

Headend Optics

LGX

» Contents

Chassis and Accessories.....	2
WDM/CWDM Modules.....	4
DWDM C-Band Modules.....	8
Optical Splitter Modules.....	12

CHASSIS and ACCESSORIES

Deploy a versatile and cost efficient LGX platform offering a swift installation process. Fulfill all your requirements in a small space...

Our space saving installation chassis/frames provides a cost-effective and practical system for mounting of LGX-compatible modules in any standard 19 inch rack. Cabling is one of the most important components of a network, accordingly our LGX-portfolio also includes accessories that will help you to protect and implement optimal procedures of good cable management.





FEATURES

Chassis and Accessories

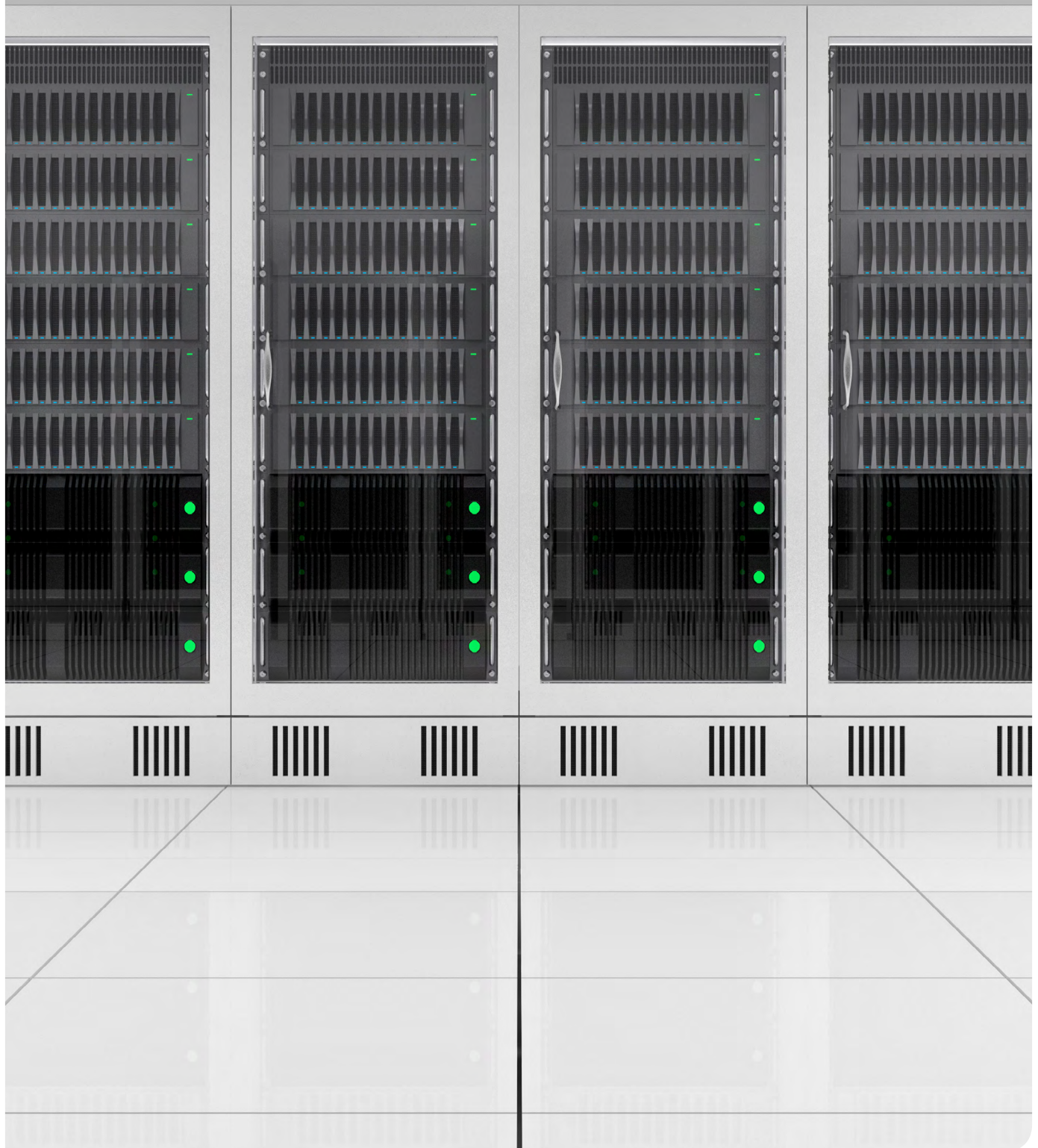
- >> Robust **STREET CABINET** style (LGX501) with fibre organizer
- >> **MODULAR** 3U high rack mechanics (LGX502)
- >> **DENSE** 1U high rack mechanics (LGX503, LGX1U3)
- >> 1U, 2U and 3U open **FLUSH MOUNT** installation

