

1xN SM PLC Splitter Module



DATASHEET

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Features

- Wide Operating Wavelength
- Ultra Low Excess Loss
- Low Polarization Sensitivity
- Highly Stable & Reliable
- High Uniformity
- Ultra Low Cost
- Telcordia GR-1221 and GR-1209 Qualified

Applications

- Telecommunications
- FTTX
- CATV
- LAN
- Passive Optical Network (PON)

Planar lightwave circuit (PLC) splitter is a type of optical power management device that is fabricated using silica optical waveguide technology to distribute optical signals from Central Office (CO) to multiple premise locations. Bare fiber splitter is a kind of ODN product suitable for PON networks that can be installed in the pigtail cassette, test instrument and WDM system, which minimizes the space occupation.

Specifications

Parameter		Min	Typical	Max	Unit
Wavelength		1260		1650	nm
Insertion Loss ^{[1], [2]}	1x2		4.0		dB
	1x4		7.3		
	1x8		10.8		
	1x16		13.8		
	1x32		17.2		
	1x64		20.5		
Uniformity	1x2		0.6		dB
	1x4		0.8		
	1x8		1.0		
	1x16		1.5		
	1x32		2.0		
	1x64		2.5		
PDL	1x2		0.2		dB
	1x4		0.2		
	1x8		0.2		
	1x16		0.3		
	1x32		0.3		
	1x64		0.3		
Return Loss			50		dB
Directivity			55		dB
Power Handling			300		mW
Working Temperature		-40		85	°C
Storage Temperature		-40		85	°C
Fiber type		Corning SMF28			
Connector Type		Custom specified			

Notes:

- [1]. Measured without connectors at room temperature
- [2]. For devices with connectors, add 0.3dB to the IL

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

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Rev 07/17/25

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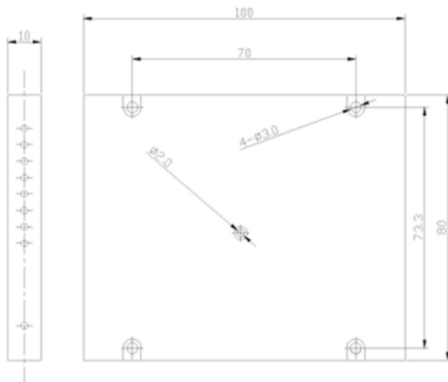


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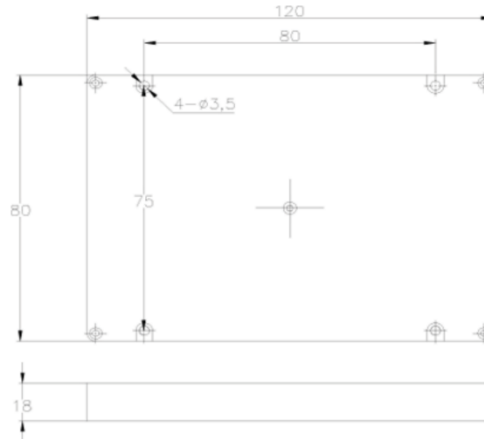
Mechanical Dimensions (mm)

Package Type	Package Dimensions (H x W x L), mm	PLC Splitters Port Configuration				
		1x2; 2x2; 1x4; 2x4	1x8; 2x8	1x16; 2x16	1x32; 2x32	1x64; 2x64
1	10 x 80 x 100	x	x			
2	18 x 80 x 120	x	x	x		
3	14.5 x 102 x 142	x	x	x	x	
4	18 x 115 x 141	x	x	x	x	x
5	19" Rack Single	x	x	x	x	
	19" Rack Double					x
6	LGX Box Single Wide	x	x			
	LGX Box Double Wide			x		

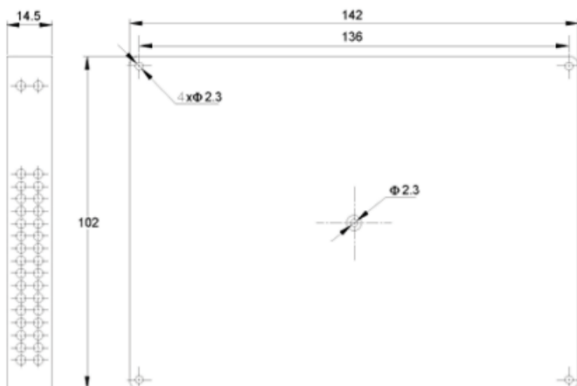
Package 1: 10x80x100 (HxWxL) mm



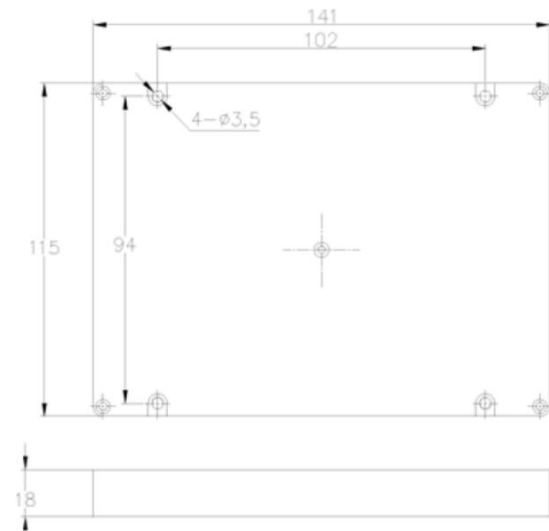
Package 2: 18x80x120 (HxWxL) mm



Package 3: 14.5x102x142 (HxWxL) mm



Package 4: 18x115x141 (HxWxL) mm



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

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Ordering Information (Part Number)

Prefix	Wavelength	Port	Package	Fiber Type	Fiber Length	Input Connector ^[2]	Output Connector ^[2]
PSM1-	1310 = 1 1550 = 2 C+L = 6 Special = 0	1x2 = 02 1x4 = 04 1x8 = 08 1x16 = 16 1x32 = 32 1x64 = 64	Standard = 1 Aerospace ^[1] = A	250um = 1 900um tube = 3 Special = 0	0.25m = 1 0.5 m = 2 1.0 m = 3 1.5 m = 4 2.0 m = 5 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/APC = A LC/UPC = U Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/APC = A LC/UPC = U Special = 0

[1]. Aerospace-grade package featuring an aluminum metal casing filled with a specially formulated RTV compound that is both vibration-resistant and thermally conductive, specifically designed to endure repeated thermal shock cycles from -45°C to 90°C.

[2]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

Fiber Cleanliness

Fibers with smaller core diameters (<5 µm) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

Maximum Optical Input Power

Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the how handling by expanding the core side at the fiber ends.