

1x2(2x2) Mini Size Fused Multi-Mode Fiber Coupler

Features

Low Excess Loss / Low PDL
Broad Operating Band
Telcordia GR-1221 Compliant

Application

Multi-mode Fiber Communication Systems
LAN
Testing Instruments
Optical Fiber Sensors

Specifications

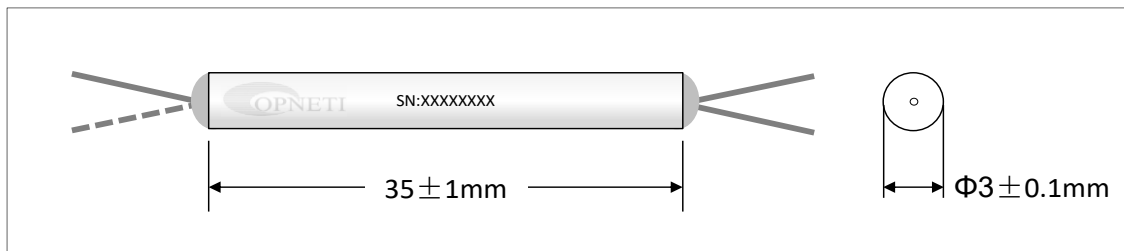


Parameters		Unit	Grade P	Grade A
Center Wavelength		nm	850 or 1310, 850/1310	
Operating Bandwidth		nm	±40	
Excess Loss		dB	≤0.4	≤0.7
Insertion Loss	50/50	dB	≤3.8/3.8	≤4.1/4.1
	40/60	dB	≤4.8/2.8	≤5.1/3.1
	30/70	dB	≤6.1/2.2	≤6.4/2.5
	20/80	dB	≤7.9/1.5	≤8.2/1.8
	10/90	dB	≤11.3/1.0	≤11.7/1.3
	5/95	dB	≤14.6/0.8	≤15.1/1.1
	2/98	dB	≤18.7/0.7	≤19.5/1.0
	1/99	dB	≤22.1/0.6	≤22.9/0.9
Uniformity (50/50)		dB	≤0.8	≤1.0
Return Loss		dB	≥35	
Directivity		dB	≥40	
Operating Temperature		°C	-20 ~ +70	
Storage Temperature		°C	-40 ~ +85	

*With connectors, IL+0.3dB, RL-5dB.

Package Information

Configuration	1x2 or 2x2
Fiber Length	1m, others on request
Fiber Type	50/125, 62.5/125, 105/125 0.22, 200/220 0.22
Pigtail Type	250μm Bare Fiber
Dimensions(mm)	φ3.0x35



Ordering Information

CP- ①-②-③③③-④④④-⑤⑤⑤⑤⑤-⑥⑥⑥-⑦-⑧-⑨⑨-⑩⑩⑩⑩⑩-⑪⑪

①	Type	M=Multimode Fiber Coupler;
②	Grade	P=Grade P; A=Grade A;
③	Port Type	1x2; 2x2;
④	Wavelength	850; 1310; 850/1310;
⑤	Coupling Ratio	1/99; 2/98; 3/97;; 50/50; EVEN;
⑥	Pigtail Type	250=250μm Fiber; 900=900μm Loose Tube; 2mm=2mm loose tube; 3mm=3mm Loose Tube;
⑦	Fiber Type	2=50/125; 3=62.5/12.5; M102=105/125 0.22; M202=200/220 0.22;
⑧	Length	1=1m; X=Other;
⑨	Connector	NE=None; FA=FC/APC; FC=FC/UPC; SA=SC/APC; SC=SC/UPC; LC=LC/UPC; ST=ST/UPC;
⑩	Package	3x35;
⑪	Light Source	LD; LED; VSCSEL;

Application Notes

Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled polished (APC).

Coupling / split ratio will be very strange comparing to OPNETI's test data if additional connector mating loss is added.

Fiber Bending Loss

A shorter fiber and straightening the fiber or with larger bend radius will be very helpful to get lower Excess Loss.

Fiber Cleanliness

Fibers with smaller core diameters (<5μm) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

Maximum Optical Input Power

Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed above table specified, if higher power handling is needed, please contact OPNETI technicians.

Standard connector power handling max 1W(CW), Optical connectors can be removed and the device can be spliced into optical path at higher optical powers.

Optical Path

All of our fused fiber couplers are bidirectional, means that all ports can be used as an input.

Coupler split ratio configuration refer to:

[Coupler Split Ratio Configuration](#)