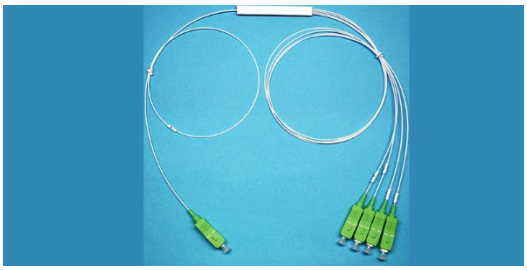
Description:

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. 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 as a low-cost solution. Fiberdyne Labs Inc. 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.

PLC Splitter
(Bare Device, no fan-out or connectors)

Features:

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



Mini Module 1x4 PLC Splitter

Applications:

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

Compliance:

- Telcordia GR-1209-Core
- Telcordia GR-1221-Core
- RoHS

PLC Splitter Pigtail
Module with connectors

Specifications:

Table 1 – 1XN PLC Splitter

Parameters	1 x 2	1 x 4	1 x 8	1 x 16	1 x 32	1 x 64
Operating Wavelength	1260-1650					
Fiber Type	G657A1					
Insertion Loss (dB)	3.8	7.0	10.2	13.5	16.5	20.5
Loss Uniformity (dB)	0.4	0.6	0.8	1.2	1.5	2.5
Return Loss (dB)	55	55	55	55	55	55
Polarization Dependent Loss (PDL, dB)	0.2	0.2	0.3	0.3	0.3	0.4
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)	0.5	0.5	0.5	0.5	0.5	0.5
Operating Temperature	-40 – 85 °C					
Storage Temperature	-40 – 85 °C					
Package Dimensions (mm) (LxWxH)	40x4x4	40x4x4	40x4x4	50x7x4	50x7x4	60x12x4
Module Dimensions (mm) (LxWxH)	100x80x10	100x80x10	100x80x10	120x80x18	140x115x18	140x115x18
Mini-Module Dimensions (mm) (LxWxH)	60x7x4	60x7x4	60x7x4	60x12x4	80x20x6	N/A

Note: Specifications subject to change without notice

Table 2 – 2xN PLC Splitter

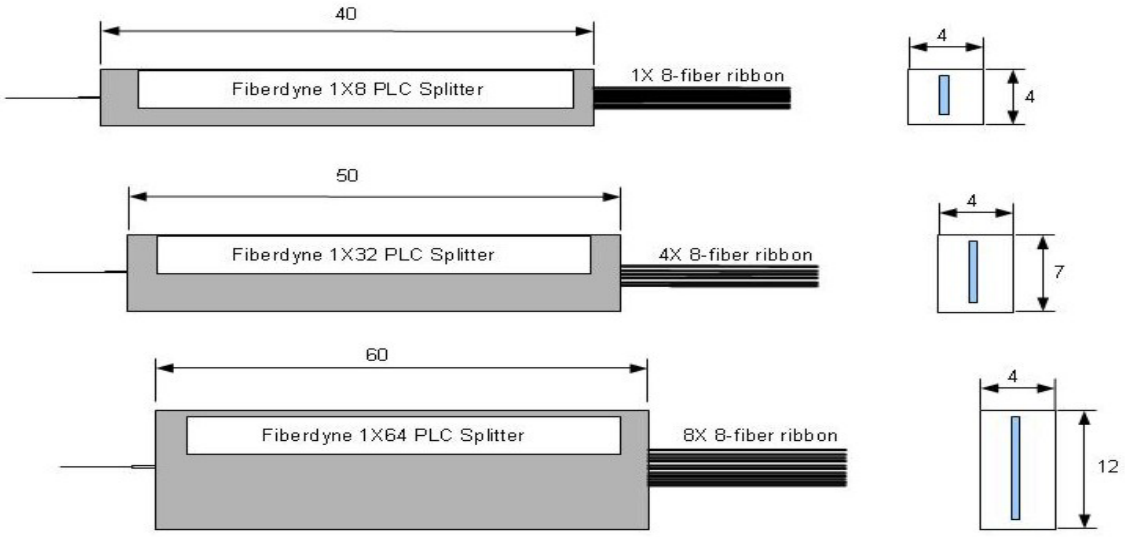
Parameters	2 x2	2 x 4	2 x 8	2 x16	2 x 32
Operating Wavelength	1260 - 1650				
Fiber Type	G657A1				
Insertion Loss (dB)	4.0	7.6	11.0	14.5	17.5
Loss Uniformity (dB)	0.8	1.5	1.5	2.0	2.5
Return Loss (dB)	55	55	55	55	55
Polarization Dependent Loss (PDL, dB)	0.2	0.2	0.3	0.4	0.4
Directivity (dB)	55	55	55	55	55
Wavelength Dependent Loss (dB)	0.3	.05	0.5	0.5	0.5
Temperature Stability (-40 – 85 °C) (dB)	.05	.05	.05	.05	.05
Operating Temperature	-40 – 85 °C				
Storage Temperature	-40 – 85 °C				
Package Dimensions (mm) (LxWxH)	40x4x4	40x4x4	50x7x4	50x7x4	60x7x4
Module Dimensions (mm) (LxWxH)	100x80x10	100x80x10	100x80x10	120x80x18	140x115x18
Mini-Module Dimensions (mm) (LxWxH)	60x7x4	60x7x4	60x7x4	60x12x4	80x20x6

Notes:

