NETSOURCE

PLC Splitter Guide

Overview

Optical PLCs (Planar Lightwave Circuit Splitters) are essential components in fiber optic networks, designed to efficiently distribute optical signals across multiple pathways. They are widely used in Fiber-to-the-Home (FTTH) networks and support ITU-T PON standards, including GPON and XGS-PON. These splitters provide scalable and reliable signal distribution for central offices, fiber distribution hubs, and both inside plant (ISP) and outside plant (OSP) applications. NetSource offers three splitter configurations to meet a variety of network requirements: Ruggedized, Bare, and Connectorized.

SPECIFICATIONS

Parameter	1x2	1x4	1x8	1x16	1x32	1x64
Operating Wavelength (nm)	1260-1650					
Fiber Type	G657A2					
Insertion Loss (dB) Max w/o Connectors	3.8	7.1	10.2	13.5	16.8	20.2
Insertion Loss (dB) Max with Connectors	4.1	7.4	10.5	13.8	17.1	20.5
Uniformity (dB)	≤0.4	≤0.5	≤0.8	≤1.0	≤1.5	≤1.8
Polarization Dependent Loss (dB)	≤0.25	≤0.25	≤0.25	≤0.3	≤0.3	≤0.35
Return Loss (dB)	≥55					
Directionality (dB)	≥55					
Temperature Stability (dB)	-40°C to 85°C (≤0.5)					
Operating Temperature (°C)	40°C to 85°C					
Storage Temperature (°C)	40°C to 85°C					
Maximum Power (nW)	1,000					

CONFORMANCE

- **Telcordia:** Tested to GR-1209-CORE and GR-1221-CORE
- **RoHS/REACH**

BABA and RUS/RDUP-Compliant configurations available.
Contact NetSource for applicable part numbers and compliance documentation.

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Ruggedized

Designed for use in outdoor enclosures and demanding network environments. Ideal for fiber distribution hubs, handholes, pedestals, and aerial installations.

Note: Must be installed within a properly sealed IP-rated enclosure.

KEY BENEFITS

- **Outdoor Deployment:** Designed for use in protected outside-plant environments.
- **Durable Construction:** Designed for demanding broadband applications.
- **Flexible Installation:** Suitable for fiber distribution hubs, handholes, pedestals, and aerial installations.

GENERAL SPECIFICATIONS

- **Splitter Configuration:** 1x16, 1x32, and 1x64
- **Fiber Type:** G.657.A2
- **Connector Configuration:** SC/APC, SC/UPC, LC/APC, or LC/UPC
- **Cable Construction:** 2 mm or 3 mm ruggedized jacket
- **Input Identification:** Red-booted input leg

