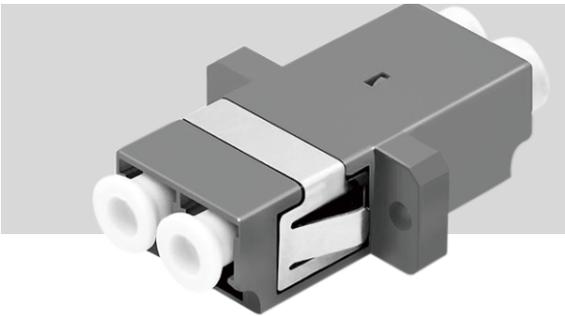
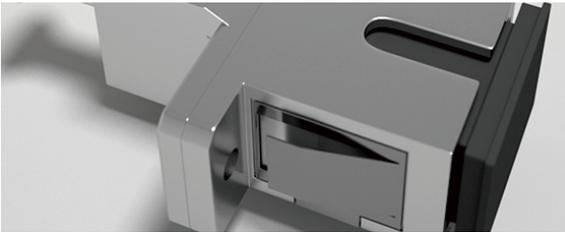




# Optical Passive Components

## Product manual

[www.prevail-catv.com](http://www.prevail-catv.com)



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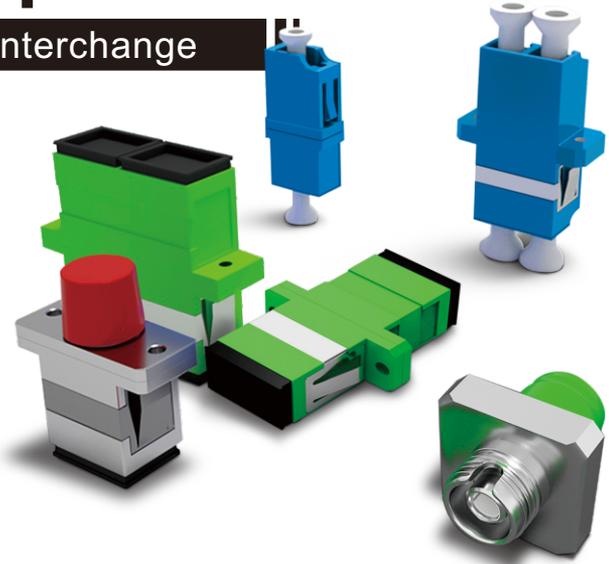
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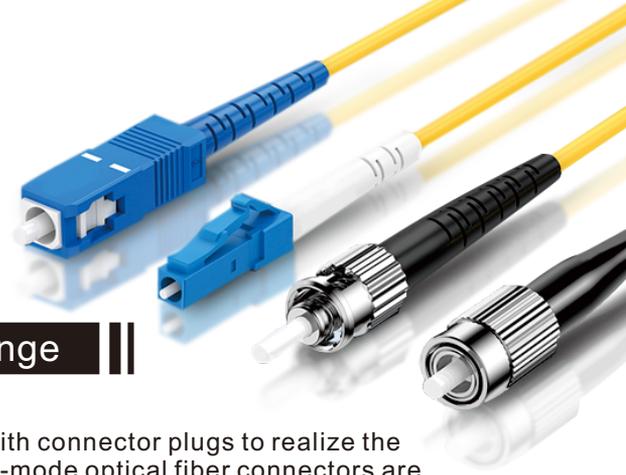
# Optical Fiber Adapter

SC, FC, LC, ST, and various interfaces interchange

- Low insertion loss
- Good repeatability
- Good interchangeability
- Large return loss
- Good inter-insertion performance
- Good temperature stability



Parameter	Specification
Operating wavelength	1100-1610nm
Number of interfaces	Standard
Insertion loss	≤0.2dB
Return loss	≥50dB : UPC ≥60dB : APC
Mechanical durability	≤0.2dB : 1000times
Repeatability	≤0.1dB
Interchangeability	≤0.2dB
Tensile strength of locking mechanism	≤0.2dB
Vibration	≤0.2dB
Fall	≤0.2dB
Tensile strength	≤0.2dB
High temperature	≤0.2dB
Low temperature	≤0.2dB
Temperature cycling	≤0.2dB
Humidity	≤0.2dB
Sleeve material	Ceramics
Frame material	Flame retardant ABS engineering plastics/metal
Color	Blue, green or optional
Operating temperature	-40°C ~ 80°C
Storage temperature	-40°C ~ 85°C
Certification	ROHS 2.0, CE
Standard	EN 61754 IEC 60874 Telcordia GR-326-CORE



