

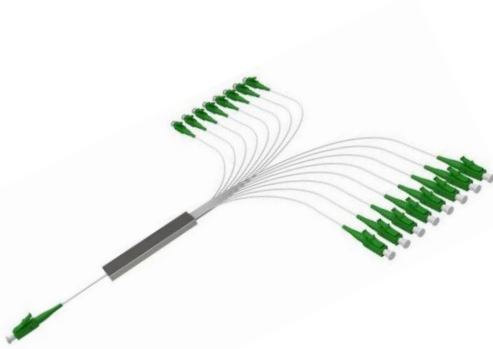
1xN Polarization Maintaining PLC Splitter

1x8, 2x8, 1x16, 2x16, 1x32, 1310/1550nm, both polarization axes, low cost compact



DATASHEET

[Return to the Webpage](#)



Features

- Wide Wavelength
- Large Fiber Port
- Compact
- High Uniformity
- Low Cost
- Telcordia Qualified

Applications

- Sensor
- Instrument
- Communication

Planar lightwave circuit (PLC) splitter is a type of optical power management device that is fabricated using silica optical waveguide technology to split an incoming fiber into multiple output fibers. It offers large output ports at low cost with a compact size, than fused couplers. Polarization Maintaining Fiber Splitter is an optical splitter in which the polarization of linearly polarized light waves launched into the fiber is maintained during propagation, with little or no cross-coupling of optical power between the polarization modes. Available configurations are 1xN and 2xN up to 32 output fiber ports. The device intrinsically works for light of both polarizations, also it maintains one polarization.

Specifications

Parameter		Min	Typical	Max	Unit
Center Wavelength		1310		1550	nm
Operating Wavelength Range			±40		nm
Insertion Loss	1x8			10.5	dB
	2x8			11.2	
	1x16			13.7	
	2x16			14.6	
	1x32			16.9	
Uniformity	1x8			1	dB
	2x8			1.2	
	1x16			1.2	
	2x16			1.5	
	1x32			1.5	
Return Loss			50		dB
Polarization Extinction Ratio		18			
Directivity			55		dB
Power Handling			300	500	mW
Working Temperature		-10		75	°C
Storage Temperature		-40		85	°C

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](#):

Legal notices: All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 08/13/25

© Photonwares Corporation

P +1 781-935-1200

E sales@photonwares.com

W www.agiltron.com

Information contained herein is deemed to be reliable and accurate as of the issue date. Photonwares reserves the right to change the design or specifications at any time without notice. Agiltron is a registered trademark of Photonwares Corporation in the U.S. and other countries.

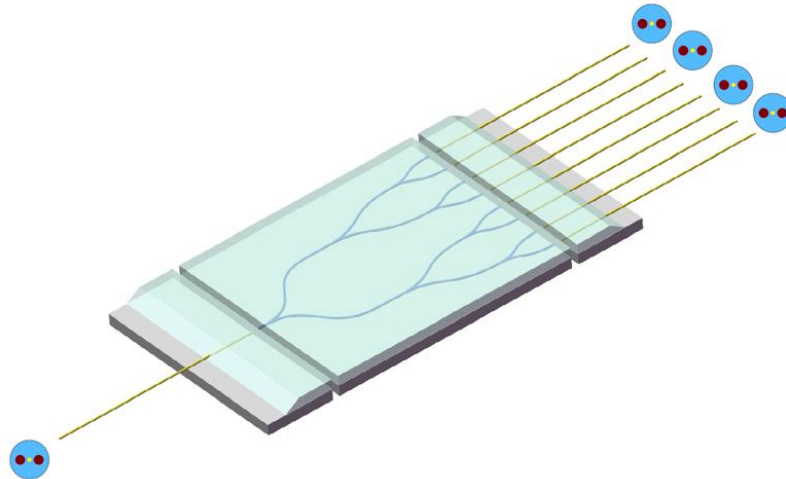
1xN Polarization Maintaining PLC Splitter

1x8, 2x8, 1x16, 2x16, 1x32, 1310/1550nm, both polarization axes, low cost compact