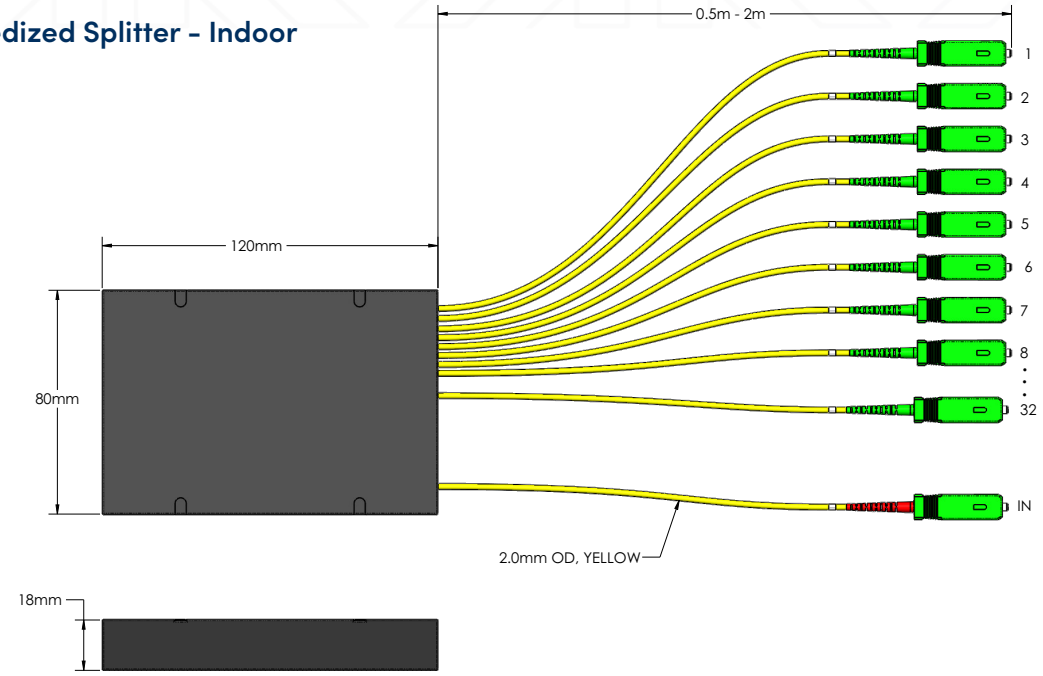
PART NUMBERS

PLC-SP	-	Input Fibers	-	Output Fibers	-	Input Connector Type	Output Connector Type	-	Input Breakout Length	Output Breakout Length	Breakout
		1		16		SA: SC/APC	SA: SC/APC		03: .3M (1FT)	03: .3M (1FT)	RG: 3MM Outdoor
				32		SC: SC/UPC	SC: SC/UPC		05: .5M (1.64FT)	05: .5M (1.64FT)	2: 2MM Indoor
				64		LA: LC/APC	LA: LC/APC		01: 1M (3.28FT)	01: 1M (3.28FT)	
						LC: LC/UPC	LC: LC/UPC		15: 1.5M (5FT)	15: 1.5M (5FT)	
									02: 2M (6.56FT)	02: 2M (6.56FT)	

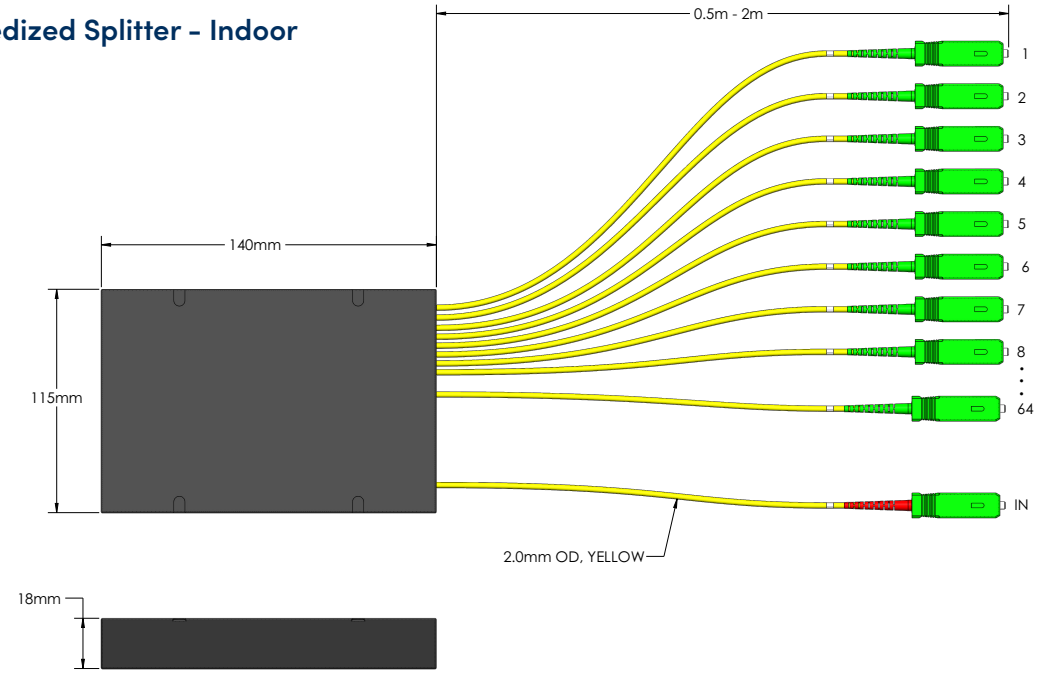
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Ruggedized

1x32 Ruggedized Splitter - Indoor Breakout



1x64 Ruggedized Splitter - Indoor Breakout



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Bare

Designed for integration into splice trays, closures, and other protected enclosures. The compact construction supports high-density applications where the surrounding enclosure provides physical protection.

