

**Introduction:**

Fiberdyne presents the planar splitter. *Planar* technology is the latest in passive, fiber-optic component manufacturing. It uses semiconductor (i.e. integrated circuit) fabrication techniques, to build compact, fiber-optic devices. This technique displaces fused-biconical taper devices for high-count splitters (e.g. 1x32). The resulting devices are smaller and more robust.

**Conceptual Usage:**

*Couplers* are typically used where an aggregate of optical power is required. Therefore, a *Coupler Module* is an assembly, which houses coupler components. These components combine optical power from three or more inputs.

*Splitter* applications are more common. Typically, they are used for video distribution or for data network monitoring. Inputs are divided and sent to several destinations (e.g. to neighborhoods for CATV). Alternatively, a low-power signal sample is “read-out” with minimal impact, to the link. Therefore, a *Splitter Module* is an assembly, which house splitter components. These components divide optical power to three or more outputs.

**Features:**

- Coupler/Splitter components comply with Telcordia GR-1209
- Connectors comply with Telcordia GR-326
- Standard Fiber Connectors: SC, ST, FC, LC, MT-RJ, MTP
- Polish Type: UPC or APC (as applicable)

**Options:**

- Number of splits: 4, 8, 16 or 32
- Combine with alternate fiber-optic components (e.g. multiplexers) for enhanced capabilities
- Multiple packaging options
  - LGX/Fiberdyne compatible modules
  - Rackmount modules, 19/23-inch, 1U high
- Connection options include bulkhead connectors or pigtails

### Standard Configurations:

Modules with bulkhead adapters \*

Module	Split Qty	Box	Faceplate
<b>LGX/Lucent-compatible</b>			
Single-wide	4	3.97" H x 1.13" W x 4.98" D (101 x 29 x 127 mm)	5.06" H x 1.13" W (129 x 29 mm)
Double-wide	8	3.97" H x 2.25" W x 4.98" D (101 x 57 x 127 mm)	5.06" H x 2.25" W (129 x 57 mm)
Triple-wide	16	3.97" H x 3.38" W x 4.98" D (101 x 86 x 127 mm)	5.06" H x 3.38" W (129 x 86 mm)
Single-wide	4	7.12" H x 1.06" W x 6.06" D (181 x 27 x 154 mm)	8.62" H x 1.06" W (219 x 27 mm)
Double-wide	8	7.12" H x 2.31" W x 6.06" D (181 x 59 x 154 mm)	8.62" H x 2.31" W (219 x 59 mm)
Triple-wide	16	7.12" H x 3.56" W x 6.06" D (181 x 90 x 154 mm)	8.62" H x 3.56" W (219 x 90 mm)
<b>Rackmount</b>			
19/23-inch	8, 16, 32	1.72" H x 17.0" W x 5.94" D (44 x 432 x 151 mm)	1.72" H x 19.0" W (44 x 483 mm)

Note: \* other configurations available, including smaller modules with pigtails

### Bare device



- Split quantity: 4, 8, 16, 32
- Dimensions: 6 x 9.5 x 68 mm (0.24 x 0.37 x 2.68 inch)

**Specifications:**

<i>Parameter</i>	<i>Unit</i>	<i>Value</i>
Wavelength (1310-band)	nm	1260 to 1360
Wavelength (1550-band)	nm	1460 to 1625
Temperature, Operating	O <sub>C</sub>	-40 to +85
Temperature, Storage	O <sub>C</sub>	-40 to +85
Return Loss	dB	> 55
Directivity	dB	> 55

<i>Configuration (1xN) *</i>	<i>Unit</i>	<i>1x4</i>	<i>1x8</i>	<i>1x16</i>	<i>1x32</i>
Max Insertion Loss **	dB	< 7.2	< 10.5	< 13.5	< 16.5
Uniformity	dB	< 0.8	< 1.0	< 1.3	< 1.5
Polarization Dependent Loss	dB	< 0.2	< 0.2	< 0.2	< 0.3

<i>Configuration (2xN) *</i>	<i>Unit</i>	<i>2x4</i>	<i>2x8</i>	<i>2x16</i>	<i>2x32</i>
Max Insertion Loss **	dB	< 8.7	< 12.0	< 15.5	< 18.5
Uniformity	dB	< 2.0	< 2.0	< 2.0	< 2.0
Polarization Dependent Loss	dB	< 0.4	< 0.4	< 0.5	< 0.5

Notes: \* Equal Split-Ratios (i.e. "even splits") on each input/output

\*\* Insertion Loss values do not include connector losses.

**Ordering Information:**

PART A											
F	X	X	-	X	X	X	X	X	-	X	X
	2	3		4	5	6	7	8		9	10
Fiberdyne Labs, Inc. Planar Lightwave Circuit (PLC) /Splitter											

2nd Digit	Center Wavelength	P = Planar Lightwave Circuit (PLC) 1310/1550 Singlemode Module	
3rd Digit	Ports	1 = 1x4 2 = 1x8 3 = 1x16 4 = 1x32 5 = 2x32	6 = 2x16 7 = 2x8 8 = 2x4 9 = 1x64* A = 2x64* B = 1 x 128* C = 2 x 128* D = 1 x 2 E = 2 x 2 *Requires LC/UPC or LC/APC
4th Digit	Package	0 = LGX/Fiberdyne compatible with input pigtail, output adapters 1 = LGX/Fiberdyne compatible with input adapters, output adapters 2 = LGX/Fiberdyne compatible with input pigtail, output pigtail 3 = <del>Corning FDC compatible with input pigtail, output adapters</del> 4 = <del>Corning FDC compatible with input adapter, output adapter.</del> 5 = <del>Corning FDC compatible with input pigtail, output pigtail.</del> 6 = Corning Reduced Fusion Splice Tray compatible with pigtail input, pigtail output. 7 = 19" Rackmount Module 8 = Customer requested special 9 = Wall Mount Module A = <del>ADC Module (Not Available)</del> B = LGX with Rear Entry C = Corning Eclipse compatible with input adapter, output adapter D = Splitter/Coupler Tray E = Aerial Enclosure 24 Fiber F = Aerial Enclosure 36 Fiber H = Standard 900µm Legs J = Standard 250µm Legs P = Pedestal V = Pedestal with Vault	
5th Digit	Grade	1 = Ultra	
6th Digit	Fiber Type	0 = G.657.A1	
7th Digit	Connector Type Input = 0	0 = None 1 = FC 2 = FC/APC 3 = SC 4 = SC/APC	5 = ST L = LC 7 = Specify N = LC/APC
8th Digit	Connector Type Output	0 = None 1 = FC 2 = FC/APC 3 = SC 4 = SC/APC	5 = ST L = LC 7 = Specify N = LC/APC
9th Digit	Length Input	0 = Adapter 1 = 1 m 2 = 2 m 3 = 3 m 4 = 4 m 5 = 5 m	
10th Digit	Length Output	0 = Adapter 1 = 1 m 2 = 2 m 3 = 3 m 4 = 4 m 5 = 5 m	