

Planar Lightwave Circuit (PLC) Splitter

Features

- ✓ Low Insertion Loss (IL)
- ✓ High isolation
- ✓ Low Polarization Dependent Loss (PDL)
- ✓ Compact design
- ✓ Wide operating wavelength range
- ✓ Good channel-to-channel uniformity
- ✓ High reliability and high stability
- ✓ Telcordia GR-1209-CORE-2001 compliant
- ✓ Telcordia GR-1221-CORE-1999 compliant
- ✓ YD/T-1272Q compliant
- ✓ Q/CT-2295 compliant
- ✓ RoHS-6 compliant (lead free)



Applications

- ✓ FTTH/PON/CATV Networks

Description

The Gigalight Planar Lightwave Circuit (PLC) splitter is a type of optical power management device based on silica optical waveguide technology. It is widely used in passive optical networks to realize optical signal power splitting with 1xN or 2xN splitting ratio. Gigalight provides a series of customized PLC splitters to meet different requirements on Package (Bare Fiber, Mini Module, ABS Box, LGX Box, Rack Mount, Cassette, and Wall Mount), Port Configuration (1x2, 1x4, 1x8, 1x16, 1x32, 1x64, 2x2, 2x4, 2x8, 2x16, 2x32, and 2x64), Input Fiber Type, Input Fiber Length, Output Fiber Type, Output Fiber Length, Input connector, and Output Connector etc..

Specifications

Parameters	1xN Bare Fiber PLC Splitters					
Operating Wavelength (nm)	1260 to 1650					
Port Configuration	1x2	1x4	1x8	1x16	1x32	1x64
Max Insertion Loss (dB) (P/S Grade)	3.8/4.0	7.1/7.3	10.2/10.5	13.5/14.7	16.5/16.9	20.5/21.0
Max Loss Uniformity (dB)	0.6	0.7	0.8	1.2	1.5	2.0
Max PDL (dB)	0.2		0.25		0.35	
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max Wavelength Dependent Loss (dB)	0.5		0.8		1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-5 to +75					
Storage Temperature (°C)	-40 to +85					
Device Dimension LxWxH (mm)	40x4x4		50x4x4	50x7x4	60x12x4	

Parameters	2xN Bare Fiber PLC Splitters				
Operating Wavelength (nm)	1260 to 1650				
Port Configuration	2x2	2x4	2x8	2x16	2x32
Max Insertion Loss (dB)	4.2	7.6	11.0	14.4	17.5
Max Loss Uniformity (dB)	0.9	1.0	1.2	1.5	1.8
Max PDL (dB)	0.3				0.35
Min Return Loss (dB)	55				
Min Directivity (dB)	55				
Max Wavelength Dependent Loss (dB)	0.5			0.8	
Max Temperature Stability (dB)	0.5				
Operating Temperature (°C)	-5 to +75				
Storage Temperature (°C)	-40 to +85				
Device Dimension LxWxH (mm)	40x4x4	50x4x4	50x7x4	60x7x4	

Notes:

1. All specifications are based on the devices without connectors.
2. Fiber type is G657A1.

Parameters	1xN Mini Module PLC Splitters					
Operating Wavelength (nm)	1260 to 1650					
Port Configuration	1x2	1x4	1x8	1x16	1x32	1x64
Max Insertion Loss (dB) (P/S Grade)	4.1/4.3	7.4/7.6	10.5/10.8	13.8/14.0	16.8/17.2	20.8/21.3
Max Loss Uniformity (dB)	0.6	0.7	0.8	1.2	1.5	2.0
Max PDL (dB)	0.2			0.25		0.35
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max Wavelength Dependent Loss (dB)	0.5			0.8	1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-5 to +75					
Storage Temperature (°C)	-40 to +85					
Device Dimension LxWxH (mm)	60x7x4			60x12x4	80x20x6	100x40x6

Parameters	2xN Mini Module PLC Splitters				
Operating Wavelength (nm)	1260 to 1650				
Port Configuration	2x2	2x4	2x8	2x16	2x32
Max Insertion Loss (dB)	4.5	7.9	11.3	14.7	17.8
Max Loss Uniformity (dB)	0.9	1.0	1.2	1.5	1.8
Max PDL (dB)	0.3				0.35
Min Return Loss (dB)	55				
Min Directivity (dB)	55				
Max Wavelength Dependent Loss (dB)	0.5			0.8	

Max Temperature Stability (dB)	0.5		
Operating Temperature (°C)	-5 to +75		
Storage Temperature (°C)	-40 to +85		
Device Dimension LxWxH (mm)	60x7x4	60x12x4	100x20x6

Notes:

1. All specifications are based on the devices with connectors.
2. Fiber type is G657A1.
3. IL, PDL, WDL can also be customer specified.