KEY BENEFITS

- **Direct Splicing:** Supports direct splicing into network fibers for integration into the network.
- **Low Insertion Loss:** Eliminates connector interfaces from the optical path.
- **Compact Construction:** Designed for applications where space is limited and the surrounding enclosure provides protection.

GENERAL SPECIFICATIONS

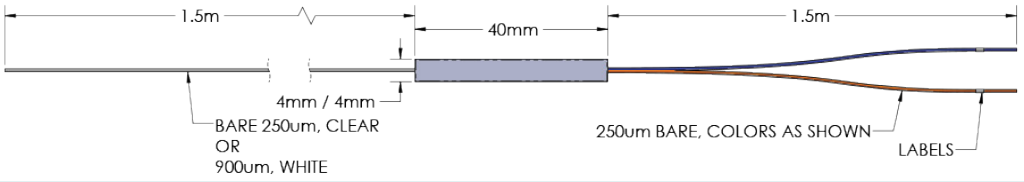
- **Splitter Configuration:** 1x2, 1x4, 1x8, 1x16, 1x32, and 1x64
- **Fiber Type:** G.657.A2
- **Cable Construction:** 250 µm or 900 µm
- **Input/Output Length:** 1.5 m

PART NUMBERS

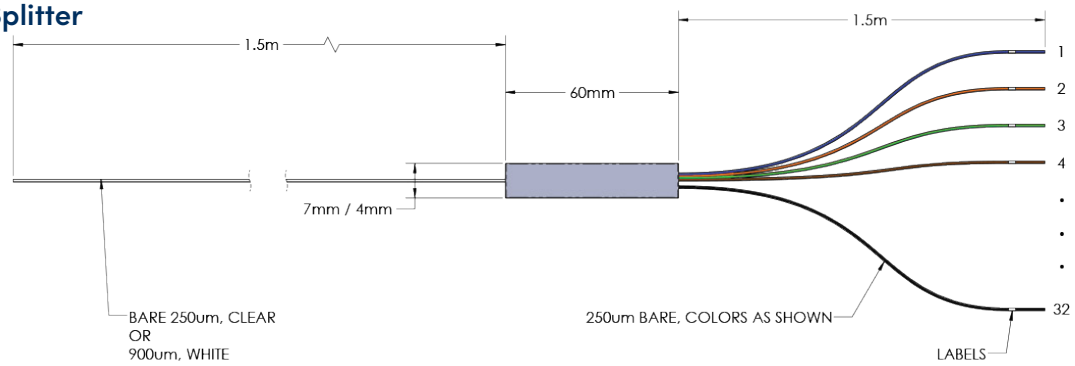
PLC-SP	-	Input Fibers	-	Output Fibers	-	Input Type	Output Type	-	Input Breakout Length	Output Breakout Length
		1		2		X: Bare 250UM	X: Bare 250UM		15: 1.5M (5FT)	15: 1.5M (5FT)
				4		Y: Bare 900UM	Y: Bare 900UM			
				8						
				16						
				32						
				64						