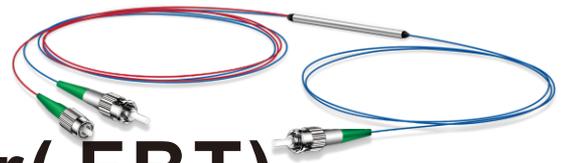
# Optical Patch Cord

SC, FC, LC, ST, and various interfaces interchange

Optical Patch Cord means that both ends of the light are equipped with connector plugs to realize the active connection of the optical path. The connection types of single-mode optical fiber connectors are FC, SC, and ST, and the end contact methods are PC, UPC, and APC. Jumpers with different connector types or contact surfaces at both ends are called single-mode transfer jumpers.

- Low insertion loss
- Large return loss
- Good repeatability
- Good inter-insertion performance
- Good interchangeability
- Good temperature stability

Parameter	Specification
Operating wavelength	1100-1610nm
Fiber type	Single mode G652, G657
Optical cable type	Ø0.9 , Ø3
Insertion loss	≤0.2dB
Return loss	≥50dB : UPC ≥60dB : APC
Mechanical durability	≤0.2dB : 1000 times
Repeatability	≤0.1dB
Interchangeability	≤0.2dB
Tensile strength of locking mechanism	≤0.2dB
Vibration	≤0.2dB
Fall	≤0.2dB
Tensile strength	≤0.2dB
Reverse	≤0.2dB
High temperature	≤0.2dB
Low temperature	≤0.2dB
Temperature cycling	≤0.2dB
Humidity	≤0.2dB
Length	Customizable
Operating temperature	-40°C ~ 80°C
Storage temperature	-40°C ~ 85°C
Certification	ROHS 2.0, CE
Standard	Telcordia GR-326-CORE



# Fused biconical taper(FBT)

## 1X2-64

FBT optical splitter is to bundle two or more optical fibers together, and then melt and draw on the taper machine, and monitor the change of the splitting ratio in real time. After the splitting ratio reaches the requirements, the melt-drawing is ended. One end of the fiber is reserved (cut the rest) as the input, and the other end is used as the multi-outputs.

1. Low cost. The Molten taper optical splitter has more than 20 years of history and experience, and the development cost is very cheap.
2. Can make unequal splitter. Through real-time monitoring, unequal splitters can be made as needed.

Parameter	Specification	
Operating wavelength	Single window 1310nm or 1550nm	Double window 1310&1550nm
Wavelength range	±40nm	
Fiber type	Single mode G652,G657	
Optical cable type	Ø0.9, Ø3	
Output port	1X2-64	
Splitting ratio	1/99-50/50	
Additional loss	≤0.2dB	≤0.3dB
Insertion loss	≤22.4-11.0lg(P%)	≤22.4-11.8lg(P%)
Uniformity (Equalized type)	≤0.9dB	≤1.2dB
Return loss	≥50dB : UPC ≥60dB : APC	
Polarization related loss	≤0.3dB	
Maximum input power	>15W	
Directionality	≥55dB	
Repeatability	≤0.1dB	
Interchangeability	≤0.2dB	
Mechanical durability	≤0.2dB : 1000 times	
Tensile strength of locking mechanism	≤0.2dB	
Vibration	≤0.2dB	
Fall	≤0.2dB	
Tensile strength	≤0.2dB	
Reverse	≤0.2dB	
High temperature	≤0.2dB	
Low temperature	≤0.2dB	
Temperature cycling	≤0.2dB	
Humidity	≤0.2dB	
Length	Customizable	
Operating temperature	-40°C ~ 80°C	
Storage temperature	-40°C ~ 85°C	
Certification	ROHS 2.0, CE	
Standard	Telcordia GR-1209-CORE Telcordia GR-1221-CORE	





