Fiber Optic PLC Splitter

Planar light wave circuits (PLC) splitter are manufactured using silica glass waveguide circuits and extremely precise alignment of optic fibers in very small package. They split or combine light from one or two incoming fibers to multiple numbers of outgoing fibers.

They perform uniformly over a wide spectral range, with ultra-low losses. Splitter are highly compact, reliable and available in very wide range of fiber and connector types. All PLC splitter are fully compliant with the Telcordia GR-1209 & GR-1221 standard.
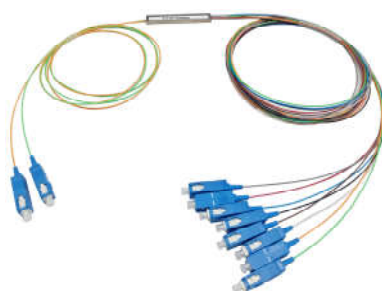
Splitter contain no electronics and use no power. They are the network elements that put the passive in passive optical network and are available in a variety of split ratios, including 1x8, 1x16, 1x32, 1x64, 2x8, 2x16, 2x32 & 2x64 with boxed type or micro type packaging.
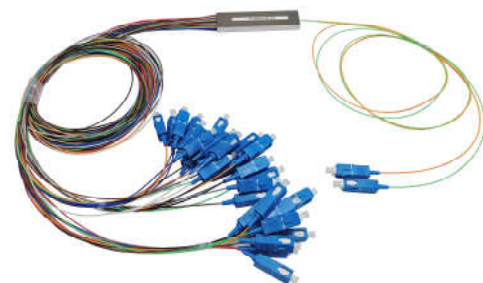

2x8 Boxed Type PLC Splitter

2x16 Boxed Type PLC Splitter

2x8 Micro Type Color Coded PLC Splitter

2x32 Micro Type Color Coded PLC Splitter

Standard Compliance

- Telcordia GR-1221-CORE-1999 & GR-1209-CORE-2001
- TIA/EIA-568B.3 Fiber Optic Cabling Components Standard
- IEE802.3z Standards for Fiber Optic Cabling
- RoHS Certified for European Market Requirements

Features & Benefits

- Low insertion losses, High Uniformity, High Reliability, High directivity.
- Ultra-broadband performance (1250-1650nm)
- Low Polarization Dependant Loses (PDL) and Polarization Mode Dispersion (PMD)
- 1 or 2 input channels and up to 64 output channels
- Ultra small, easy installation, suitable for all applications
- Available with all type of packages and connectors
- Ready for use in uncontrolled environment

Specifications

Telcordia 1209 & 1221 Test results：

Name of the test	Condition	Duration
Temperature- Humidity aging	85°C and 85% RH	7 days
Vibration	10 - 55Hz, 1.52mm double amplitude, in three axes	1 hour
Component Impact Test	Impact of 500g (mass<=0.125kg), 1ms, half sine pulse	2 impacts
Temperature Cycling Test	-40°C to + 70°C, Ramp rate: 1°C /min, Dwell time >15min	10 cycles
Temperature- Humidity cycling	-40°C to + 85°C, between 10°C and 23°C - 85% RH, at 85°C -20%RH, between 23°C and 85°C - maintain a linear change in RH, below 10°C - uncontrolled RH	14 days
Water Immersion	43 ± 2°C, PH 5.5 ± 0.5	7 days
Fiber Side Pull test	0.23 kg load, 90° angle, 2 directions	5 seconds
Fiber Side Pull test	0.45 Kg load for Single Input Fiber, 1.5 Kg load for 8 Fiber Ribbon Outputs	5 seconds

1 x N

Parameter		Unit	1 x 2	1 x 4	1 x 8	1 x 16	1 x 32	1 x 64
Insertion Loss	Max.	dB	3.8	7.0	10.4	13.9	17.2	22.0
Channel Uniformity	Max.	dB	0.6	0.5	0.5	1.4	1.6	2.5
Polarization Dependent Loss	Max.	dB	0.2	0.3	0.3	0.3	0.3	0.3
Wavelength Dependent Loss	Max.	dB	0.3	0.3	0.3	0.3	0.3	0.3
Temperature Dependent Loss	Max.	dB	0.5	0.5	0.5	0.5	0.5	0.5
Connector Dependent Loss	Max.	dB	0.2	0.2	0.2	0.2	0.2	0.2
Operating Wavelength	Min.-Max	nm	1250 ~ 1650					
Return Loss	Min.	dB	55					
Directivity	Min.	dB	55					
Operating Temperature		°C	-40 ~ + 85					
Storage Temperature		°C	-40 ~ + 85					
Maximum Input Power	Max.	mW	500					
Fiber Type		-	ITU G.652D or G.657A					

2 x N

Parameter		Unit	2 x 2	2 x 4	2 x 8	2 x 16	2 x 32	2 x 64
Insertion Loss	Max.	dB	4.0	7.3	10.7	14	17.5	22.5
Channel Uniformity	Max.	dB	0.8	1.0	1.0	1.5	1.8	3.0
Polarization Dependent Loss	Max.	dB	0.2	0.3	0.3	0.3	0.3	0.4
Wavelength Dependent Loss	Max.	dB	0.3	0.3	0.3	0.3	0.3	0.3
Temperature Dependent Loss	Max.	dB	0.5	0.5	0.5	0.5	0.5	0.5
Connector Dependent Loss	Max.	dB	0.2	0.2	0.2	0.2	0.2	0.2
Operating Wavelength	Min.-Max.	nm	1250 ~ 1650					
Return Loss	Min.	dB	55					
Directivity	Min.	dB	55					
Operating Temperature		°C	-40 ~ + 85					
Storage Temperature		°C	-40 ~ + 85					
Maximum Input Power	Max.	mW	500					
Fiber Type		-	ITU G.652D or G.657A					

Ordering Information

Using the available configurations amend/create product codes using the formula below.

Part Number： PLC-**ABC**-**DEF**-**GHI**

Ordering Guide

A	Input Port	**1**=1 Port, **2**=2 Ports
B	Output Port	**02**=2 Ports, **16**=16 Ports, **64**=64 Ports
C	Packaging Type	**B**=Boxed Type, **M**=Micro Type
D	Diameter of Input Fiber	**09**=0.9mm, **20**=2.0mm, **30**=3.0mm
E	Input Fiber Connector type	**FP**, **SP**, **SA**, **LP** (As noted in Connector type code chart)
F	Input Fiber Length	**10**=1M, **15**=1.5M, **20**=2M
G	Diameter of Output Fiber	**09**=0.9mm, **20**=2.0mm, **30**=3.0mm
H	Output Fiber Connector type	**FP**, **SP**, **SA**, **LP** (As noted in Connector type code chart)
I	Output Fiber Length	**05**=0.5M, **10**=1M, **15**=1.5M, **20**=2M

Connector Type Code

Code	Connector	Code	Connector	Code	Connector	Code	Connector	Code	Connector	Code	Connector
FP	FC/PC	FA	FC/APC	LP	LC/PC	LA	LC/APC	MU	MU	DN	DIN
SP	SC/PC	SA	SC/APC	TP	ST/PC	TA	ST/APC	MT	MTRJ	E2	E2000

Ordering Sample

Part Number	Description
PLC-**108B**-**30SP05**-**30SP05**	1x8 PLC splitter, boxed type package, input and output fiber Φ 3, length 0.5M, and connector SC/PC.
PLC-**232M**-**09SP10**-**09SP10**	2x32 PLC splitter, micro type package, input and output fiber Φ 0.9, length 1M, and connector SC/PC.