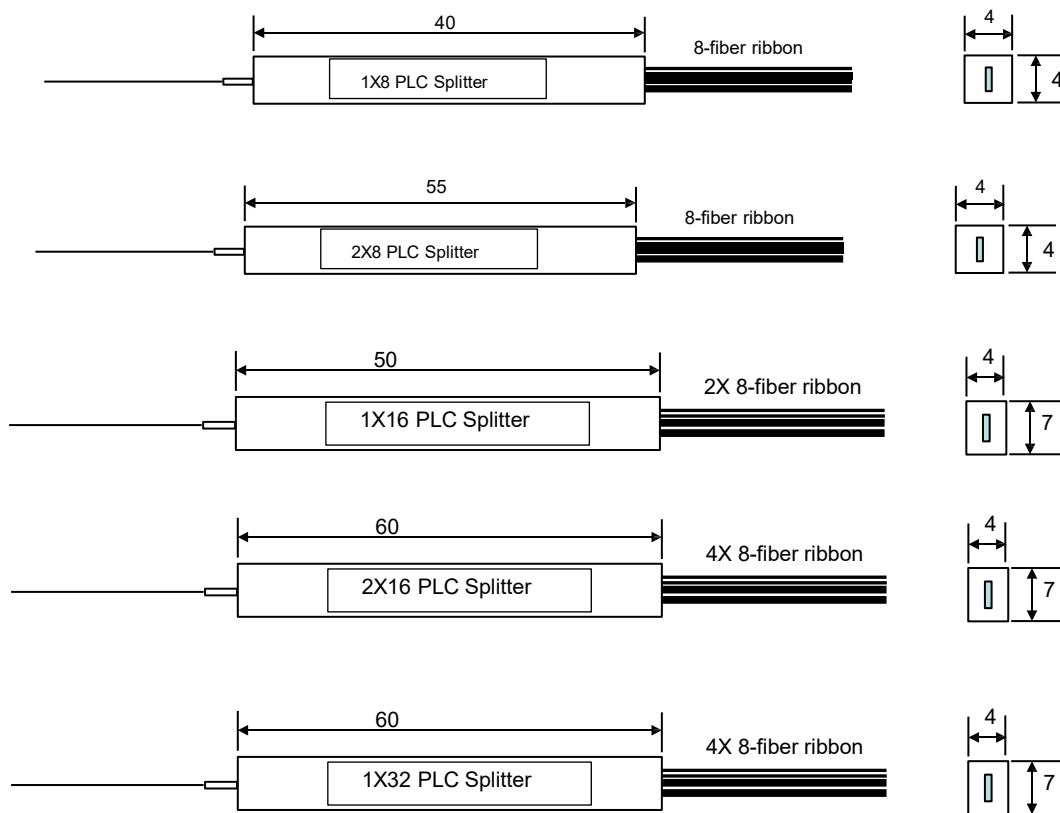


DATASHEET

Configurations



Mechanical Dimensions Bare Fiber PLC Package (mm)



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

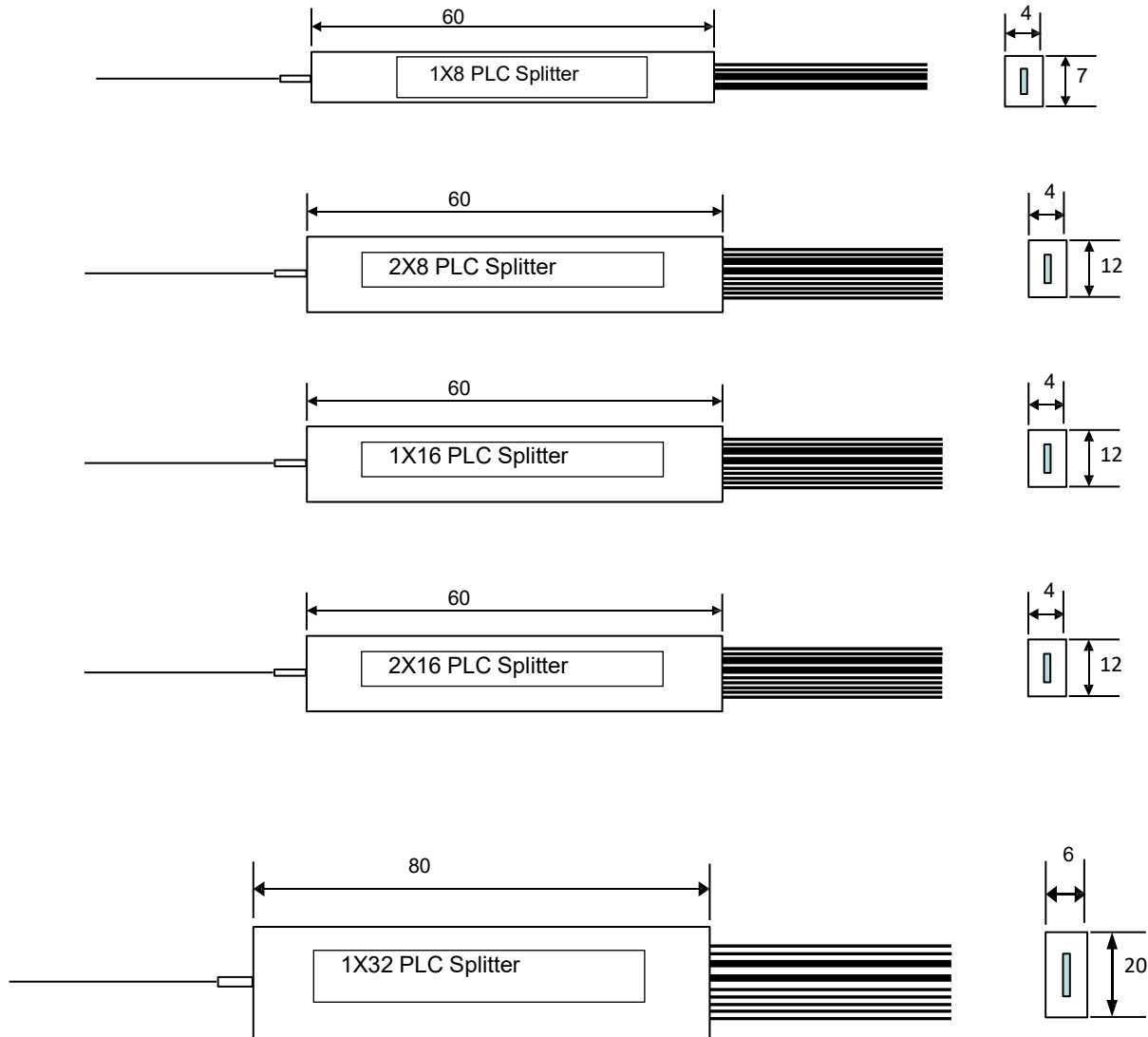
1xN Polarization Maintaining PLC Splitter