P/N AND DESCRIPTION	CAPACITY	DIMENSIONS	
LGX501 Installation enclosure for street cabinets	4 LGX modules	181 x 184 x 304 mm	
LGX502 Installation frame for 19" racks, 3U	13 LGX modules	135 x 280 x 482.6 (432) i.e. 3U x 305 x 19"	
LGX503 Installation frame for 19" racks, 1U, with slide tray	3 LGX modules	45 x 280 x 482.6 (432) i.e. 1U x 305 x 19"	
LGX1U3 Installation frame for 19" racks, 1U, open, flushed mounting	3 LGX modules	1U x 99 mm x 19"	
LGX2U6 Installation frame for 19" racks, 2U, open, flushed mounting	6 LGX modules	2U x 113 mm x 19"	
LGX3U14 Installation frame for 19" racks, 3U, open, flushed mounting	14 LGX modules	3U x 113 mm x 19"	
730060 1U LGX Cable Guide, including Velcro strap down ties	N/A	1U x 90 mm x 19"	
LGX1U-SHELF 1U 19" rack-mountable cable organiser shelf, including Velcro strap down ties. Optional Rear Mounting Brackets, LGX1U-SHELF-RB	N/A	1U x 365,5 mm x 19"	

WDM and CWDM modules

The lack of fibre is often an obstacle when Network Operators are trying to respond to the ever increasing bandwidth requirements - harness our WDM/CWDM solutions to unlock capacity of your fibre cables...

The solution can efficiently be deployed in incremental steps. Operators can start out with just a few channels and gradually reach a 16-fold capacity increase on a single fibre. The modules allow for easy snap-in mounting and are fitted with industry standard SC/APC adaptors to minimize return and insertion loss.



FEATURES

WDM modules

- >> **LOW INSERTION LOSS** over the whole temperature range
- >> **HIGH DENSITY**, two WDM's in one single width module (LG X551)
- >> **OPTIMIZED** to combine PON data with RFOG upstream and downstream (LGX570-4)
- >> LGX570-4 works together with **WIDELY DEPLOYED** Teleste residential nodes (RN1160)



LGX551 - 2 x WDM 1310 / 1550 nm

PARAMETER	VALUE	PARAMETER	VALUE
Enclosure	Single width LGX module	Operating wavelength range, 1310 nm port	1260...1360 nm
Operating wavelength range, 1550 nm port	1460...1620 nm	Insertion loss of 1310 nm port	0.8 dB (max. 1.2 dB)
Insertion loss of 1550 nm port	0.8 dB (max. 1.2 dB)	1310 nm port isolation	40 dB
1550 nm port isolation	40 dB	Directivity	50 dB
Return loss	45 dB	Maximum optical power	300 mW
Number of optical ports	6		

LGX570-4 - 4-port WDM FILTER

Enclosure	Single width LGX module	Operating wavelength range: Common port	1270...1620 nm
Operating wavelength range: xPON DS and US port	1270...1350 nm and 1480...1500 nm	Operating wavelength range: RF DS port	1550...1560 nm
Operating wavelength range: RFOG US port	1604...1618 nm	Insertion loss	1.3 dB
Isolation	25 dB	Directivity	45 dB
Return loss	45 dB	Maximum optical power	300 mW
Number of optical ports	4		

WDM - GENERAL SPECIFICATION

Optical connector	SC/APC	Dimension - single width module	130(100) x 160 x 29 mm (h x d x w)
Temp. Range	-20...+75 °C	Operating relative humidity	0...85 %

FEATURES

CWDM modules

- >> **EXCELLENT** isolation
- >> **FIELD PROVEN** full-blown technology
- >> **LOW INSERTION LOSS** over the whole temperature range
- >> Additional 1310 nm **EXTENSION PORT**



