

PLC Splitter Device

Henan Shijia's full line of PLC Splitters is ideal for inside/outside plant installations providing superior optical performance and field-proven environmental reliability for FTTH PON applications. PLC splitters are available in a variety of packaging options and can be offered according to customers' design and requirements.

Features:

- Compact Design
- Low insertion loss and PDL
- Good uniformity
- Wide range operating wavelength
- High Reliability
- Telcordia GR-1209 & GR-1221 Compliance

Applications:

- FTTH/FTTB/FTTC/CATV Network system
- PON (Passive Optical Network)

Other applications in fiber-optic systems



1xN Specifications:

Parameters		1X2	1X3	1X4	1X6	1X8	1X12	1X16	1X24	1X32	1X64	1X128
Operating Wavelength		1260~1650										
IL(Max.) (dB)	P Grade	3.8	6.0	7.1	9.2	10.2	12.3	13.5	15.9	16.6	20.1	24.2
	S Grade	4.1	6.3	7.4	9.5	10.5	12.6	13.9	16.2	17.0	20.5	24.6
Uniformity (dB)	MAX	0.8	0.8	0.8	0.8	0.8	1	1.2	1.4	1.5	2	2.5
PDL (dB)	MAX	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5
Directivity (dB)	MIN	55										
Return Loss (dB)	MIN	55										
Fiber Type		ITU.G657A or Customized										
Storage Temp.		-40~85°C										
Operating Temp.		-40~85°C										

2xN Specifications:

Parameters		2X2	2X4	2X8	2X16	2X32	2X64
Operating Wavelength		1260~1650					
IL(Max.) (dB)	P Grade	4.2	7.4	10.8	14.1	17.2	20.4
	S Grade	4.4	7.7	11	14.3	17.5	20.7
Uniformity (dB)	MAX	0.8	0.8	1	1.2	1.8	2.5
PDL (dB)	MAX	0.3	0.3	0.3	0.3	0.3	0.4
Directivity (dB)	MIN	55					
Return Loss (dB)	MIN	55					
Fiber Type		G657A or Customized					
Storage Temp.		-40~85					
Operating Temp.		-40~85					

- 1.All parameters are tested at 1310nm&1550nm and room temperature;
- 2.The IL are tested without connector loss ;Insertion loss increases 0.3dB/pair if connectors are added;
- 3.The RL requirement is: $RL \geq 55\text{dB}$ for with APC connector and $RL \geq 50\text{dB}$ for with UPC connector

Thermal AWG Module

SHIJIA's TAWG is based on the silica-on-silicon technology. The AAWG is an integrated PLC component that multiplexes or demultiplexes multi channels onto a single fiber for Dense Wavelength Division Multiplexing applications. It keeps at a certain temperature to maintain the optical performance from -15°C to 65°C of environmental temperature.

Features:

- Intelligentized temperature controller
- High stability and reliability
- Low insertion loss, high isolation increase system margin
- Mux and Demux functionality
- Qualified under Telcordia 1209/1221 and ROHS compliant

Applications:

- DWDM Transmission
- Metro Area Networks
- Long Haul Networks



PARAMETER	UNITS	SPECIFICATION	
		Flat-Top	Gaussian
Pass Band Profile		Flat-Top	Gaussian
Nominal Channel Spacing	GHz	100/150	
Output Number of Channels		48	
Operating Band		O/C/L Band	
Clear Passband	GHz	±12.5	
Wavelength Accuracy	pm	±40	
1dB Bandwidth	nm	≥0.47	≥0.24
3dB Bandwidth	nm	≥0.64	≥0.43
20dB Bandwidth	nm	≤1.2	≤1.15
Optical Insertion Loss	dB	≤4.8	≤2.8
Insertion Loss Uniformity	dB	≤1.0	
Ripple	dB	≤0.5	≤1.0
Polarization Dependent Loss	dB	≤0.5	
Adjacent Channel Isolation	dB	≥28	≥30
Non-adjacent Channel Isolation	dB	≥38	≥40
Total Crosstalk	dB	≥24	≥26
Polarization Mode Dispersion(PMD)*	ps	≤0.5	
Chromatic Dispersion	ps/nm	±20	
Optical Return Loss	dB	≥40	
Package Size	mm	120×70×11.5	
Operating Temperature	°C	-15 ~ +65	

Athermal AWG Module

SHIJIA's AAWG is based on the silica-on-silicon technology and has equivalent performance to standard thermal AWGs. It has no control electronics, and consumes no electrical power. The AAWG is an integrated PLC component that multiplexes or demultiplexes multi channels onto a single fiber for Dense Wavelength Division Multiplexing applications.

