

Plastic Fiber Coupler/Splitter

1×2, 1×4, 1×8, 4×4, 8×8, 1×16, 16×16



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Agiltron PLAC plastic fiber couplers/splitters distribute incoming optical signals across multiple output fibers. These couplers utilize high-performance plastic optical fibers with a diameter of 1.0 mm with a 0.98mm core and 2.2 mm outer diameter, featuring a core made from polymethyl-methacrylate (PMMA) resin and fluorinated polymer cladding. The 1x2 coupler efficiently splits light 50:50 over a broad wavelength range in the visible spectrum. Larger 1xN and NxN configurations are created by cascading 1x2 couplers, resulting in approximately 3 dB loss at each junction.

Couplers are efficient in splitting light, but incur significant losses when combining lights.

Features

- Low Insertion Loss
- Good Uniformity
- High Reliability
- Compact Size

Specifications

Parameter	Min	Typical	Max	Unit
Transmission Wavelength	370	650	800	nm
Insertion Loss @650nm	1x2	3.7	4	6
	1x4	6	7	12
	1x8	11	12	17
Fiber Attenuation @650nm	0.14		0.16	dB/m
Core Reflective Index		1.492		
Cladding Refractive Index		1.402		
Operating Temperature	-55		85	°C
Splitting Ratio (1x2)		50:50		

Applications

- Data Communication Systems
- LANs
- Optical Sensors
- Optical Entertainment Systems

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](#):

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Mechanical Dimensions (mm)

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

Ordering Information

Prefix	Test Wavelength	Configuration	Grade	Package *	Fiber Cover	Fiber Length	Connector**
PLFC-	650nm =1 Special =0	1x2 = A12 1x4 = A14 1x8 = A18 2x2= B22 4x4 = B22 8x8 = B88 1x12=112	Premium = P A Grade = A	Component = 1 Box = 2	2.2mm Cable = R	0.5m = 0 0.75m = 1 1.0m = 2 Special =0	None = 0 Simplex= S

* 1x2 is only available in component package, other configurations are packaged inside a box with fiber fan out from two sides

** Simplex Fiber Connector, Grey. HFBR-4501

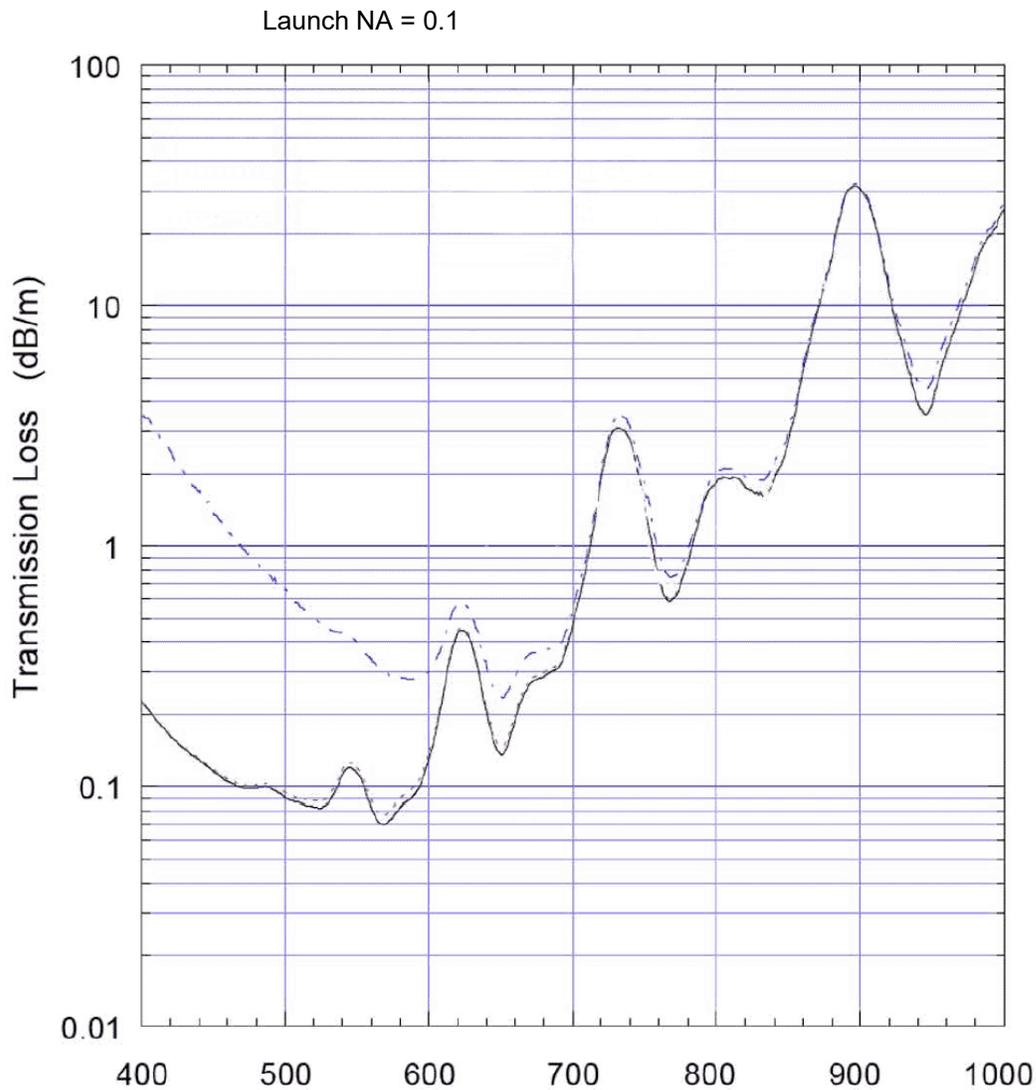
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Typical Transmission Loss Spectra



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