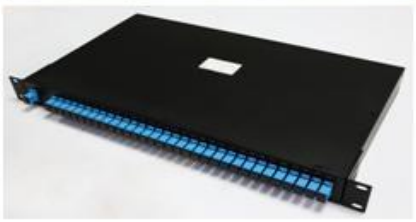
PLC Splitter 1xN 2xN

PLC Splitter - Planar Lightwave Circuit Splitter
A PLC splitter is an integrated waveguide optical power splitter based on a quartz substrate. It features compact size, wide operating wavelength range, high reliability, and excellent splitting uniformity. It is particularly suitable for Passive Optical Networks (EPON, GPON, etc.) to connect central office equipment with terminal devices and enable optical signal splitting. Currently, 1×N and 2×N splitters evenly distribute optical signals from one or two input ports to multiple output ports, or conversely, combine multiple signals into one or two fibers.。



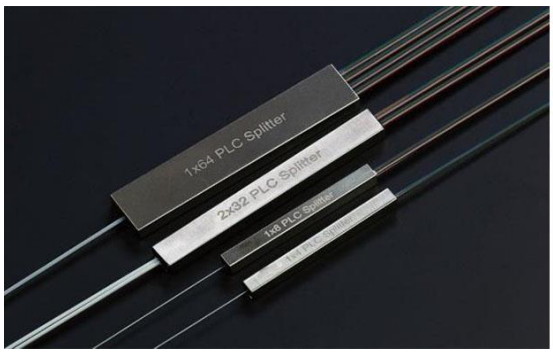
Product Features

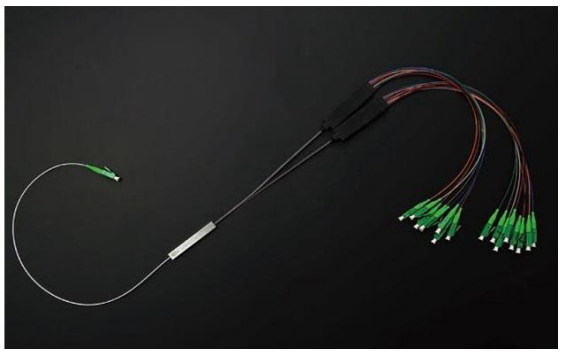
- Low insertion loss, polarization-insensitive
- Wide operating wavelength, low polarization-dependent loss
- High uniformity between channels, reliability, and stability
- Passed GR-1221-CORE and GR-12091-CORE reliability tests
- RoHS compliant

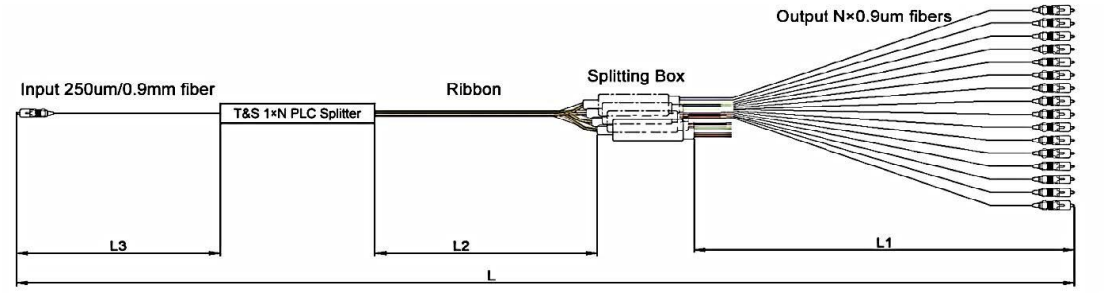
- Applications
  Fiber-to-the-Home (FTTH)
- Mobile/telecom networks, LAN, MAN
- Cable TV networks (CATV)
- Passive Optical Network systems (E/GPON)
- Video transmission, test equipment