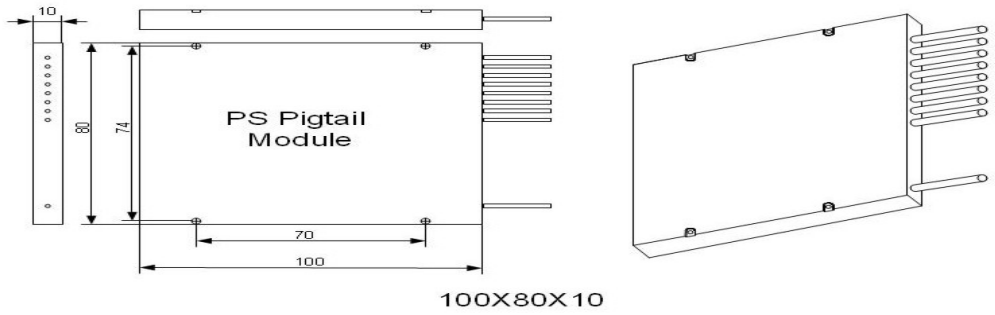
1. **Specified without connectors**
2. **Add an additional 0.2dB loss per connector**

Mechanical Dimensions:

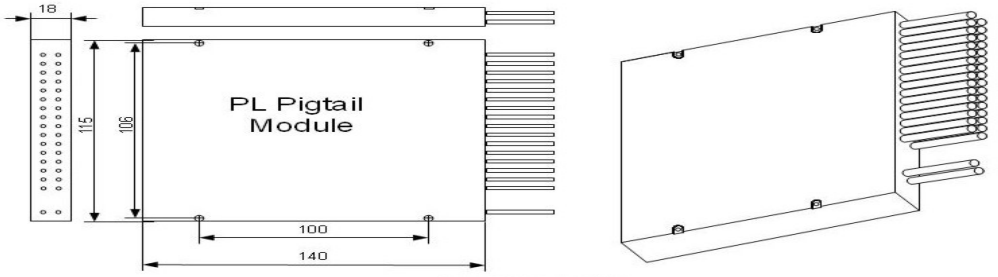
PLC Splitter (Bare Device)



PLC Splitter Pigtail Module

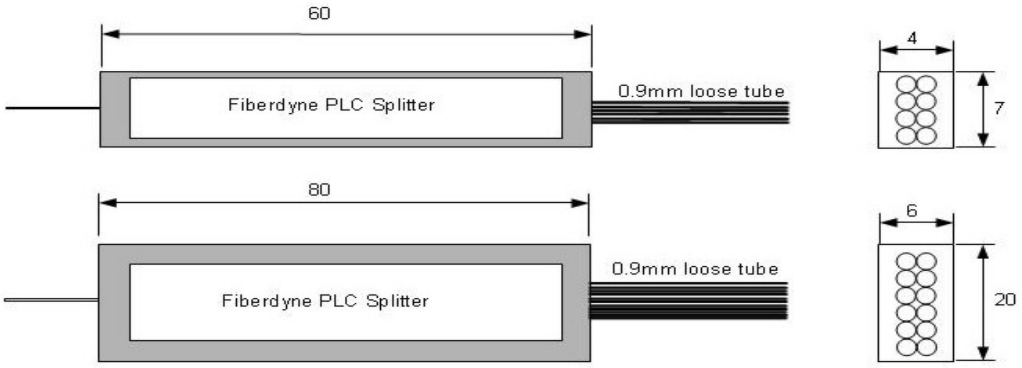


100X80X10



140X115X18

PLC Splitter Pigtail Mini- Module



Ordering Information:

FPD	-	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
F = Fiberdyne		102 = 1 x 2		B = 250µm bare fiber	10 = 1.0m	B = 250µm bare fiber	10 = 1.0m		0 = None	0 = None
P = PLC Splitter		104 = 1 x 4			15 = 1.5m	R = ribbon fiber	15 = 1.5m			
D = Device					25 = 2.5m		25 = 2.5m			
		108 = 1 x 8								
		116 = 1 x 16								
		132 = 1 x 32								
		164 = 1 x 64								
		202 = 2 x 2								
		204 = 2 x 4								
		208 = 2 x 8								
		216 = 2 x 16								
		232 = 2 x 32								

PLC Splitter Pigtail Module (including Mini-Module)

FPP	-	XXX	-	XX	XX	XX	XX	-	X	X
		Port Configuration		Pigtail Module Type	Fiber Type	Input Fiber Type	Output Fiber Length		Input Connector	Output Connector
F = Fiberdyne		102 = 1 x 2		PL = 140x115x18, plastic	09 = 0.9mm (900µm)	10=1.0m	10 = 1.0m		0 = None	0 = None
P = PLC Splitter		104 = 1 x 4		PM = 120x80x18mm, plastic	20 = 2.0mm	15=1.5	15 = 1.5		1 = FC/UPC	1 = FC/UPC
P = Pigtail Module				PM = 140x115x18mm, plastic	30=3.0mm	25 = 2.5m	25 = 2.5m		2 = FC/APC	2 = FC/APC
		108 = 1 x 8		MM = Mini Module		XX = Custom (Specify)	XX = Custom (Specify)		3 = SC/UPC	3 = SC/UPC
									4 = SC/APC	4 = SC/APC
		116 = 1 x 16							7 = Custom (Specify)	7 = Custom (Specify)
									L = LC/UPC	L = LC/UPC
		132 = 1 x 32							N = LC/APC	N = LC/APC
		164 = 1 x 64								
		202 = 2 x 2								
		204 = 2 x 4								
		208 = 2 x 8								
		216 = 2 x 16								
		232 = 2 x 32								

Notes for above:

1. Package PS standard package for 1x2, 1x4, 1x8, 2x4, 2x8.
2. Package PL is standard package for 1x32, 2x32.
3. Package PM is standard package for 1x16, 2x16.
4. Package MM only 1 meter 900µm loose tube available. 1x64 not available in MM Package.
5. Custom length not available in all configurations (requires fusion splicing additional fiber).