LGX572 - 4-ch CWDM MULTIPLEXER/DEMULTIPLEXER

PRODUCT MODEL		WAVELENGTH ALLOCATIONS	
LGX572 S7E		1310, 1471, 1491, 1511 and 1531 nm	
LGX572 C1E		1310, 1511, 1531, 1551 and 1571 nm	
LGX572 C5E		1310, 1551, 1571, 1591 and 1611 nm	
PARAMETER	VALUE	PARAMETER	VALUE
Enclosure	Single width LGX module	Operating wavelength range	1270...1350 nm and 1500...1580 nm
Insertion loss of CWDM ports	1.0 dB (max. 1.5 dB)	Insertion loss of 1310 nm port	1.0 dB (max. 1.5 dB)
CWDM channel bandwidth	±6.5 nm	1310 nm channel bandwidth	1270...1350 nm
Adjacent channel isolation	30 dB	Non-adjacent channel isolation	45 dB
Directivity	45 dB	Return loss	45 dB
Max. Optical power	300 mW	Number of optical ports	6

LGX574 - 8-ch CWDM MULTIPLEXER/ DEMULTIPLEXER

PRODUCT MODEL		WAVELENGTH ALLOCATIONS	
LGX574 S7E		1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 and 1310 nm	
PARAMETER	VALUE	PARAMETER	VALUE
Enclosure	Double width LGX module	Operating wavelength range	1270...1350 nm and 1460...1620 nm
Insertion loss of CWDM ports	1.2 dB (max. 1.7 dB)	Insertion loss of 1310 nm port	1.0 dB (max. 1.5 dB)
CWDM channel bandwidth	±6.5 nm	1310 nm channel bandwidth	1270...1350 nm
Adjacent channel isolation	30 dB	Non-adjacent channel isolation	45 dB
Directivity	45 dB	Return loss	45 dB
Max. Optical power	300 mW	Number of optical ports	10

LGX578 07 16-ch CWDM MULTIPLEXER/ DEMULTIPLEXER

PARAMETER	VALUE	PARAMETER	VALUE
Enclosure	Double width LGX module	Operating wavelength range	1270...1620 nm
Wavelengths	1271, 1291, 1311, 1331, 1351, 1371, 1391, 1411, 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 and 1310 nm	Insertion loss of CWDM ports	2.3 dB (max. 3.2 dB)
CWDM channel bandwidth	±6.5 nm	Adjacent channel isolation	30 dB
Non-adjacent channel isolation	45dB	Directivity	45 dB
Return loss	45 dB	Max. Optical power	300 mW
Number of optical ports	17		

LGX570 xxxx 1-ch CWDM ADD/DROP FILTER

Enclosure	Single width LGX module	Operating wavelength range	1460...1620 nm
Add-drop wavelength options	1471, 1491, 1511, 1531, 1551, 1571, 1591 or 1611 nm	Insertion loss of CWDM ports	1.0 dB
Pass band ripple	0.5 dB	Channel bandwidth	±6.5 nm
Adjacent channel isolation	30 dB	Non-adjacent channel isolation	40 dB
Return loss	45 dB	Number of optical ports	3
Wavelengths and product naming	LGX570 XXXX (XXXX = ITU ch) Example: LGX570 1611 (Centre wavelength 1611 nm)		

CWDM - GENERAL SPECIFICATION

Optical connector	SC/APC	Dimension - single width module	130(100) x 160 x 29 mm (h x d x w)
Dimension - double width module (H x d x w)	130(100) x 160 x 58 mm	Weight - single width module	0.2 kg
Weight - double width module	0.3 kg	Temp. Range	-20...+75 °C
Operating relative humidity	0...85 %		

DWDM modules

Advanced LGX MUX/DEMUX modules achieving outstanding field performance and being thoroughly designed for ITU channel spacing applications...

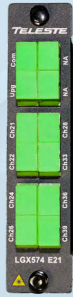
Our premium grade DWDM modules offers stable and reliable performance; providing low insertion loss over the whole temperature range, high adjacent band isolation characteristic and moreover the installation is done without tools within minutes.