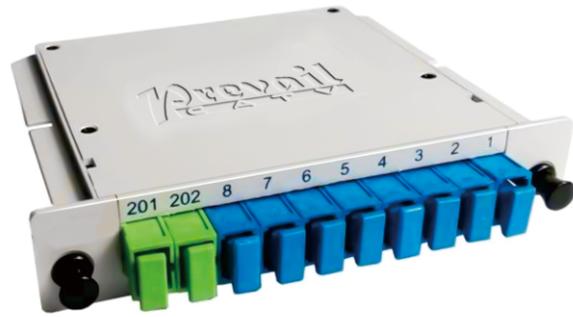
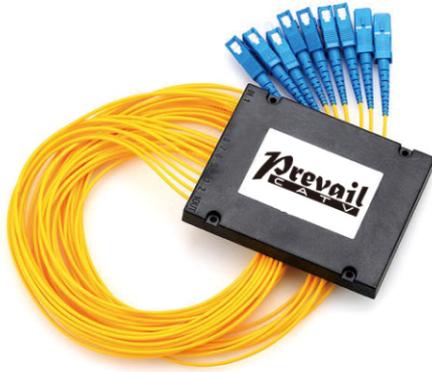
# 1XN PLC Optical Splitter 1XN PLC ||

Planar waveguide optical splitter (PLCSplitter) is an integrated waveguide optical power distribution device based on quartz substrate, with small size, wide operating wavelength range, high reliability and good splitting uniformity. Especially suitable for passive optical networks (EPON, BPON, GPON, etc.) to connect the master and terminal equipment and achieve optical signal splitting.

### Fiber splitter key features :

1. Good uniformity and low insertion loss
2. Low polarization related loss
3. Excellent environmental adaptability
4. Good mechanical performance
5. Reliability ,meets GR-1221 and GR-1209 standards

Parameter	Specification						
	1X2	1X4	1X8	1X16	1X32	1X64	1X128
Operating wavelength	1260-1650nm						
Fiber type	Single mode G652,G657						
Optical cable type	Ø0.9 , Ø3						
Splitting ratio	50/50						
Return loss	≥50dB : UPC ≥60dB : APC						
Polarization related loss	≤0.3dB						
Insertion loss: plug type(dB)	≤4.2	≤7.8	≤10.9	≤13.9	≤17.2	≤20.9	≤24.4
Channel uniformity:fixed wavelength (dB)	≤0.6	≤0.7	≤1.0	≤1.2	≤1.5	≤2.0	≤2.5
Channel uniformity: full wavelength (dB)	≤1.1	≤1.2	≤1.5	≤1.7	≤2	≤2.5	≤3
Maximum input power	500mW						
Directionality	≥55dB						
Repeatability	≤0.1dB						
Interchangeability	≤0.2dB						
Mechanical durability	≤0.2dB : 1000 times						
Tensile strength of locking mechanism	≤0.2dB						
Vibration	≤0.2dB						
Fall	≤0.2dB						
Tensile strength	≤0.2dB						
Reverse	≤0.2dB						
High temperature	≤0.2dB						
Low temperature	≤0.2dB						
Temperature cycling	≤0.2dB						
Humidity	≤0.2dB						
Length	Customizable						
Operating temperature	-40°C ~ 85°C						
Storage temperature	-40°C ~ 85°C						
Certification	ROHS 2.0, CE						
Standard	Telcordia GR-1209-CORE Telcordia GR-1221-CORE						



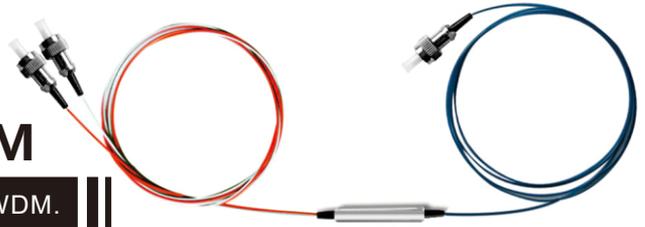
## 2XN PLC Optical Splitter 2XN PLC ||

Planar waveguide optical splitter (PLCSplitter) is an integrated waveguide optical power distribution device based on quartz substrate, with small size, wide operating wavelength range, high reliability and good splitting uniformity. Especially suitable for passive optical networks (EPON, BPON, GPON, etc.) to connect the master and terminal equipment and achieve optical signal splitting.