Parameters	1xN ABS Box PLC Splitters					
Operating Wavelength (nm)	1260 to 1650					
Port Configuration	1x2	1x4	1x8	1x16	1x32	1x64
Max Insertion Loss (dB) (P/S Grade)	4.1/4.3	7.4/7.6	10.5/10.8	13.8/14.0	16.8/17.2	20.8/21.3
Max Loss Uniformity (dB)	0.6	0.7	0.8	1.2	1.5	2.0
Max PDL (dB)	0.2		0.25		0.35	
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max Wavelength Dependent Loss (dB)	0.5		0.8		1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-5 to +75					
Storage Temperature (°C)	-40 to +85					
Device Dimension LxWxH (mm)	100x80x10		120x80x18		140x115x18	

Parameters	2xN ABS Box PLC Splitters					
Operating Wavelength (nm)	1260 to 1650					
Port Configuration	2x2	2x4	2x8	2x16	2x32	2x64
Max Insertion Loss (dB)	4.5	7.9	11.3	14.7	17.8	21.3
Max Loss Uniformity (dB)	0.9	1.0	1.2	1.5	1.8	2.2
Max PDL (dB)	0.3			0.35		0.4
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max Wavelength Dependent Loss (dB)	0.5		0.8		1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-5 to +75					
Storage Temperature (°C)	-40 to +85					
Device Dimension LxWxH (mm)	100x80x10		120x80x18		140x115x18	

Notes:

1. All specifications are based on the devices with connectors.
2. Fiber type is G657A1.
3. IL, PDL, WDL can also be customer specified.

Parameters	1xN LGX Box PLC Splitters		
Operating Wavelength (nm)	1260 to 1650		

Port Configuration	1x2	1x4	1x8	1x16	1x32	1x64
Max Insertion Loss (dB) (P/S Grade)	4.1/4.3	7.4/7.6	10.5/10.8	13.8/14.0	16.8/17.2	20.8/21.3
Max Loss Uniformity (dB)	0.6	0.7	0.8	1.2	1.5	2.0
Max PDL (dB)	0.2		0.25		0.35	
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max Wavelength Dependent Loss (dB)	0.5		0.8		1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-5 to +75					
Storage Temperature (°C)	-40 to +85					
Device Dimension LxWxH (mm)	102x155x29		102x155x40		102x155x82	

Parameters	2xN LGX Box PLC Splitters					
Operating Wavelength (nm)	1260 to 1650					
Port Configuration	2x2	2x4	2x8	2x16	2x32	2x64
Max Insertion Loss (dB)	4.5	7.9	11.3	14.7	17.8	21.3
Max Loss Uniformity (dB)	0.9	1.0	1.2	1.5	1.8	2.2
Max PDL (dB)	0.3			0.35		0.4
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max Wavelength Dependent Loss (dB)	0.5		0.8		1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-5 to +75					
Storage Temperature (°C)	-40 to +85					
Device Dimension LxWxH (mm)	102x155x29		102x155x40		102x155x82	

Notes:

1. All specifications are based on the devices with connectors and adapters.
2. Fiber type is G657A1.
3. IL, PDL, WDL can also be customer specified.

Parameters	1xN Rack Mount PLC Splitters					
Operating Wavelength (nm)	1260 to 1650					
Port Configuration	1x2	1x4	1x8	1x16	1x32	1x64
Max Insertion Loss (dB) (P/S Grade)	4.1/4.3	7.4/7.6	10.5/10.8	13.8/14.0	16.8/17.2	20.8/21.3
Max Loss Uniformity (dB)	0.6	0.7	0.8	1.2	1.5	2.0
Max PDL (dB)	0.2		0.25		0.35	
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max Wavelength Dependent Loss (dB)	0.5		0.8		1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-40 to +85					