FEATURES

DWDM C-BAND modules

- >> **EXCELLENT** isolation
- >> **HIGH DENSITY**, up to 12 SC/APC ports in a single width module
- >> Optimized **MUX/DEMUX** functionality to reach **LOW INSERTION LOSS** (option A) or **LOGISTICAL EASINESS** (option B)



LGX572 - 4-ch DWDM MULTIPLEXER/DEMULTIPLEXER, 100 GHz

PRODUCT MODEL		WAVELENGTH ALLOCATIONS	
LGX572 E21 , 4 ch. MULTIPLEXER		ITU ch. 21, 22, 24, 26, UPG	
LGX572 F21 , 4 ch. DEMULTIPLEXER		ITU ch. 21, 22, 24, 26, UPG	
PARAMETER	VALUE	PARAMETER	VALUE
Operating wavelength range	1520...1565 nm	Wavelength spacing	100 GHz
Insertion loss of DWDM ports	1.5 dB (max. 2.3 dB)	Insertion loss of upgrade port	1.4 dB (max. 2.2 dB)
Insertion loss option A: (E21)MUX - (F21)DEMUX pair	2.0 dB (max. 3.2 dB)	Insertion loss option B: (F21)DEMUX - (F21)DEMUX pair	2.0 dB $\pm$ 1.9 (max. 3.9 dB)
DWDM channel bandwidth	$\pm$ 0.11 nm	Upgrade channel bandwidth	1520...1565 nm, except DWDM channels
Adjacent channel isolation	25 dB	Non-adjacent channel isolation	40 dB
Upgrade port isolation	15 dB	Directivity	45 dB
Return loss	45 dB	Maximum optical power	300 mW
Number of optical ports	6	Enclosure	Single width LGX module

LGX574 - C-band 8-ch DWDM MULTIPLEXER/ DEMULTIPLEXER, 200 GHz

PRODUCT MODEL		WAVELENGTH ALLOCATIONS	
LGX574 A45, 8 ch. MULTIPLEXER		ITU ch. 45, 47, 49, 51, 53, 55, 57, 59, UPG	
LGX574 B45, 8 ch. DEMULTIPLEXER		ITU ch. 45, 47, 49, 51, 53, 55, 57, 59, UPG	
PARAMETER	VALUE	PARAMETER	VALUE
Operating wavelength range	1520...1565 nm	Wavelength spacing	200 GHz
Insertion loss of DWDM ports	2.4 dB (max. 3.6 dB)	Insertion loss of upgrade port	2.4 dB (max. 3.2 dB)
Insertion loss option A: (A45)MUX - (B45)DEMUX pair	3.0 dB (max. 4.2 dB)	Insertion loss option B: (B45)DEMUX - (B45)DEMUX pair	3.0 dB $\pm$ 2.6 (max. 5.6 dB)
Upgrade channel bandwidth	1520...1565 nm, except DWDM channels	DWDM channel bandwidth	$\pm$ 0.25 nm
Adjacent channel isolation	25 dB	Non-adjacent channel isolation	40 dB
Upgrade port isolation	15 dB	Return loss	45 dB
Directivity	45 dB	Max. Optical power	300 mW
Enclosure	Single width LGX module	Number of optical ports	10

LGX574 - C-band 8-ch DWDM MULTIPLEXER/ DEMULTIPLEXER, 100 GHz

PRODUCT MODEL		WAVELENGTH ALLOCATIONS	
LGX574 E21, 8 ch. MULTIPLEXER		ITU ch. 21, 22, 24, 26, 28, 33, 36, 39, UPG	
LGX574 F21, 8 ch. DEMULTIPLEXER		ITU ch. 21, 22, 24, 26, 28, 33, 36, 39, UPG	
PARAMETER	VALUE	PARAMETER	VALUE
Operating wavelength range	1520...1565 nm	Wavelength spacing	100 GHz
Insertion loss of DWDM ports	2.4 dB (max. 3.1 dB)	Insertion loss of upgrade port	2.1 dB (max. 2.8 dB)
Insertion loss option A: (E21)MUX - (F21)DEMUX pair	3.0 dB (max. 4.2 dB)	Insertion loss option B: (F21)DEMUX - (F21)DEMUX pair	3.0 dB $\pm$ 2.6 (max. 5.6 dB)
DWDM channel bandwidth	$\pm$ 0.11 nm	Upgrade channel bandwidth	1520...1565 nm, except DWDM channels
Adjacent channel isolation	25 dB	Non-adjacent channel isolation	40 dB
Upgrade port isolation	15 dB	Return loss	45 dB
Directivity	45 dB	Max. Optical power	300 mW
Enclosure	Single width LGX module	Number of optical ports	10