Bare

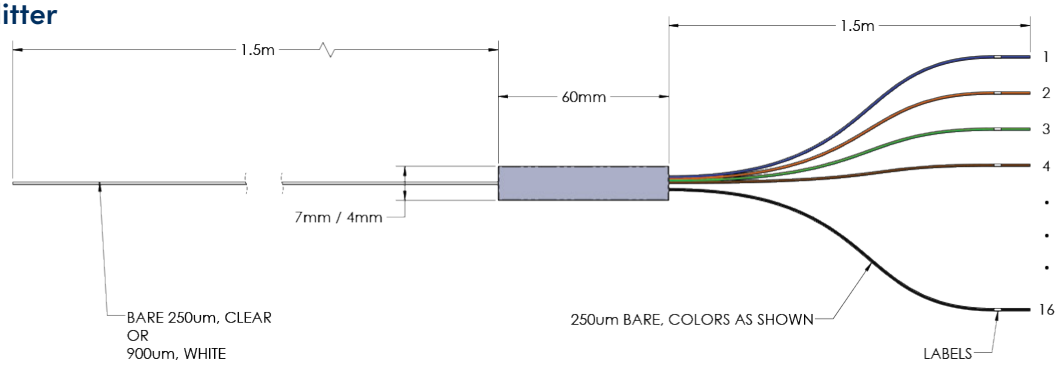
1x2, 1x4, & 1x8 Bare Splitter



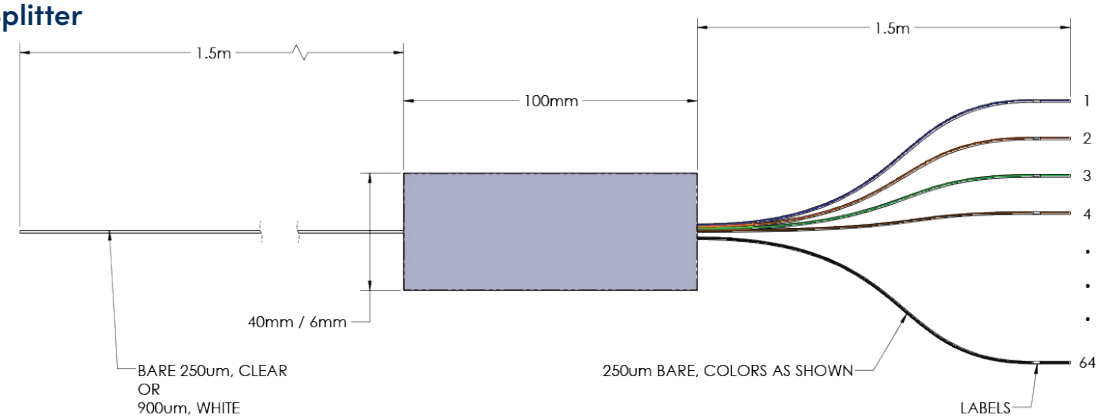
1x32 Bare Splitter



1x16 Bare Splitter



1x64 Bare Splitter



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Connectorized

Designed for flexible deployment in central offices, fiber distribution hubs, multi-dwelling units (MDUs), trays, and protected enclosures. Pre-terminated connectors simplify installation and support modular network configurations.

KEY BENEFITS

- **Plug-and-Play Integration:** Pre-terminated connectors simplify installation, maintenance, and replacement.
- **Compact Design:** Supports high-density installations in distribution panels and enclosures.
- **Consistent Performance:** Factory-terminated connectors provide consistent optical performance and help minimize signal loss.

GENERAL SPECIFICATIONS

- **Splitter Configuration:** 1x2, 1x4, 1x8, 1x16, 1x32, and 1x64
- **Fiber Type:** G.657.A2
- **Connector Configuration:** SC/APC, SC/UPC, LC/APC, or LC/UPC
- **Cable Construction:** 900 µm, 2 mm, or 3 mm

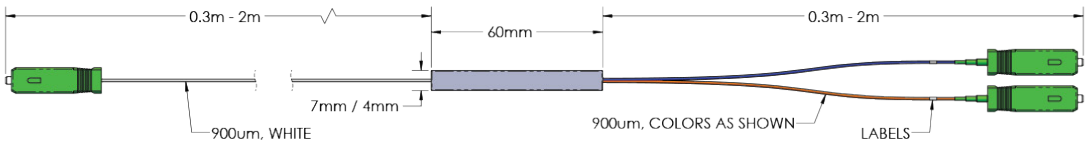
PART NUMBERS

PLC-SP	-	Input Fibers	-	Output Fibers	-	Input Connector Type	Output Connector Type	-	Input Breakout Length	Output Breakout Length	Breakout
		1		2		SA: SC/APC	SA: SC/APC		03: .3M (1FT)	03: .3M (1FT)	900: 900UM
				4		SC: SC/UPC	SC: SC/UPC		05: .5M (1.64FT)	05: .5M (1.64FT)	
				8		LA: LC/APC	LA: LC/APC		01: 1M (3.28FT)	01: 1M (3.28FT)	
				16		LC: LC/UPC	LC: LC/UPC		15: 1.5M (5FT)	15: 1.5M (5FT)	
				32		X: Bare 250UM			02: 2M (6.56FT)	02: 2M (6.56FT)	
				64		Y: Bare 900UM					

