

Planar Lightwave Circuit Splitter

Description

Planar lightwave circuit (PLC) splitter is a type of optical power management device that is fabricated using silica optical waveguide technology. It features small size, high reliability, wide operating wavelength range and good channel-to-channel uniformity, and is widely used in PON networks to realize optical signal power splitting. Sunma provides whole series of 1xN and 2xN splitter products that are tailored for specific applications. All products meet GR-1209-CORE and GR-1221-CORE requirements.

Features

- Low Insertion loss
- Low PDL
- Compact Design
- Good channel-to-channel uniformity
- Wide Operating Wavelength:
From 1260nm to 1650nm
- Wide Operating Temperature:
From -40°C to 85°C
- High Reliability and Stability

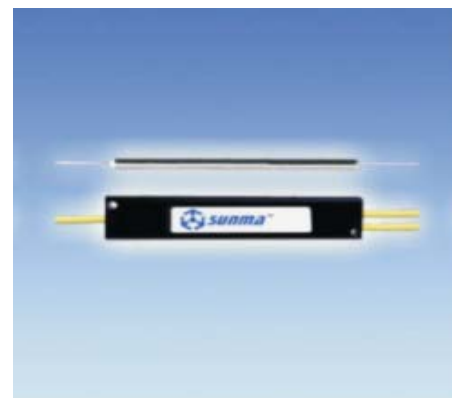


Applications

- FTTX Systems
- PON Networks
- CATV Links
- Optical Signal Distribution

Compliance

- Telcordia GR-1209-CORE
- Telcordia GR-1221-CORE
- RoHS



Specifications

Table 1 – 1×N PLC Splitter

Parameters	1×2	1×4	1×8	1×16	1×32	1×64
Operating Wavelength (nm)	1260~1650					
Fiber Type	G657A or customer specified					
Insertion Loss (dB) (P/S Grade)	3.8/4.0	7.1/7.3	10.2/10.5	13.5/13.7	16.5/16.9	20.5/21.0
Loss Uniformity (dB)	0.4	0.6	0.8	1.2	1.5	2.0
Return Loss (dB) (P/S Grade)	55/50	55/50	55/50	55/50	55/50	55/50
Polarization Dependent Loss(dB)	0.2	0.2	0.2	0.25	0.3	0.35
Directivity (dB)	55	55	55	55	55	55
Wavelength Dependent Loss(dB)	0.3	0.3	0.3	0.5	0.5	0.5
Temperature Stability(-40~85 °C)(dB)	0.4	0.4	0.4	0.5	0.5	0.5
Operating Temperature (°C)	-40~85					
Storage Temperature (°C)	-40~85					
Device Dimension (mm) (L×W×H)	40×4×4	40×4×4	40×4×4	50×4×4	50×7×4	60×12×4
Module Dimension (mm) (L×W×H)	100×80×10	100×80×10	100×80×10	120×80×18	140×115×18	140×115×18
Mini-Module Dimension (mm) (L×W×H)	50×7×4	50×7×4	60×7×4	60×12×4	80×20×6	N/A

Table 2 – 2×N PLC Splitter

Parameters	2×2	2×4	2×8	2×16	2×32	2×64
Operating Wavelength (nm)	1260~1650					
Fiber Type	G657A or customer specified					
Insertion Loss (dB)	4.0	7.6	11.0	14.4	17.5	21.0
Loss Uniformity (dB)	0.6	1.0	1.2	1.5	1.8	2.2
Return Loss (dB) (P/S Grade)	55/50	55/50	55/50	55/50	55/50	55/50
Polarization Dependent Loss(dB)	0.2	0.2	0.3	0.3	0.4	0.4
Directivity (dB)	55	55	55	55	55	55
Wavelength Dependent Loss(dB)	0.3	0.4	0.5	0.5	0.5	0.5