LGX570 - C-band DWDM 1-ch ADD/ DROP FILTER

PARAMETER	VALUE	PARAMETER	VALUE
Enclosure	Single width LGX module	Operating wavelength range	1530...1564 nm
Add-drop wavelength options	ITU ch 59, 58, 57, ..., 18	Channel spacing	100 GHz or 200 GHz
Channel bandwidth	±0.11 nm (100 GHz) ±0.25 nm (200 GHz)	Insertion loss	1.0 dB
Pass band ripple	0.5 dB	Adjacent channel isolation	25 dB
Non-adjacent channel isolation	40 dB	Isolation Common IN <-> Common OUT	15 dB
Directivity	50 dB	Return loss	45 dB
Number of optical ports	3		
Wavelengths and product naming	LGX570 XYZ XY = ITU ch 100 GHz, Z = 1 or 200 GHz, Z = 2 Example: LGX570 442 --> ITU ch 44 and 200 GHz spacing		

DWDM - GENERAL SPECIFICATION

PARAMETER	VALUE	PARAMETER	VALUE
Optical connector	SC/APC	Dimension - single width module	130(100) x 160 x 29 mm (h x d x w)
Dimension - double width module (H x d x w)	130(100) x 160 x 58 mm	Weight - single width module	0.2 kg
Weight - double width module	0.3 kg	Temp. range	-20...+75 °C
Operating relative humidity	0...85 %		
NOTE:	DWDM O-BAND LGX592 O1/O2 - 4-ch DWDM MULTIPLEXER/ DEMULTIPLEXER can be made available upon request. O1 Wavelengths: 1310 nm 1325.782 nm (226.125 THz) 1327.249 nm (225.875 THz) 1329.220 nm (225.540 THz) 1330.459 nm (225.330 THz) O2 Wavelengths: 1310 nm 1323,587 nm (226,500 THz) 1322,828 nm (226,630 THz) 1318,725 nm (227,335 THz) 1317,740 nm (227,505 THz)		

SPLITTER modules

Designed to meet the requirements of any fibre optic communication system that demands branching and distribution of the optical signal to multiple endpoints...

The splitter modules can be used in the same chassis/frames as WDM, CWDM and DWDM modules to achieve high-density rack configurations. The modules are clearly labelled with SC/APC adaptors which makes it easy to install and test passive optical networks.





FEATURES OPTICAL SPLITTER modules

- >> **LOW INSERTION LOSS** over the whole temperature range
- >> From 1:2 split up to 1:16 split **IN ONE MODULE**
- >> **BALANCED** and **UNBALANCED** models

LGX512 Optical splitter 1:2		LGX522 Optical splitter 2 x 1:2	
Enclosure	Single width LGX module	Enclosure	Single width LGX module, two independent splitters in one module
Wavelength range	1310 and 1550 nm	Wavelength range	1310 and 1550 nm
Band pass	±40 nm and ±40 nm	Band pass	±40 nm and ±40 nm
Insertion loss, 50/50 outputs	3.4/ 3.4 dB (max. 3.8/ 3.8 dB)	Insertion loss, 50/50 outputs	3.4/ 3.4 dB (max. 3.8/ 3.8 dB)
Directivity	50 dB	Number of optical ports	6
Return loss	45 dB		
Number of optical ports	3		
LGX514 Optical splitter 1:4		LGX518 Optical splitter 1:8	
Enclosure	Single width LGX module	Enclosure	Single width LGX module
Wavelength range	1310 and 1550 nm	Wavelength range	1310 and 1550 nm
Band pass	±40 nm and ±40 nm	Band pass	±40 nm and ±40 nm
Insertion loss, 50/50 outputs	6.3 dB (max. 7.2 dB)	Insertion loss, 50/50 outputs	9.7 dB (max. 10.8 dB)
Number of optical ports	5	Number of optical ports	9
LGX51F Optical splitter 1:16			
Enclosure	Double width LGX module	Insertion loss	13.0 dB (max. 13.7 dB)
Wavelength range	1310 and 1550 nm	Directivity	50 dB
Band pass	±40 nm and ±40 nm	Return loss	45 dB
Number of optical ports		17	
SPLITTERS - GENERAL SPECIFICATION			
Optical connector	SC/APC	Dimension - single width module	130(100) x 160 x 29 mm (h x d x w)
Dimension - double width module	130(100) x 160 x 58 mm (h x d x w)	Weight - single width module	0.2 kg
Weight - double width module	0.3 kg	Temp. range	-20...+75 °C



Teleste Corporation

Postal address P.O.Box 323, FI-20101 Turku, Finland

Visiting address Telestenkatu 1, Littoinen, Finland

Phone +358 2 2605 611

www.teleste.com