### Fiber splitter key features :

1. Good uniformity and low insertion loss
2. Low polarization related loss
3. Excellent environmental adaptability
4. Good mechanical performance
5. Reliability ,meets GR-1221 and GR-1209 standards

Parameter	Specification						
	2X2	2X4	2X8	2X16	2X32	2X64	2X128
Operating wavelength	1260-1650nm						
Fiber type	Single mode G652,G657						
Optical cable type	Ø0.9 , Ø3						
Splitting ratio	50/50						
Return loss	≥50dB : UPC ≥60dB : APC						
Polarization related loss	≤0.3dB						
Insertion loss: plug type(dB)	≤4.4	≤8	≤11.2	≤14.2	≤17.5	≤21.2	≤24.7
Channel uniformity:fixed wavelength (dB)	≤0.6	≤0.7	≤1.0	≤1.2	≤1.5	≤2.0	≤2.5
Channel uniformity: full wavelength (dB)	≤1.1	≤1.2	≤1.5	≤1.7	≤2	≤2.5	≤3
Maximum input power	500mW						
Directionality	≥55dB						
Repeatability	≤0.1dB						
Interchangeability	≤0.2dB						
Mechanical durability	≤0.2dB : 1000 times						
Tensile strength of locking mechanism	≤0.2dB						
Vibration	≤0.2dB						
Fall	≤0.2dB						
Tensile strength	≤0.2dB						
Reverse	≤0.2dB						
High temperature	≤0.2dB						
Low temperature	≤0.2dB						
Temperature cycling	≤0.2dB						
Humidity	≤0.2dB						
Length	Customizable						
Operating temperature	-40°C ~ 85°C						
Storage temperature	-40°C ~ 85°C						
Certification	ROHS 2.0, CE						
Standard	Telcordia GR-1209-CORE Telcordia GR-1221-CORE						



# 1310/1550 Broadband WDM

Suitable for conventional 1550/1310 two wavelength WDM.

Low insertion loss

Large return loss

Good repeatability

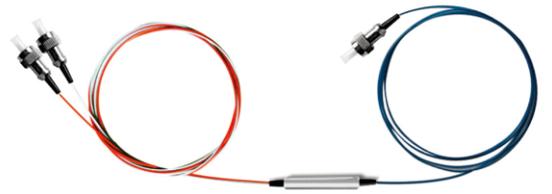
Good inter-insertion performance

Good interchangeability

Good temperature stability

**Application:** \* WDM system \* Cable TV system \* FTTH 3-in-1 system

Parameter	Specification
Working wavelength	1260-1600nm
Transmission wavelength	1500~1600nm
Reflection wavelength	1260~1360
Insertion loss	≤0.5dB
Insertion loss temperature stability	≤0.005dB/°C
Passband flatness	≤0.3dB
Isolation	Transmissive end COM-PASS@1310
	Reflective end COM-REF@1550
Polarization related loss	≤0.1dB
Polarizing film dispersion	≤0.1ps
Directionality	≥50dB
Reflection	≥50dB
Maximum input power	500mW
Fiber type	Single mode G652,G657
Optical cable type	Ø0.9 , Ø3
Optical interface	Customizable
Length	Customizable
Operating temperature	-40°C ~ 85°C
Storage temperature	-40°C ~ 85°C
Certification	ROHS 2.0, CE
Standard	Telcordia GR-1209-CORE
	Telcordia GR-1221-CORE