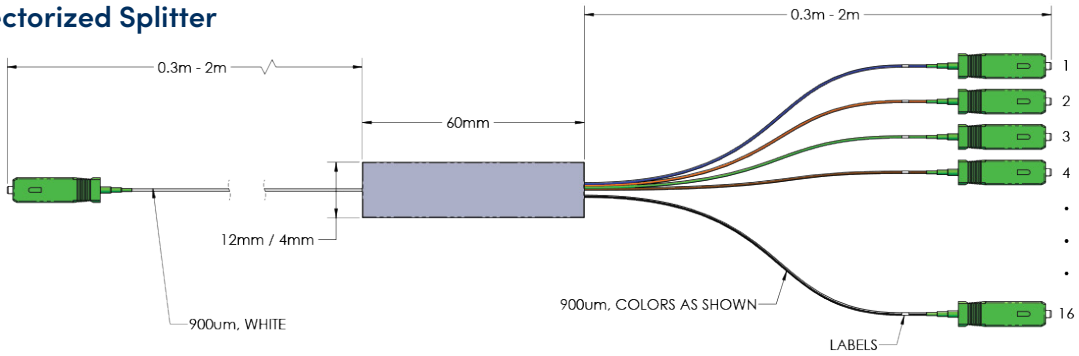
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Connectorized

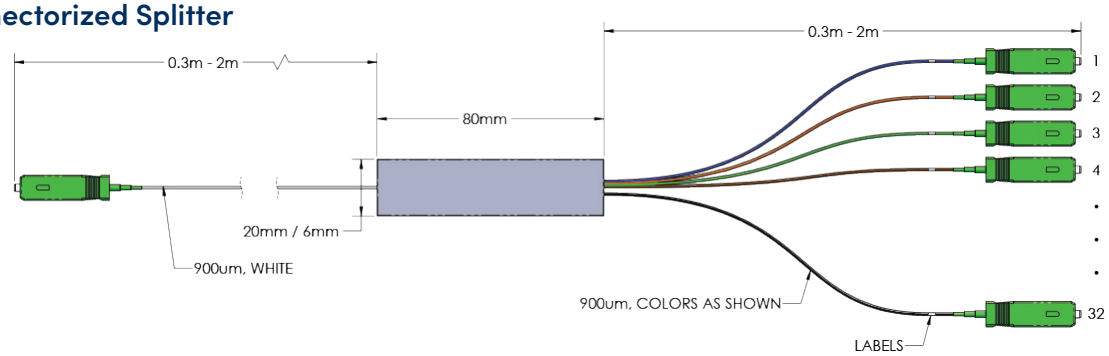
1x2, 1x4, & 1x8 Connectorized Splitter



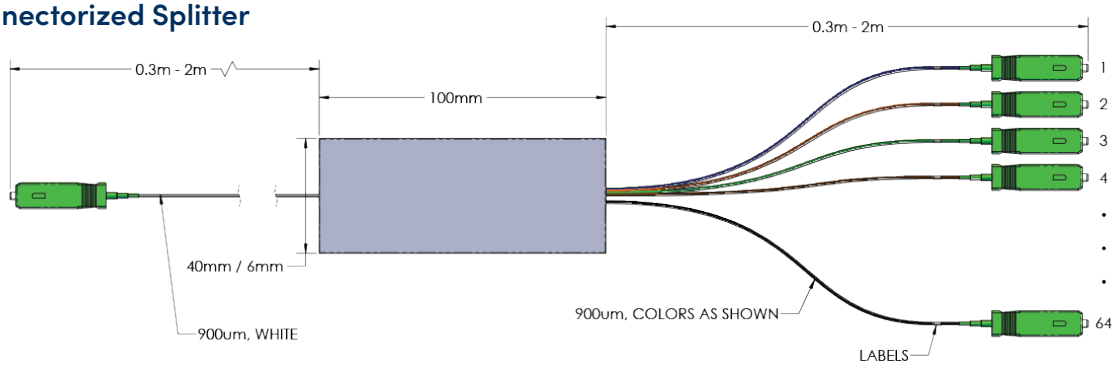
1x16 Connectorized Splitter



1x32 Connectorized Splitter



1x64 Connectorized Splitter



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