Storage Temperature (°C)	-40 to +85
Device Dimension LxWxH (mm)	483x150x45

Parameters	2xN Rack Mount PLC Splitters					
Operating Wavelength (nm)	1260 to 1650					
Port Configuration	2x2	2x4	2x8	2x16	2x32	2x64
Max Insertion Loss (dB)	4.5	7.9	11.3	14.7	17.8	21.3
Max Loss Uniformity (dB)	0.9	1.0	1.2	1.5	1.8	2.2
Max PDL (dB)	0.3			0.35		0.4
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max Wavelength Dependent Loss (dB)	0.5		0.8		1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-40 to +85					
Storage Temperature (°C)	-40 to +85					
Device Dimension LxWxH (mm)	483x150x45					

Notes:

1. All specifications are based on the devices with connectors and adapters.
2. Fiber type is G657A1.
3. IL, PDL, WDL can also be customer specified.

Parameters	1xN Cassette PLC Splitters				
Operating Wavelength (nm)	1260 to 1650				
Port Configuration	1x2	1x4	1x8	1x16	1x32
Max Insertion Loss (dB) (P/S Grade)	4.1/4.3	7.4/7.6	10.5/10.8	13.8/14.0	16.8/17.2
Max Loss Uniformity (dB)	0.6	0.7	0.8	1.2	1.5
Max PDL (dB)	0.2			0.25	
Min Return Loss (dB)	55				
Min Directivity (dB)	55				
Max Wavelength Dependent Loss (dB)	0.5			0.8	
Max Temperature Stability (dB)	0.5				
Operating Temperature (°C)	-40 to +85				
Storage Temperature (°C)	-40 to +85				
Device Dimension LxWxH (mm)	130x100x25				267x100x50

Parameters	2xN Cassette PLC Splitters				
Operating Wavelength (nm)	1260 to 1650				
Port Configuration	2x2	2x4	2x8	2x16	2x32
Max Insertion Loss (dB)	4.5	7.9	11.3	14.7	17.8
Max Loss Uniformity (dB)	0.9	1.0	1.2	1.5	1.8
Max PDL (dB)	0.3				0.35
Min Return Loss (dB)	55				

Min Directivity (dB)	55	
Max Wavelength Dependent Loss (dB)	0.5	0.8
Max Temperature Stability (dB)	0.5	
Operating Temperature (°C)	-40 to +85	
Storage Temperature (°C)	-40 to +85	
Device Dimension LxWxH (mm)	130x100x25	267x100x50

Notes:

1. All specifications are based on the devices with connectors and adapters.
2. Fiber type is G657A1.
3. IL, PDL, WDL can also be customer specified.

Parameters	1xN Wall Mount PLC Splitters					
Operating Wavelength (nm)	1260 to 1650					
Port Configuration	1x2	1x4	1x8	1x16	1x32	1x64
Max IL (dB) (P/S Grade)	4.1/4.3	7.4/7.6	10.5/10.8	13.8/14.0	16.8/17.2	20.8/21.3
Max Loss Uniformity (dB)	0.6	0.7	0.8	1.2	1.5	2.0
Max PDL (dB)	0.2		0.25		0.35	
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max WDL (dB)	0.5		0.8		1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-40 to +85					
Storage Temperature (°C)	-40 to +85					
Dimension LxWxH (mm)	205x115x35	207x181x45	300x220x80	450x310x140	450x400x150	