# 1310/1490/1550 WDM

Suitable for conventional GPON, EPON 1550/1310/1490 three wavelength WDM

Low insertion loss

Large return loss

Good repeatability

Good inter-insertion performance

Good interchangeability

Good temperature stability

**Application:** \* WDM system \* Cable TV system \* FTTH 3-in-1 system

Parameter	Specification	
Working wavelength	1260-1650nm	
Transmission wavelength	≥1540nm	
Reflection wavelength	≤1500nm	
Insertion loss	≤0.5dB	
Insertion loss temperature stability	≤0.005dB/°C	
Wavelength thermal stability	≤0.002nm/°C	
Passband flatness	≤0.3dB	
Isolation	Transmissive end COM-PASS@1310/1490	≥30dB
	Reflective end COM-REF@1550	≥20dB
Polarization related loss	≤0.1dB	
Polarizing film dispersion	≤0.1ps	
Directionality	≥50dB	
Reflection	≥50dB	
Maximum input power	500mW	
Fiber type	Single mode G652,G657	
Optical cable type	Ø0.9 , Ø3	
Optical interface	Customizable	
Length	Customizable	
Operating temperature	-40°C ~ 85°C	
Storage temperature	-40°C ~ 85°C	
Certification	ROHS 2.0, CE	
Standard	Telcordia GR-1209-CORE Telcordia GR-1221-CORE	



# 1270/1310/1490/1550/1577 WDM

Suitable for 10G PON 1270/1310/1490/1550/1577 five-wavelength WDM, compatible with GPON and EPON.

Wide operating wavelength range

High channel isolation

Low insertion loss

High stability and reliability

Ultra flat broadband

Light path without epoxy resin

Add 1270 and 1577nm wavelength reflections based on the three-wavelength device

Compatible with G/EPON and 10G/EPON

**Application:** \* WDM system      \* Cable TV system      \* FTTH 3-in-1 system

Parameter		Specification
Working wavelength		1260-1650 nm
Transmission wavelength		1540-1560nm
Reflection wavelength		<1540nm >1560nm
Insertion loss		≤0.7dB
Insertion loss temperature stability		≤0.005dB/°C
Wavelength thermal stability		≤0.002nm/°C
Passband flatness		≤0.3dB
Isolation	Transmissive end COM-PASS@1270/1310/1490/1577	≥30dB
	Reflective end COM-REF@1550	≥20dB
Polarization related loss		≤0.1dB
Polarizing film dispersion		≤0.1ps
Directionality		≥50dB
Reflection		≥50dB
Maximum input power		500mW
Fiber type		Single mode G652,G657
Optical cable type		Ø0.9 , Ø3
Optical interface		Customizable
Length		Customizable
Operating temperature		-40°C ~ 85°C
Storage temperature		-40°C ~ 85°C
Certification		ROHS 2.0, CE
Standard		Telcordia GR-1209-CORE Telcordia GR-1221-CORE



## CWDM

ITU-T standard wavelength

Low insertion loss

Large return loss

Good repeatability

Good inter-insertion performance

Good interchangeability

Good temperature stability

**Application:** \* WDM system \* Cable TV system \* FTTH 3-in-1 system

Parameter	Specification		
Working wavelength	1260-1650 nm		
Center wavelength	ITU-T Grid		
Channel spacing	20nm		
0.5dB Bandwidth	±7nm		
Passband flatness	≤0.3dB		
Number of channels	4	8	16
Typical insertion loss	≤1.5dB	≤2.5dB	≤3.5dB
Polarization related loss	≤0.1dB	≤0.15dB	≤0.15dB
Polarizing film dispersion	≤0.1ps		
Adjacent channel isolation	≥30dB		
Non-adjacent channel isolation	≥40dB		
Insertion loss temperature stability	≤0.005dB/°C		
Wavelength thermal stability	≤0.002nm/°C		
Passband flatness	≤0.3dB		
Directionality	≥50dB		
Reflection	≥50dB		
Maximum input power	500mW		
Fiber type	Single mode G652,G657		
Optical cable type	Ø0.9 , Ø3		
Optical interface	Customizable		
Length	Customizable		
Operating temperature	-10°C ~ 70°C		
Storage temperature	-40°C ~ 85°C		
Certification	ROHS 2.0, CE		
Standard	Telcordia GR-1209-CORE Telcordia GR-1221-CORE ITU G.694.2		