

1x2, 2x2 PM Fiber Optic Coupler

(0.3dB loss, 18 – 25 ER, 480nm-2000 nm)



DATASHEET

BUY NOW



Features

- Low Loss
- High Reliability
- High ER

Applications

- Instrumentation
- Sensor

The FC Series PM fiber optic coupler is based on our fused biconical taper technology and compact packaging structure. It features good uniformity, low excess loss and very low polarization sensitivity. The device is ideal for splitting or combining light with exceptional performance over a wide wavelength range. The cost is related to the polarization extinction ratio grade level.

The FC Series PM fiber optic couplers can handle optical power up to 1W at 1550nm. The power handling threshold reduces for shorter wavelengths. We produce a HPFC Series fiber optic high-power couplers.

Specifications

Parameter	Min	Typical	Max	Unit
Coupling Ratio		1/99 to 50/50		%
Wavelength ^[1]	480		2300	nm
Wavelength Bandwidth		± 15		nm
Return Loss ^[5]		> 55		dB
Fiber Tensile Load		< 10		N
Default Connector Key		Slow axis		
Operating Temperature	-40		85	°C
Storage Temperature	-40		85	°C

Parameter	Grade U	Grade S	Grade P	Grade A	Unit	
Center-Wavelength	480nm (0.1W)			≤0.7	dB	
	530nm (0.2W)			≤0.7	dB	
	540nm (0.2W)			≤0.7	dB	
	560nm (0.2W)			≤0.5	dB	
	635nm (0.3W)			≤0.4	dB	
	670nm (0.5W)			≤0.4	dB	
	780nm (0.6W)			≤0.4	dB	
	850nm (1W)			≤0.4	dB	
	Max Optical Power ^[2]	980nm (1.5W)	≤0.3	≤0.3	≤0.3	dB
		1060nm (1.5W)	≤0.3	≤0.3	≤0.3	dB
		1310nm (1.5W)	≤0.3	≤0.3	≤0.4	dB
		1480nm (1.5W)	≤0.3	≤0.3	≤0.4	dB
1550nm (1.5W)		≤0.7	≤0.3	≤0.3	dB	
1600nm (1.5W)		≤0.3	≤0.3	≤0.4	dB	
Excess Loss ^[3]	2000nm (6W)	≤0.3	≤0.3	≤0.4	dB	
	Polarization Extinction Ratio ^[4]	≥25	≥20	≥18	≥16	dB
Coupling Ratio Tolerance						
Split Ratio: 50/50	±1.5	±2	±4	±6	%	
Split Ratio: 40/60	±1.5	±2	±3	±5	%	
Split Ratio: 30/70	±1.5	±1.5	±1.5	±2	%	
Split Ratio: 20/80	±1.0	±1.0	±1.0	±1.0	%	
Split Ratio: 10/90	±0.5	±0.5	±0.5	±0.5	%	
Split Ratio: 5/95	±0.3	±0.3	±0.3	±0.3	%	
Split Ratio: 1/99	±0.25	±0.25	±0.25	±0.25	%	

Notes:

- [1]. Customer wavelength is available on request
- [2]. Without connector, connector reduces the optical power handling
- [3]. Without connector. Each connector adds 0.3dB and 0.5dB for short wavelength
- [4]. Without connector. Each connector adds 2dB
- [5]. Without connector. Each connector adds 5dB

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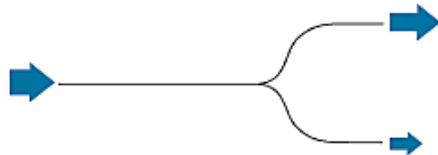
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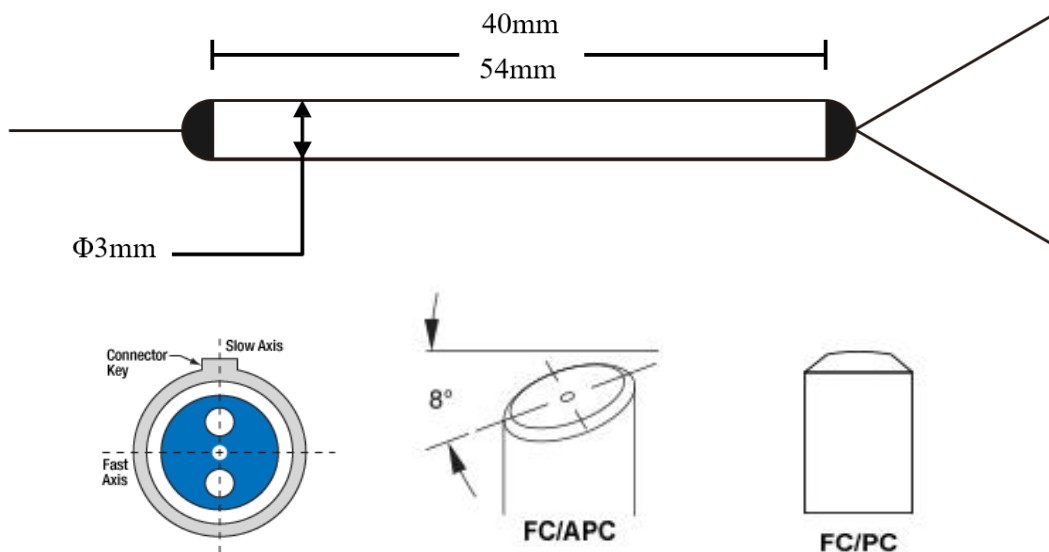
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Function Diagram



Mechanical Dimensions (mm)



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

Ordering Information

Prefix	Wavelength	Grade	Package	Ratio	Port	Fiber Cover	Fiber Type	Connector Type
FC-	480 = A 530 = B 540 = C 560 = D 630 = E 670 = F 1480 = G 1060 = 1 1310 = 3 1550 = 5 780 = 7 850 = 8 980 = 9 1600 = 2 2000 = 4 2039 = H Special = 0	A = 5 P = 1 S = 2 U = 3 Special = 0	40(L) = 1 54(L) = 2 90(L) = 3 70 = 5 35 = 6 34 = 7 56 = 8 Special = 0	01/99 = 1 02/98 = 2 05/95 = 3 10/90 = 4 15/85 = 5 20/80 = 6 30/70 = 7 40/60 = 8 50/50 = 9 0.5/99.5 = A Special = 0	1x2 = 1 2x2 = 2	250um = 1 900um tube = 3 Special = 0	Panda = 1 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/UPC = U Special = 0