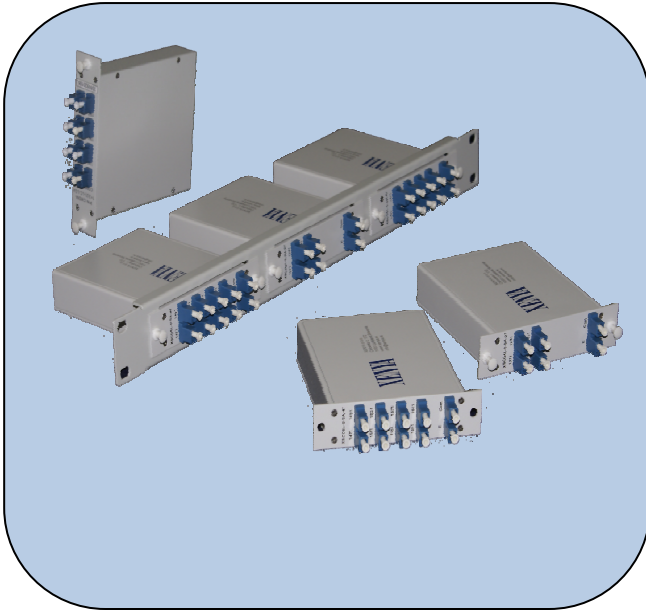# XENYA

XSC Single Fiber series
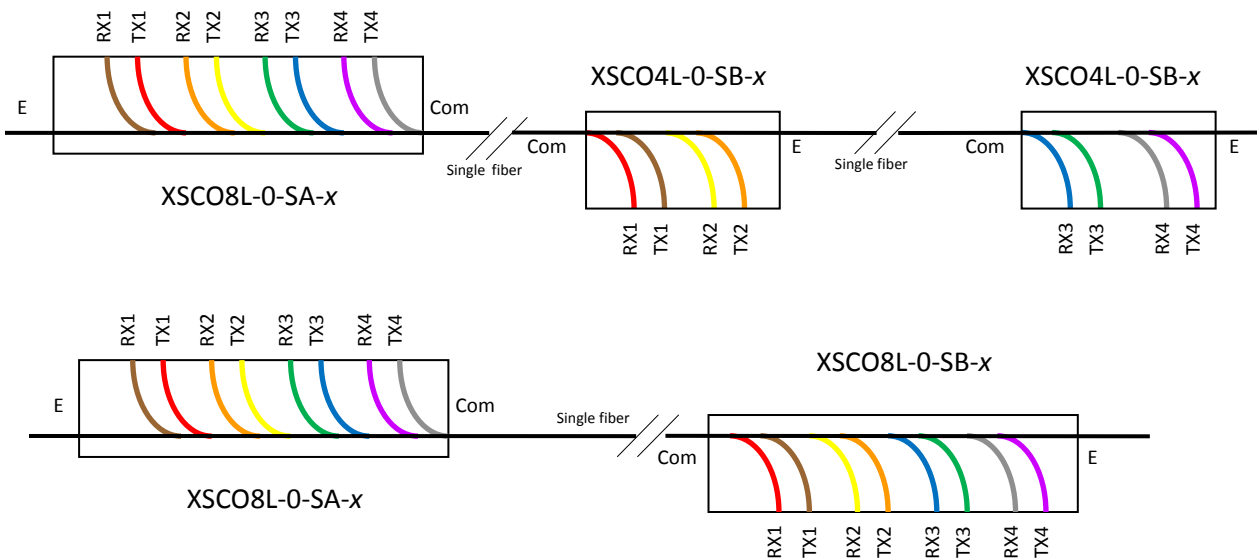## CWDM passive optical components

Fetures:

- Optimized for single fiber applications

- Simplified component interconnection system using standard dual patch cords eliminates most interconnection errors

- Up to 9 bidirectional channels using all 18 standard CWDM wavelengths

- Very low inter-channel attenuation ripple

- Modular design enables later expansion

- Lower attenuation models available on request

- Standard versions available from stock

Typical Applications:

- Optimization of fiber use in fiber based data transfer

- Concurrent transmission of different data formats i.e. Ethernet, Fiber Channel, TDM

- Out of band monitoring, fiber integrity and performance monitoring

Description:

XSC is a series of passive optical components optimized for use in single fiber CWDM transmission systems. Depending on fiber characteristics it enables transfer of up to 9 bidirectional channels over a single fiber strand using low cost CWDM transponders. Standard single mode fiber G.652, that

exhibits watermark peak attenuation, still allows transfer of at least 6 bidirectional channels and even more on shorter distances. All components are add/drop type (OADM) so they can be daisy-chained. System using multiple wavelength ranges can be easily integrated using standard components. Each bidirectional data channel consists of two consecutive wavelengths, each transferring data in one direction.

Terminal connections are designed so that standard dual SM patch cords can be used to connect to standard transponder equipment (i.e. SFP). Each type of optical component is available in two versions (A and B). Use of both versions – one at each side – enables that wavelengths within a channel are swapped and that attenuation between different channels is balanced.

Devices are installed in standard LGX module that snaps into 1U rack mount bracket. Up to three LGX modules can be inserted in single 1U rack mount bracket. There is also a selection of unmanaged transponder modules that can be installed in place of LGX module. Managed transponders must be installed in separate rack mount enclosure.

Ordering:

XSCO2L-0-SA-*xx* XSCO2L-0-SB-*xx*	2 wavelengths (single channel single fiber) OADM
XSCO4L-0-SA-*xx* XSCO4L-0-SB-*xx*	4 wavelengths (dual channel single fiber) OADM
XSCO8L-0-SA-*xx* XSCO8L-0-SB-*xx*	8 wavelengths (quad channel single fiber) OADM

If wavelengths are all sequential xx is replaced by middle two digits of lowest wavelength of component. If wavelengths are not sequential ***xx*** is replaced with list of middle digits of all wavelengths separated by »/« are listed.

