, C38, C39, C40, C41, C42, C43 1548.51, 1547.72, 1546.92, 1546.12, 1545.32, 1544.53, 1543.73, 1542.94
5520-104	8-Channel DWDM MUX/DEMUX Channel 36 - Channel 43 with Expansion Port, Tap Ports and OTDR	C36, C37, C38, C39, C40, C41, C42, C43 1548.51, 1547.72, 1546.92, 1546.12, 1545.32, 1544.53, 1543.73, 1542.94
5520-105	8-Channel DWDM MUX/DEMUX Channel 52 - Channel 59 with Expansion Port and Tap Ports	C52, C533, C54, C55, C56, C57, C58, C59 1535.82, 1535.04, 1534.25, 1533.47, 1532.68, 1534.90, 1531.12, 1530.33
5520-106	8-Channel DWDM MUX/DEMUX Channel 52 - Channel 59 with Expansion Port, Tap Ports and OTDR	C52, C533, C54, C55, C56, C57, C58, C59 1535.82, 1535.04, 1534.25, 1533.47, 1532.68, 1534.90, 1531.12, 1530.33

Chassis and Accessories

Model Number	Model Type	Description
5800-1	14-Module LGX Chassis	OmniLight 14-Module 3-RU Passive Chassis
5800-5	3-Module LGX Shelf	OmniLight 3-Module 1-RU Shelf
5800-20	23" Rack Mounting Kit	23" Rack Mounting Brackets for OmniLight Chassis and Shelf
5800-21	LGX Mounting Bracket	Mounting Bracket for Individual Full Size LGX Modules

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