PLC Splitter Package Types and Dimensions

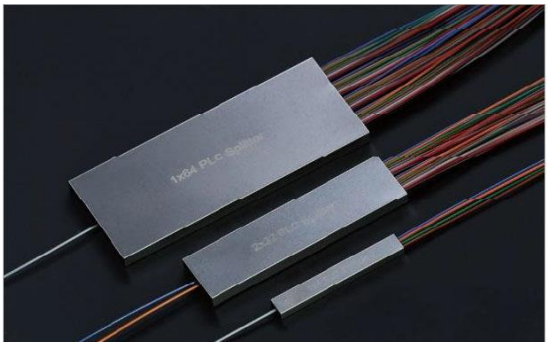
Ⅰ-Bare Fiber PLC Splitter

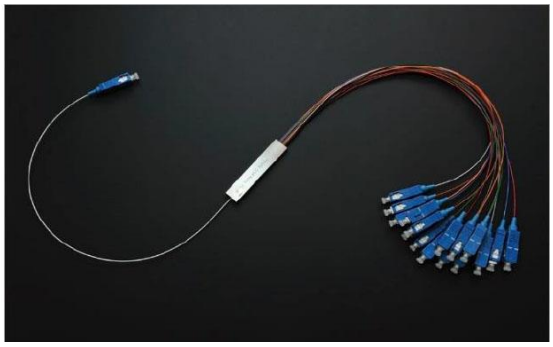


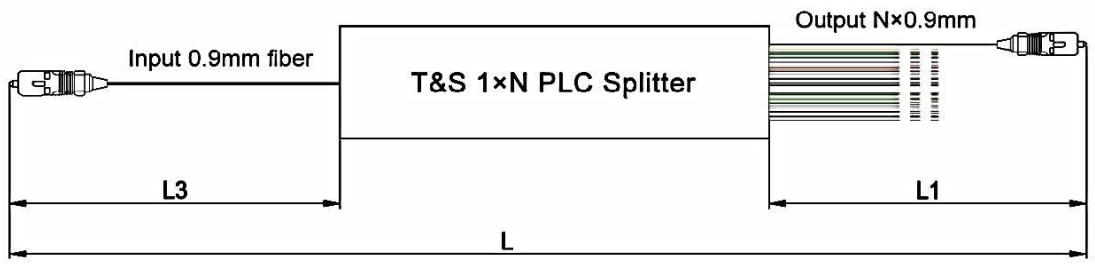




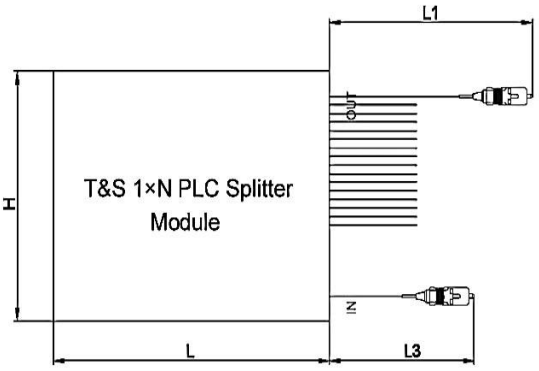
Ⅱ-Micro PLC Splitter







Ⅲ-Box-Type PLC Splitter



V-PLC Splitter Package Types and Dimensions

1xN Splitter

封装类型及尺寸	单位 (mm)	1×2	1×4	1×8	1×16	1×32	1×64
Ⅰ-裸纤型光分路器	长×宽×高	40×4×4	40×4×4	40×4×4	45×5×4	55×7×4	60×12×4
Ⅱ-微型光分路器		60×7×4	60×7×4	60×7×4	60×12×4	80×20×6	100×40×6
Ⅲ-盒式分路器		90×20×10	100×80×10	100×80×10	120×80×18	120×80×18	140×114×18

2xN Splitter

封装类型及尺寸	单位 (mm)	2×2	2×4	2×8	2×16	2×32	2×64
Ⅰ-裸纤型光分路器	长×宽×高	50×5×4	50×5×4	50×5×4	55×7×4	60×7×4	65×12×4
Ⅱ-微型光分路器		65×7×4	65×7×4	65×7×4	80×20×6	80×20×6	100×40×6
Ⅲ-盒式分路器		90×20×10	100×80×10	100×80×10	120×80×18	140×114×18	140×114×18