Any combination of standard CWDM (*ITU-T G.694.2*) wavelengths combinations can be ordered with delivery time of up to 6 weeks (4 weeks typical).
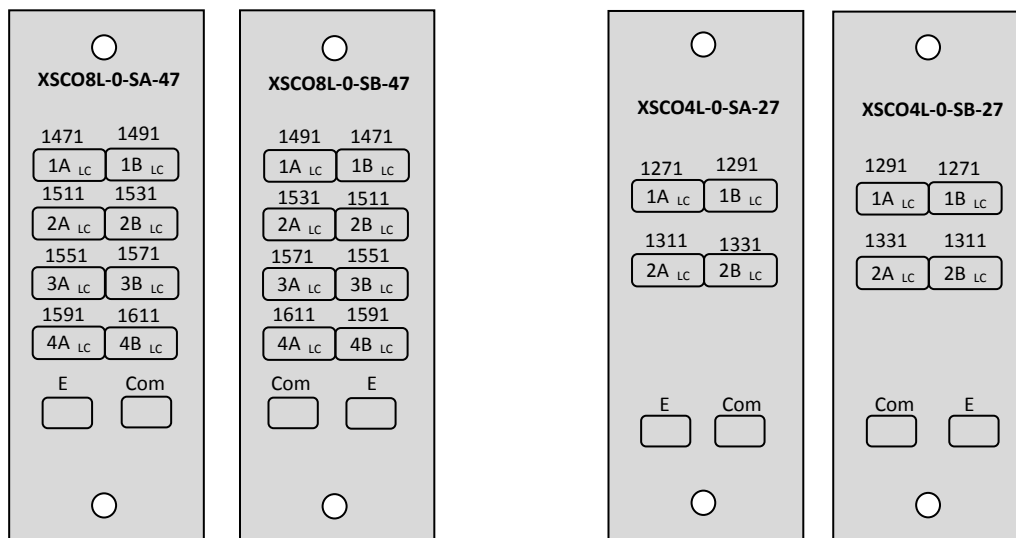Following versions are usually available from stock:

XSCO8L-0-SA(B)-47	8 wavelengths (quad channel) OADM 1471 to 1611
XSCO4L-0-SA(B)-47	4 wavelengths (quad channel) OADM 1471 to 1531
XSCO4L-0-SA(B)-55	4 wavelengths (quad channel) OADM 1531 to 1611
XSCO4L-0-SA(B)-27	4 wavelengths (quad channel) OADM 1271 to 1331
XSCO2L-0-SA(B)-59	2 wavelengths (quad channel) OADM 1591, 1611
XSCO2L-0-SA(B)-55	2 wavelengths (quad channel) OADM 1551, 1571
XSCO2L-0-SA(B)-51	2 wavelengths (quad channel) OADM 1511, 1531
XSCO2L-0-SA(B)-47	2 wavelengths (quad channel) OADM 1461, 1511
XSCO2L-0-SA(B)-31	2 wavelengths (quad channel) OADM 1311, 1331

Technical Specifications

	2 wavelengths	4 wavelengths	8 wavelengths
Express Channel pass band	1331 to 1611 nm		
Add Drop Channel	1271 to1661 nm		
Bandwidth @ -0.5dB	≥ 15 nm		
IL @ Express Channel (A/B component pair)	≤ 2.0 dB	≤ 2.5 dB	≤ 3.5 dB
IL @ Express Channel (single component)	≤ 1.1 dB	≤ 1.4 dB	≤ 2.2 dB
Express Channel Isolation	≥ 15 dB		
ILmax @ Add/Drop (A/B component pair)	≤2.0 dB	≤ 2.5 dB	≤3.5 dB
ILmax @ Add/Drop (single component)	≤ 1.5 dB	≤ 2.0 dB	≤ 2.8 dB
Add-Drop Channel Ripple (A/B component pair)	≤ 0.3 dB		
Polarization Dependent Loss (dB)	≤0.10 dB		
Add Drop Channel Isolation (Adjacent)	≥ 30 dB		
Add Drop Channel Isolation (Non Adjacent)	≥ 40 dB		
Return Loss	≥ 45 dB		
Directivity	≥ 50 dB		
Optical Power Handling	≥ 500 mW		
Operating Temperature	0 to +70 °C		
Storage Temperature	-40 to +85 °C		
Connector Type	LC		
Packaging Dimension	Aluminum LGX Box (130mm x 127mm x30mm)		

Different packing and lower Insertion loss versions are available on request.

Typical connections layouts:

XSCO8L-0-SA-47	XSCO8L-0-SB-47	XSCO4L-0-SA-27	XSCO4L-0-SB-27
1471 1491	1491 1471	1271 1291	1291 1271
1A LC 1B LC	1A LC 1B LC	1A LC 1B LC	1A LC 1B LC
1511 1531	1531 1511	1311 1331	1331 1311
2A LC 2B LC	2A LC 2B LC	2A LC 2B LC	2A LC 2B LC
1551 1571	1571 1551		
3A LC 3B LC	3A LC 3B LC		
1591 1611	1611 1591		
4A LC 4B LC	4A LC 4B LC		
E Com	Com E	E Com	Com E

Optional accessories

XMR1   19" rack mounting bracket accommodates up to 3 LGX modules in 1U height

XMR1B   blank panel for 19" rack mounting bracket

XMR1G1 Cable guide bracket enables guiding and fixing of all optical cables when installed with rack mount bracket

Optional Services:

- Optical fiber measurements and qualification
- Design and integration of complete system including active equipment