1x8, 2x8, 1x16, 2x16, 1x32, 1310/1550nm, both polarization axes, low cost compact



DATASHEET

Mechanical Dimensions Protection Tub Fiber PLC Package (mm)



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

1xN Polarization Maintaining PLC Splitter

1x8, 2x8, 1x16, 2x16, 1x32, 1310/1550nm, both polarization axes, low cost compact

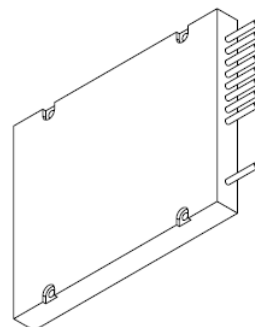
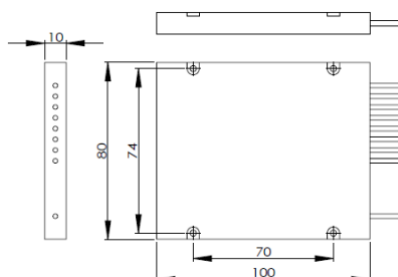


DATASHEET

Mechanical Dimensions PLC Module Package (mm)

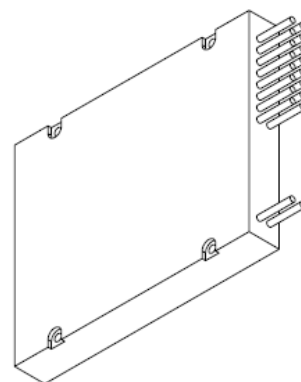
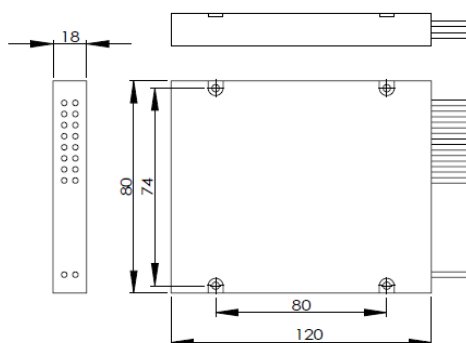
■ 1x8, 2x8 Splitters

100 x 8 x 10



■ 1x16, 2x16, 1x32 Splitters

120 x 80 x 18



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

1xN Polarization Maintaining PLC Splitter

1x8, 2x8, 1x16, 2x16, 1x32, 1310/1550nm, both polarization axes, low cost compact



DATASHEET

Ordering Information (Part Number)

Prefix	Wavelength	Input Port	Output Port	Package	Fiber Type	Fiber Length	Input Connector ^[2]	Output Connector ^[2]
PPLC-	1310 = 1 1550 = 2 Special = 0	1 = 1 2 = 2 Special = 0	2 = 02 3 = 03 4 = 04 8 = 08 16 = 16 32 = 32	Bare Fiber = 1 Loose Tube = 2 Module = 3 Aerospace ^[1] = A	PM1550 = 5 PM1310 = 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.