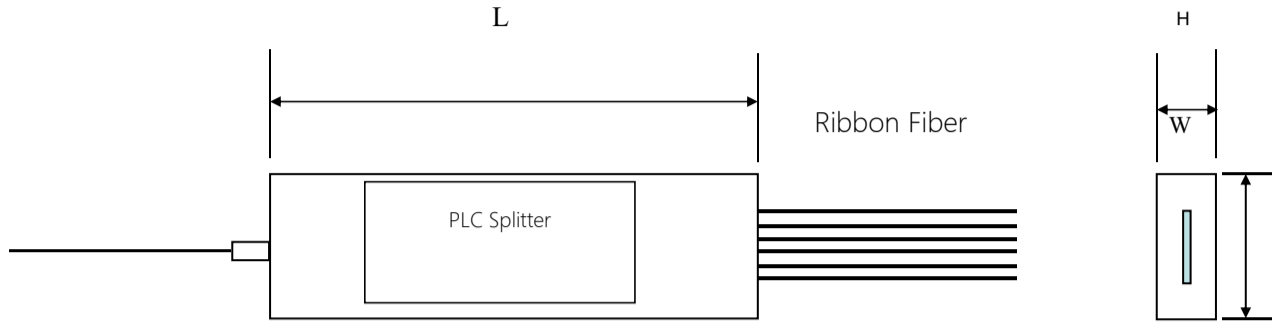
Parameters	2xN Wall Mount PLC Splitters					
Operating Wavelength (nm)	1260 to 1650					
Port Configuration	2x2	2x4	2x8	2x16	2x32	2x64
Max IL (dB)	4.5	7.9	11.3	14.7	17.8	21.3
Max Loss Uniformity (dB)	0.9	1.0	1.2	1.5	1.8	2.2
Max PDL (dB)	0.3			0.35		0.4
Min Return Loss (dB)	55					
Min Directivity (dB)	55					
Max WDL (dB)	0.5		0.8		1.0	
Max Temperature Stability (dB)	0.5					
Operating Temperature (°C)	-40 to +85					
Storage Temperature (°C)	-40 to +85					
Dimension LxWxH (mm)	205x115x35	207x181x45	300x220x80	450x310x140	450x400x150	

Notes:

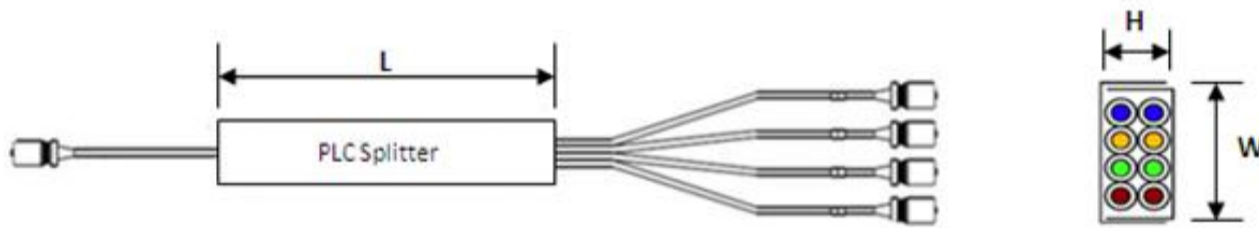
1. All specifications are based on the devices with connectors and adapters.
2. Fiber type is G657A1.
3. IL, PDL, WDL can also be customer specified.

Mechanical Dimensions

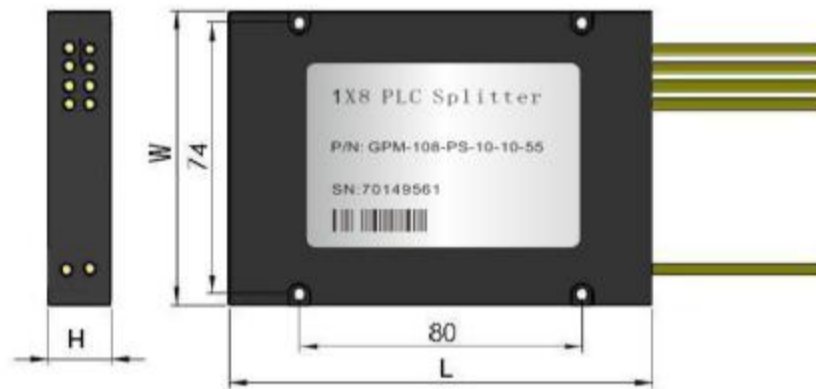
Bare Fiber:



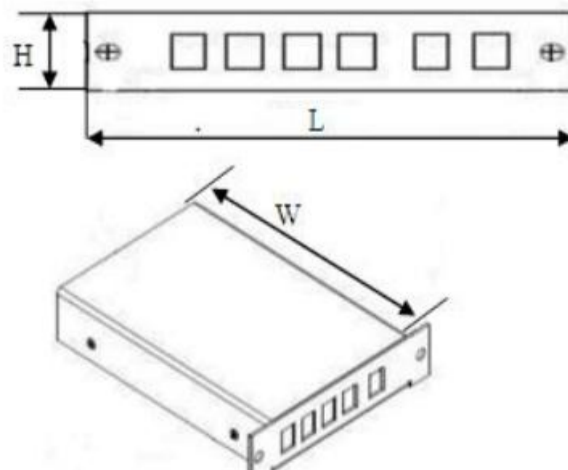
Mini Module:



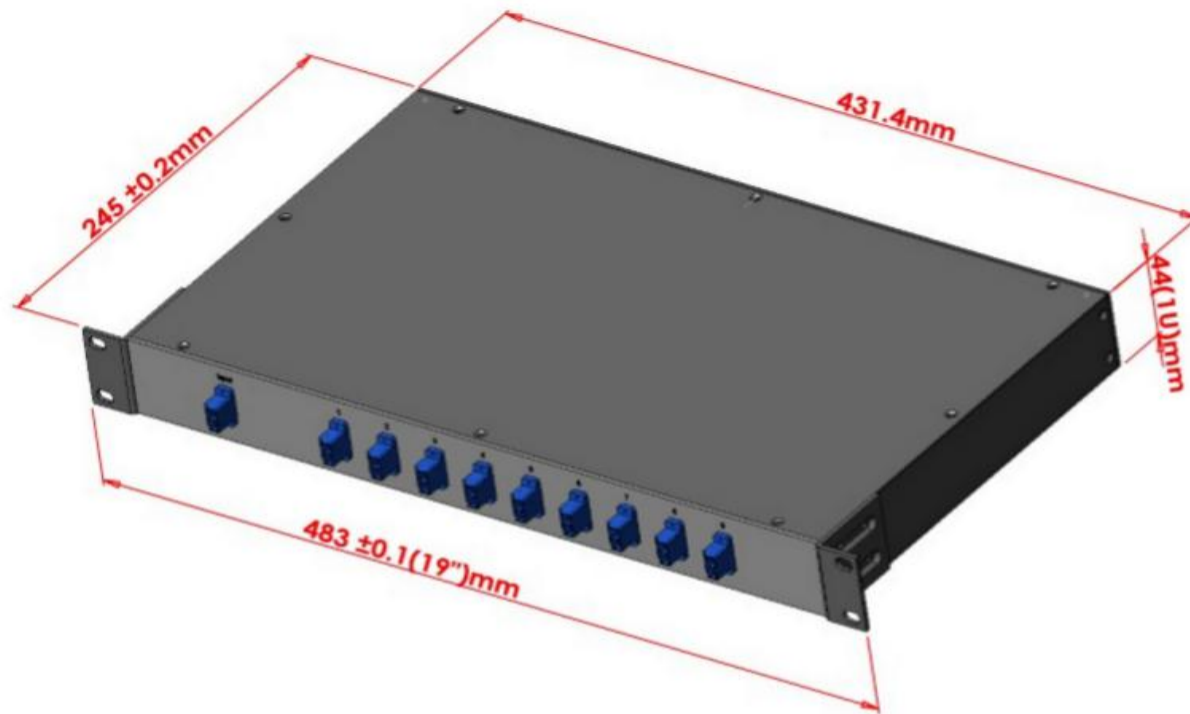
ABS Box (e.g.):



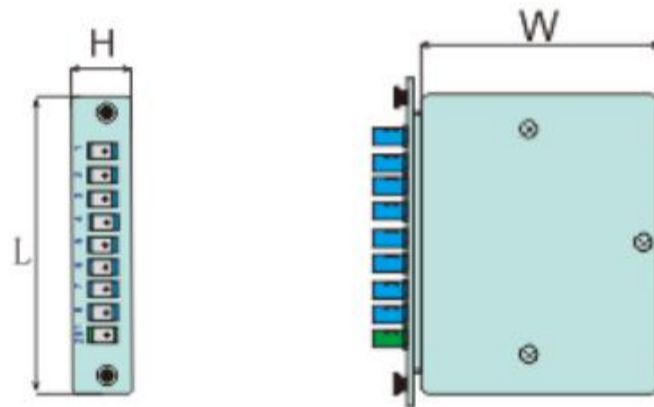
LGX Box (e.g.):



Rack Mount:



Cassette:



Ordering Information

GPS-	xxx-	x	xx-	x	xx-	x	x
	Port Configuration	Input Fiber Type	Input Fiber Length	Output Fiber Type	Output Fiber Length	Input Connector	Output Connector
Bare Fiber PLC Splitters	102=1x2	B=250um bare fiber	10=1.0m	B=250um bare fiber	10=1.0m	0=None	0=None
	104=1x4	L=0.9mm loose tube	15=1.5m	R=ribbon fiber	15=1.5m	1=FC/UPC	1=FC/UPC
	...	T=0.9mm tight buffer	20=2.0m	F=Fanout box with 900um loose tube	20=2.0m	2=FC/APC	2=FC/APC
	164=1x64		25=2.5m		25=2.5m	3=SC/UPC	3=SC/UPC
	202=2x2		4=SC/APC	4=SC/APC
	...					5=LC/UPC	5=LC/UPC
	232=2x32					6=LC/APC	6=LC/APC

GPM-xxx-MM-	xx-	xx-	x	x
Mini Module PLC Splitter xxx: 102=1x2 ... 164=1x64 202=2x2 ... 232=2x32	Fiber Type	Fiber Length	Input Connector	Output Connector
	09=0.9mm loose tube	10=1.0m	0=None	0=None
	20=2.0mm loose tube	15=1.5m	1=FC/UPC	1=FC/UPC
	30=3.0mm loose tube	20=2.0m	2=FC/APC	2=FC/APC
		25=2.5m	3=SC/UPC	3=SC/UPC
		...	4=SC/APC	4=SC/APC
			5=LC/UPC	5=LC/UPC
			6=LC/APC	6=LC/APC

GPM-xxx-Px-	xx-	xx-	x	x
ABS Box PLC Splitters PS: 100x80x10 PM: 120x80x18 PL: 145x115x18 xxx: 102=1x2 .. 264=2x64	Fiber Type	Fiber Length	Input Connector	Output Connector
	09=0.9mm loose tube	10=1.0m	0=None	0=None
	20=2.0mm loose tube	15=1.5m	1=FC/UPC	1=FC/UPC
	30=3.0mm loose tube	20=2.0m	2=FC/APC	2=FC/APC
		25=2.5m	3=SC/UPC	3=SC/UPC
		...	4=SC/APC	4=SC/APC
			5=LC/UPC	5=LC/UPC
			6=LC/APC	6=LC/APC

GPB-xxx-LX-	x	x
LGX Box PLC Splitters xxx: 102=1x2 ... 164=1x64 202=2x2 ... 264=2x64	Input Connector	Output Connector
	0=None	0=None
	1=FC/UPC	1=FC/UPC
	2=FC/APC	2=FC/APC
	3=SC/UPC	3=SC/UPC
	4=SC/APC	4=SC/APC
	5=LC/UPC	5=LC/UPC
	6=LC/APC	6=LC/APC

GPB-xxx-19-	x	x
Rack Mount PLC Splitters xxx: 102=1x2 ... 164=1x64 202=2x2 ... 264=2x64	Input Connector	Output Connector
	0=None	0=None
	1=FC/UPC	1=FC/UPC
	2=FC/APC	2=FC/APC
	3=SC/UPC	3=SC/UPC
	4=SC/APC	4=SC/APC
	5=LC/UPC	5=LC/UPC
	6=LC/APC	6=LC/APC

GPB-xxx-CP-	x	x
	Input Connector	Output Connector
Cassette PLC Splitters xxx: 102=1x2 ... 132=1x32 202=2x2 ... 232=2x32	0=None	0=None
	1=FC/UPC	1=FC/UPC
	2=FC/APC	2=FC/APC
	3=SC/UPC	3=SC/UPC
	4=SC/APC	4=SC/APC
	5=LC/UPC	5=LC/UPC
	6=LC/APC	6=LC/APC

GPB-xxx-WM-	x	x
	Input Connector	Output Connector
Wall Mount PLC Splitters xxx: 102=1x2 ... 164=1x64 202=2x2 ... 264=2x64	0=None	0=None
	1=FC/UPC	1=FC/UPC
	2=FC/APC	2=FC/APC
	3=SC/UPC	3=SC/UPC
	4=SC/APC	4=SC/APC
	5=LC/UPC	5=LC/UPC
	6=LC/APC	6=LC/APC

Notes :

If you need any other special requirement, please contact our sales.

E-mail: sales@gigalight.com

Official Site: www.gigalight.com