

Prisma D-PON System Optical Passives for PON

Prisma[®] Optical Passives are designed to support Passive Optical Networks (PON) and are used in conjunction with Prisma II transmitters and optical amplifiers. There are two product families: couplers/splitters and BWDM filters.

Prisma Singlemode Multiband Couplers/Splitters provide consistent performance with low insertion loss and polarization sensitivity. Available in LGX-compatible or rack mounted modules, these couplers/splitters are easy to handle and provide accurate and reliable transmission.

Prisma BWDM filters for RF video overlay provide the basic building block for combining video and data optical signals on a single fiber. The single slot LGX module contains two WDM filters to serve independent PONs for high density and design flexibility.

Prisma BWDM filters for Prisma D-PON are used to multiplex or demultiplex video, data, and RF return optical signals on a single fiber. Two versions of this filter are available. The first version supports a two-wavelength solution without optical line termination (OLT), and the return optical signal can be either 1310 nm or 1610 nm. The second version supports four-wavelength solutions with xPON OLT. Both versions are housed in a single LGX module that contains WDM filters to serve three independent D-PON for high-density and design flexibility.

Figure 1. LGX 2x2 Single (Left) and LGX Prisma D-PON Triple BWDM (Right) Passive Optical Modules (LGX RF Overlay Dual BWDM not pictured)



Features

- Available in industry standard LGX-compatible or rack mounted modules
- Various connector options
- Complete set of split ratios available for splitters/couplers
- Low insertion loss
- High-Density

Product Specifications

Table 1. Common Specifications

Description	Units	Common Specifications	Notes
Bandpass for couplers/splitters	nm	1270 - 1350 and 1480 - 1560	
Operating Temperature	°F / °C	+23 to +149 / -5 to +65	
Storage Temperature	°F / °C	-40 to +185 / -40 to +85	
Directivity	dB	≥ 55	
Optical Return Loss	dB	≥ 55	
Physical Dimensions			
Packaged and Connectorized LGX-compatible modules		(maximum unless otherwise specified)	
Faceplate		<u>1-Wide</u> <u>2-Wide</u> <u>3-Wide</u>	
Height	in. / mm	5.14/130.5 5.14/130.5 5.14/130.5	
Width	in. / mm	1.15/29.26 2.33/59.26 3.51/89.26	
Coupler Enclosure			
Height	in. / mm	3.88/98.5 3.88/98.5 3.88/98.5	
Width	in. / mm	1.04/26.52 2.23/56.52 3.41/86.51	
Overall Depth	in. / mm	5.02/127.51 5.02/127.51 5.02/127.51	
1 RU modules			
Height	in. / mm	1.75/44.5	
Width	in. / mm	19/482.6	
Depth	in. / mm	12/304.8	

Table 2. Couplers/Splitters * - Specifications and Options

Couplers/Splitters	Split Ratio	Max Insertion Loss Includes Connector Loss -20 to +65C	Max Uniformity	LGX Slots	Part Number
1x2 Single 1x2 Dual 2x2 Single	Even	4.0 dB	0.8 dB	1	187151 713961 739665
1x4 2x4	Even	7.5 dB	0.8 dB	1	187135 713970
1x8	Even	10.5 dB	1.0 dB	2	713974
1x16	Even	14.0 dB	1.5 dB	3	713977
1x32	Even	17.8 dB	2.0 dB	-	4011485 (1 RU)

* All with SC/APC connectors. Other split ratios (2x8, 2x16, 2x32) or high density LC/APC connector options available upon request.

Table 3. BWDM - Specifications and Options

BWDM Applications	Port	Operating Wavelength (nm)	Insertion Loss Max	Isolation Max	Options
RF Video Overlay	Video	1540-1560	1.0 dB	20 dB	4010304 (Dual, SC/APC on Video and Common, SC/UPC on Data) 4028568 (Dual, SC/APC)
	Data	1260-1360 1480-1500	0.7 dB	20 dB	
D-PON (2 wavelengths)	1550	1540-1560	1.0 dB	20 dB	4028627 (Triple module, LC/APC)
	1310/1610	1260-1360 1600-1620	0.7 dB	20 dB	
D-PON With xPON OLT (4 wavelengths)	1310/1490	1260-1360 1480-1500	1.1 dB	25 dB (Video & Return)	4028628 (Triple module, LC/APC)
	1550	1540-1560	1.4 dB	15 dB (OLT & Return)	
	1610	1600-1620	1.5 dB	30 dB (Video) 40 dB (OLT)	

Ordering Information

Table 4. Passives

Description	Part Number
LGX-BWDM-DPON-1310/1490/1550/1610 LA-TRPL	4028628
LGX-BWDM-DPON-1310/1550/1610 LA-TRPL	4028627
LGX Chassis,4RU,12slot,72pos Bulkhead Conn,Unloaded	750182

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For More Information

To learn more about the Cisco Prisma D-PON System, contact your local account representative.

To subscribe to receive end-of-life/end-of-sale information, go to: <http://www.cisco.com/cgi-bin/Support/FieldNoticeTool/field-notice>.



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Part Number 7017620 Rev B
May 2009