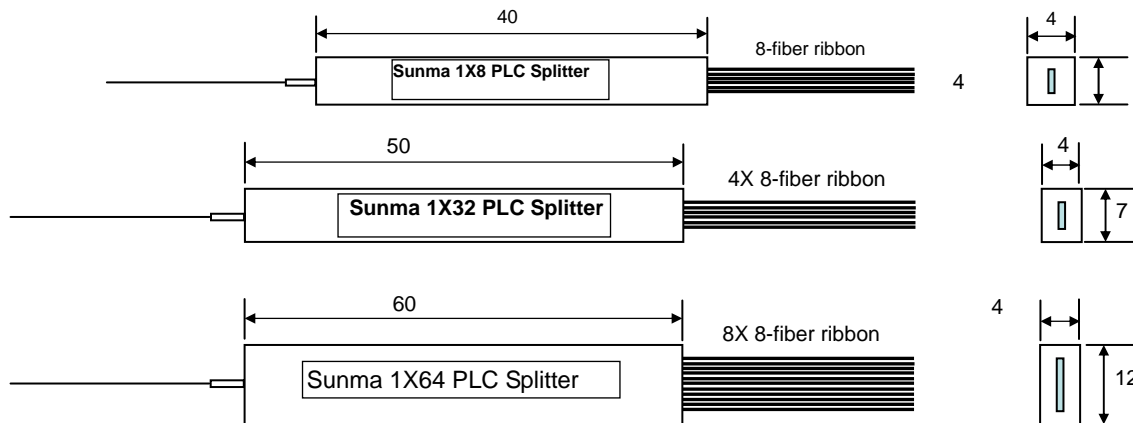
Temperature Stability(-40~85 °C)(dB)	0.4	0.4	0.4	0.5	0.5	0.5
Operating Temperature (°C)	-40~85					
Storage Temperature (°C)	-40~85					
Device Dimension (mm) (LxWxH)	40x4x4	50x4x4	50x4x4	50x7x4	60x7x4	60x12x4
Module Dimension (mm) (LxWxH)	100x80x10	100x80x10	100x80x10	120x80x18	140x115x18	140x115x18
Mini-Module Dimension (mm) (LxWxH)	60x7x4	60x7x4	60x7x4	60x12x4	80x20x6	N/A

Notes:

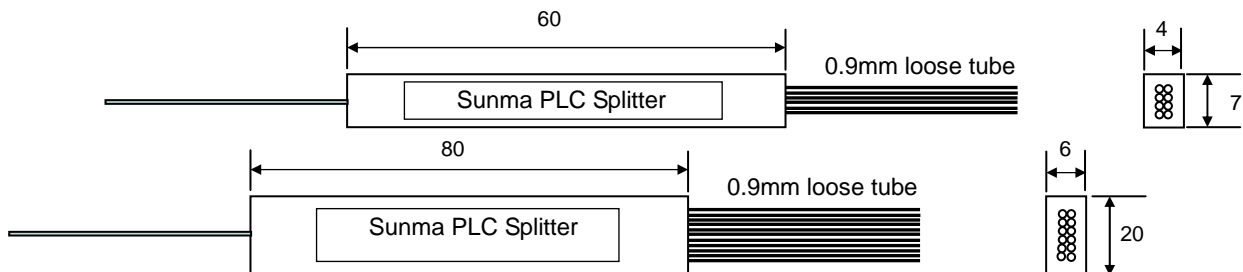
1. Specified without connectors.
2. Add an additional 0.15dB loss per connector.