Performance Parameters

1×N PLC Splitter

Parameter	1×2	1×4	1×8	1×16	1×32	1×64	1×128
Operating Wavelength (nm)	1260～1650						
Insertion Loss (dB)	3.8/4.0	7.1/7.3	10.2/10.5	13.5/13.7	16.5/16.9	20.5/21.0	23.8/24.2
Uniformity (dB)	0.4	0.6	0.8	1.2	1.5	2.0	2.5
PDL (dB)	0.2	0.2	0.2	0.25	0.3	0.35	0.4
Return Loss (dB)	55/50	55/50	55/50	55/50	55/50	55/50	55/50
Directivity (dB)	55	55	55	55	55	55	55
Wavelength Uniformity (dB)	0.3	0.3	0.3	0.5	0.5	0.5	0.5
Extinction Ratio （@23° C）(dB)	≥23	≥23	≥22	≥20	≥18	≥18	≥18
Temp. Sensitivity (-40～85℃)	0.4	0.4	0.4	0.5	0.5	0.5	0.5
Operating Temp. (℃)	-40～80						
Storage Temp. (℃)	-40～85						
Device Size (mm)	40×4×4	40×4×4	40×4×4	50×7×4	50×7×4	60×12×4	N/A
ABS Module Size (mm)	100×80×10			120×80×18	141×115×18		
Mini-Module Size (mm)	60×7×4	60×7×4	60×7×4	60×12×4	80×20×6	100×40×6	N/A

Notes:

1. All parameters tested at room temperature without connectors.
2. Add 0.2dB to insertion loss and ensure return loss ≥55dB (APC) or ≥50dB (UPC) when connectors are applied.

2×N PLC Splitter

Parameter	2×2	2×4	2×8	2×16	2×32	2×64	2×128
Operating Wavelength (nm)	1260～1650						
Insertion Loss (dB)	4	7.6	11	14.4	17.5	21.0	24.5
Uniformity (dB)	0.6	1.0	1.2	1.5	1.8	2.2	2.5
PDL (dB)	0.2	0.2	0.3	0.3	0.35	0.4	0.4
Return Loss (dB)	55/50	55/50	55/50	55/50	55/50	55/50	55/50
Extinction Ratio (@23° C) (dB)	≥23	≥23	≥22	≥20	≥18	≥18	≥18
Directivity (dB)	55	55	55	55	55	55	55
Wavelength Uniformity (dB)	0.3	0.4	0.5	0.5	0.5	0.5	0.5
Temp. Sensitivity (-40 ～85℃)	0.4	0.4	0.4	0.5	0.5	0.5	0.5
Operating Temp. (℃)	-40～80						
Storage Temp. (℃)	-40～85						
Device Size (mm)	40×4×4	55×4×4	55×4×4	60×7×4	60×7×4	N/A	N/A
ABS Module Size (mm)	100×80×10			120×80×18	141×115×18		
Mini-Module Size (mm)	60×7×4	60×7×4	60×7×4	80×12×4	80×20×6	N/A	N/A

Notes:

1. All parameters tested at room temperature without connectors.
2. Add 0.2dB to insertion loss and ensure return loss ≥55dB (APC) or ≥50dB (UPC) when connectors are applied.

Ordering Information: HC—PLC—A—B—C—D—E—F—G

A	B	C	D	E	F	G
型号	Input Fiber Diamete	Input Connector	Output Fiber Diameter	Output Fiber Length	Output Connector	Package Size
0102=1x2	0=Bare Fiber	0=none	0=Bare Fiber	0=0.5m	0=none	A=4X4X40
0104=1x4	1=900umLoose	1=SC/PC	1=900umLoose	1=1m	1=SC/PC	B=4X7X50
0108=1x8	Tube	2=SC/APC	Tube	2=1.5m	2=SC/APC	C=4X12X60
0116=1x16	2=900umTight	3=FC/PC	2=900umTight	3=2m	3=FC/PC	D=4X7X60
0132=1x32	Tube	4=FC/APC	Tube	4=3m	4=FC/APC	E=6X20X80
0164=1x64	3=2.0mmFiber	5=ST	3=2.0mmFiber	5=4m	5=ST/PC	F=100X80X10
1128=1x128	4=3.0mmFiber	6=LC	4=3.0mmFiber	S=special	6=LC/PC	G=120X80X18
0204=2x4		7=LC/APC			7=LC/APC	H=140X115X18
0208=2x8		8=E2000			8=E2000	I=19” 1U Rack
0216=2x16		S=Special			S=Special	J=Tray Type
0232=2x32						K=Plug-in Type
0264=2x64						S=Special
2128=2x128						