Features:

- Athermal design operates over operating temperature range
- High stability and reliability
- Low insertion loss, high isolation increase system margin
- Mux and Demux functionality
- Qualified under Telcordia 1209/1221 and ROHS compliant

Applications:

- DWDM Transmission
- Metro Area Networks
- Long Haul Networks



PARAMETER	UNITS	SPECIFICATION	
		Flat-Top	Gaussian
Pass Band Profile		Flat-Top	Gaussian
Nominal Channel Spacing	GHz	100/150	
Output Number of Channels		48	
Operating Band		O/C/L Band	
Clear Passband	GHz	±12.5	
Wavelength Accuracy	pm	±50	
1dB Bandwidth	nm	≥0.47	≥0.24
3dB Bandwidth	nm	≥0.64	≥0.43
20dB Bandwidth	nm	≤1.2	≤1.15
Optical Insertion Loss	dB	≤5.0	≤3.0
Insertion Loss Uniformity	dB	≤1.0	
Ripple	dB	≤0.5	≤1.0
Polarization Dependent Loss	dB	≤0.5	
Adjacent Channel Isolation	dB	≥28	≥30
Non-adjacent Channel Isolation	dB	≥38	≥40
Total Crosstalk	dB	≥24	≥26
Polarization Mode Dispersion(PMD)*	ps	≤0.5	
Chromatic Dispersion	ps/nm	±20	
Optical Return Loss	dB	≥40	
Package Size	mm	120×70×10	
Operating Temperature	°C	-5 ~ +65 or -40 ~ +85	

Athermal AWG Rack Mount

SHIJIA's AAWG is based on the silica-on-silicon technology and has equivalent performance to standard thermal AWGs. It has no control electronics, and consumes no electrical power. The AAWG is an integrated PLC component that multiplexes or demultiplexes multi channels onto a single fiber for Dense Wavelength Division Multiplexing applications.

Features:

- Athermal design operates over operating temperature range
- High stability and reliability
- Low insertion loss, high isolation increase system margin
- Mux and Demux functionality
- Qualified under Telcordia 1209/1221 and ROHS compliant

Applications:

- DWDM Transmission
- Metro Area Networks
- Long Haul Networks



PARAMETER		UNITS	SPECIFICATION
Pass Band Profile			Flat-Top
Nominal Channel Spacing		GHz	50
Output Number of Channels			80/96
Operating Band			C Band
Clear Passband		GHz	±6.25
Wavelength Accuracy		pm	±50
1dB Bandwidth		nm	≥0.23
3dB Bandwidth		nm	≥0.36
20dB Bandwidth		nm	≤1.2
Optical Insertion Loss	Link Port	dB	≤4.5
	Monitor Port (MUX)	dB	≤21
	Monitor Port (DMUX)	dB	≤17.5
Insertion Loss Uniformity		dB	≤1.2
Ripple		dB	≤0.6
Polarization Dependent Loss		dB	≤0.5
Adjacent Channel Isolation		dB	≥25
Non-adjacent Channel Isolation		dB	≥38
Total Crosstalk		dB	≥22
Polarization Mode Dispersion(PMD)*		ps	≤0.5
Optical Return Loss		dB	≥40
Package Size			1U Rack Mount
Fiber Type			SMF28e
Connector Type			LC/UPC
Operating Temperature		°C	-5 ~ +65

WDM Components & Module

SHIJIA's WDM is based on the thin film filter technology, which can let two or more optical wavelength transmit signals in one optical fiber, or separate the multiplex signals. By cascading 3-ports components, multi-channel module is implemented.

Features:

- Low Insertion Loss, Low PDL
- High Isolation
- Epoxy-free optical path
- High reliability and stability

Applications:

- CWDM/DWDM systems
- Long-haul/Access/Metro networks
- CATV Networks



WDM Components & Module Specifications:

Parameters	Unit	3ports CWDM Components	3ports DWDM Components	CWDM Module		DWDM Module
Operating Wavelength	nm	1260~1620	C & L band	1260~1620		C & L band
Center Wavelength	nm	ITU-T grid				
Channel Spacing	-	20nm	100GHz/200GHz	20nm	100GHz/200GHz	
Bandwidth	nm	+/-6.5	+/-0.12	+/-6.5	+/-0.12	
CW Accuracy	nm	+/-1	+/-0.08	+/-1	+/-0.08	
Number of Channel	-	-		4	8	16
Max.IL	dB	Transmission ≤0.7; Reflection ≤0.5		≤1.8	≤2.5	≤3.5
Rippler	dB	≤0.5				
Adjacent Isolation	dB	≥30				
Non-adjacent Isolation	dB	≥45				
PDL	dB	≤0.1	≤0.15	≤0.15	≤0.2	≤0.2
Return Loss	dB	≥50				
Directivity	dB	≥50				
Power Handing	mW	500				
Operating Temp.	°C	-40 ~ +85				
Storage Temp.	°C	-40 ~ +85				