Mechanical Dimensions

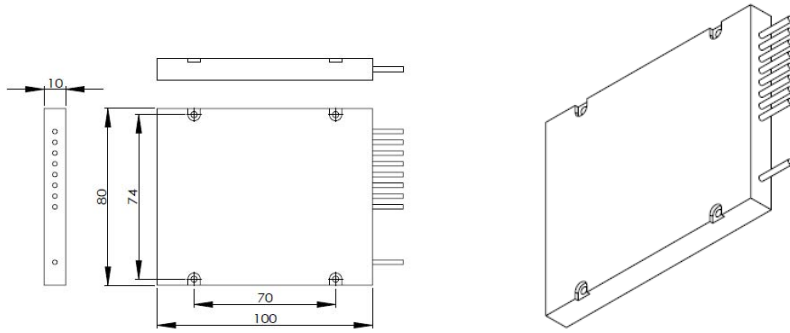
PLC Splitter Bare Device



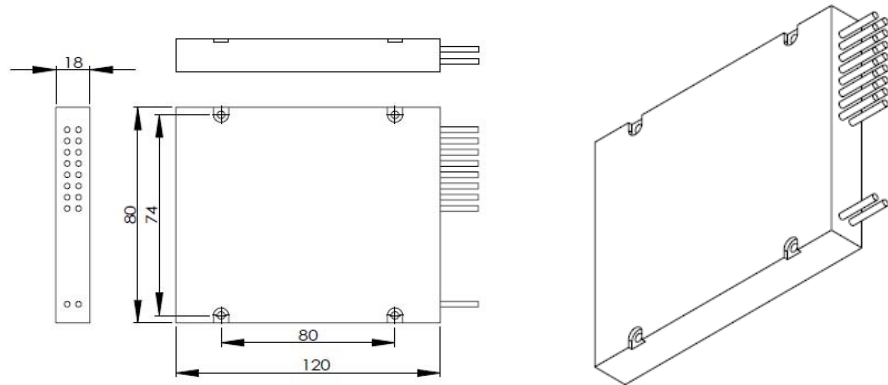
PLC Splitter Mini-Module



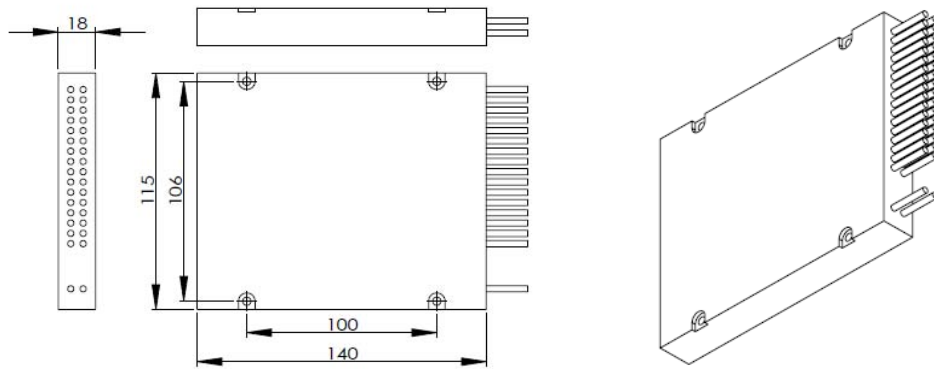
PLC Splitter Module



100X80X10



120X80X18



140X115X18

Ordering information

PLC Splitter

PS-	-	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
		102=1X2		B=250μm bare fiber	10=1.0m		B=250μm bare fiber	10=1.0m		0=None	0=None
P=PLC		104=1X4		L=900μm loose tube	15=1.5m		R=ribbon fiber	15=1.5m		1=FC/UPC	1=FC/UPC
S=Splitter		108=1X8		T=900μm tight buffer	20=2.0m		F=Fan out box with 900μm loose tube	20=2.0m		2=FC/APC	2=FC/APC
		.....			.....			.....		3=SC/UPC	3=SC/UPC
		164=1X64								4=SC/APC	4=SC/APC
		202=2X2								5=LC/UPC	5=LC/UPC
		.....								6=LC/APC	6=LC/APC
		232=2X32								X=Customized	X=Customized

Notes for above:

- 1: When Input fiber type is B=250μm bare fiber, the Input connector can ONLY be 0=None.
- 2: When Output fiber type is B=250μm bare fiber, or R=ribbon fiber, the Output connector can ONLY be 0=None.

PLC Splitter Module

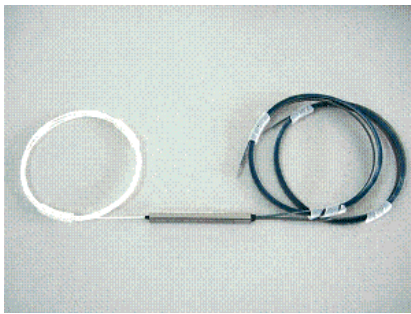
PM	-	XXX	-	XX	-	XX	-	XX	-	X	X
		Port Configuration		Modules type		Cable type		Fiber length		Input connector	Output connector
		102=1X2		PL=140X115X18, plastic		09=∅0.9mm		10=1.0m		0=None	0=None
P=PLC splitter		104=1X4		PM=120X80X18, plastic		20=∅2.0mm		15=1.5m		1=FC/UPC	1=FC/UPC
M=Module		108=1X8		PS=100X80X10, plastic		30=∅3.0mm		20=2.0m		2=FC/APC	2=FC/APC
		.....		MM=Mini-Module				.....		3=SC/UPC	3=SC/UPC
		164=1X64		XX=Customized						4=SC/APC	4=SC/APC
		202=2X2								5=LC/UPC	5=LC/UPC
		.....								6=LC/APC	6=LC/APC
		264=2X64								X=Customized	X=Customized

Notes for above:

- 1: When Port Configuration is 102=1X2, 104=1X4, 108=1X8, 202=2X2, 204=2X4, 208=2X8, Module's Enclosure type is best be PS= 100X80X10, plastic, or bigger ones.
- 2: When Port Configuration is 116=1X16, 216=2X16, Module's Enclosure type is best be PM= 120X80X18, plastic, or bigger ones.
- 3: When Port Configuration is 132=1X32, 164=1X64, 232=2X32, Module's Enclosure type is best be PL= 140X115X18, plastic, or bigger ones.
- 4: When Module's Enclosure type is MM=Mini-Module, fiber type can ONLY be 09=0.9mm, as 2.0mm or 3.0mm is too big.

PLC Splitter Box

PB	–	XXX	–	XX	–	X	X
		Port Configuration		Box type		Input connector	Output connector
		102=1X2		LX=LGX box, metal		0=None	0=None
P=PLC splitter		104=1X4		19=19' 1U Rack-Mount Box		1=FC/UPC	1=FC/UPC
B=Box		108=1X8		TP=ODF Box		2=FC/APC	2=FC/APC
		-----		WM=Wall-Mount Box		3=SC/UPC	3=SC/UPC
		164=1X64		XX=Customized		4=SC/APC	4=SC/APC
		202=2X2				5=LC/UPC	5=LC/UPC
		-----				6=LC/APC	6=LC/APC
		264=2X64				X=Customized	X=Customized

Contact Us


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