

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/Lucent compatible modules
 - ADC compatible modules
 - Rackmount modules, 19/23-inch, 1U high
- Connection options include bulkhead connectors or pigtails

Planar Coupler/Splitter Module Single-mode, Dual-Window	Fiberdyne Labs, Inc. Product Specification
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Standard Configurations:

*Modules with bulkhead adapters **

Module	Split Qty	Box	Faceplate
<i>LGX/Lucent-compatible</i>			
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)
6X-wide	32	3.97”H x 6.75”W x 4.98”D (101 x 172 x 127 mm)	5.06”H x 6.75”W (129 x 172 mm)
<i>ADC-compatible</i>			
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)
<i>Rackmount</i>			
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	°C	-40 to +85
Temperature, Storage	°C	-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.*