50:50 488nm 2x2 Polarization-Maintaining Fiber Coupler

Product Description

The MP-FBC-W0488 RGB series polarization-maintaining fiber coupler is a high-performance coupler designed for visible light wavelength splitting, manufactured using our IPCS-5000-P polarization-maintaining fiber fusion tapering machine. It offers excellent performance and can cover the entire wavelength range (460-2200nm). The polarization-maintaining coupler is made with panda-type Fujikura polarization-maintaining fiber, enabling it to maintain a high polarization extinction ratio (PER) when light is emitted along the slow axis of the fiber. idealphotonics ' optical

polarization-maintaining components are aligned to the slow axis by default, and our polarization-maintaining couplers feature a high extinction ratio and can operate over a wide temperature range from -40°C to 85°C

Product features

Fused fiber coupler for 460-2200nm、 Coupling ratios of 50:50, 75:25, 90:10, or 99:1、 Bidirectional coupling (any end can be used as input)、 2.0 mm narrow key FC/PC or FC/APC connectors、 Each broadband coupler comes with its own test report

Part Number

MP-FBC-488-A-2-50/50-PA

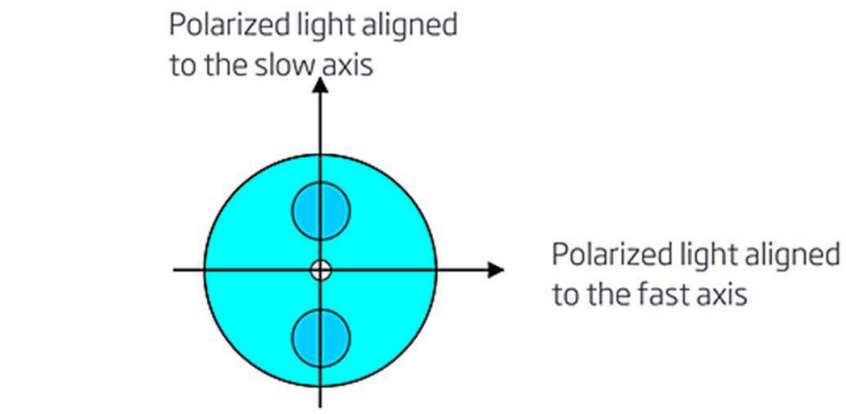
Application area

Polarization-maintaining fiber amplifiers、 Fiber optic gyroscopes、 Optical sensors

Core parameters

Operating wavelength	Coupling Ratio	Product structure
488 nm	50:50	2×2

General Parameters



Definition of Slow Axis

Parameters

Structure		Unit	1×2/2×2
Type			Polarization-Maintaining Fiber optic
			Coupler(PMFBC)
Operating Wavelength		nm	488 /632/633
Operating Bandwidth		nm	±15
50/50		%	4 .0 /4 .0
30/70		%	5 .75/2 . 10
10/90		%	1 1 .60/1 .00
Maximum Insertion Loss	5 /95	%	14 .80/0 .80
	2 /98	%	18 .50/0 .45

	1 /99	%	22 .00/0 .40		
Extinction Ratio		dB	CR>5% 5 % ⩾CR>1%	⩾18 .00 ⩾15 .00	
Return Loss		dB	⩾50 .00		
Directivity		dB	⩾55 .00		
Operating Temperature		Deg .	-5-75		
Storage Temperature		Deg .	-40-85		
Fiber Length		m	1 .00 ±0 . 10		
Fiber Type			Panda PM Fiber		
Fiber Diameter		um	250	900	900/2000/3000
Package Dimensions		mm	3×54	3×70	90×16×10

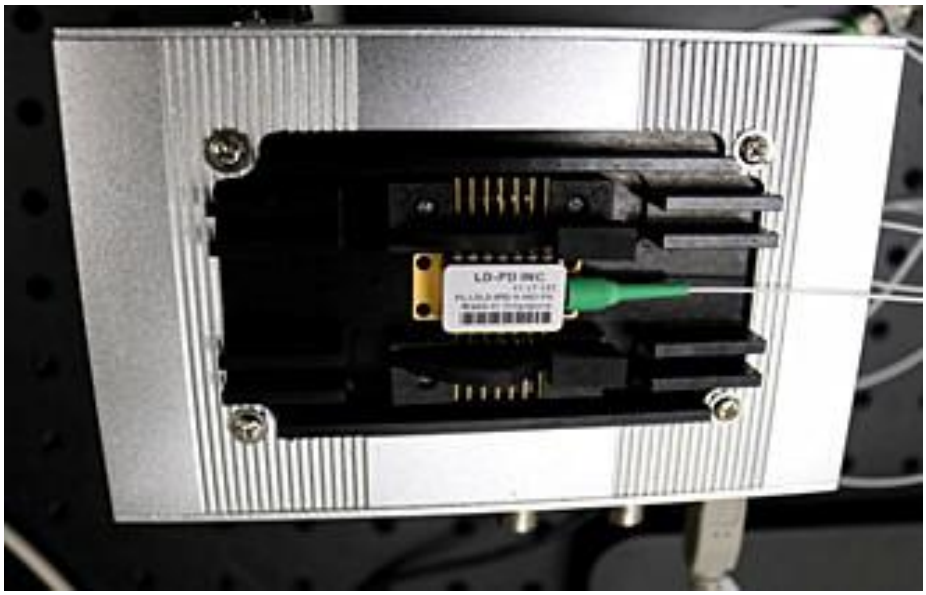
Notes:

All test results exclude connectors; adding connectors increases insertion loss by 0.3 dB.

Better parameters or other requirements can be customized.

Single-Point Data Test: 1x2, 50:50, 488nm Polarization-Maintaining Fiber Coupler

(Tested with an FP laser, center wavelength 488nm, spectral width: 30nm, 2.5 mW polarization-maintaining laser as an example)



488nm PM FP Laser diode

Slow Axis Alignment

MP-FBC-W0488-S1-CR5050-1-9-PA-35T Black port @0488nm

MP-FBC-W0488-S1-CR5050-1-9-PA-35T White port @0488nm

Ordering info

MP-FBC-W□□□□-S○-CR▽-☆-△-XX-□□

W□□□□: Wavelength

0488: 0488nm

1392: 1392nm

1512: 1512nm

1532: 1532nm

1550: 1550nm

1650: 1650nm

1742: 1742nm

S○: Port Structure

12: 1x2

22: 2x2

CR▽:

0199: 1:99

1090: 10:90

2575: 25:75

5050: 50:50

☆: Pigtail Length

05: 0.5m

1: 1m

10: 10m

△: Loose Tube

B: Bare Fiber

9: 900μm Loose Tube

20: 2mm Loose Tube

30: 2mm Loose Tube

XX: Fiber and Connector Type

PA = PM Fiber + FC/APC

PP = PM Fiber + FC/PC

□□: Package

35T: Tube 3×35

70T: Tube 3×70

M: Module 90×16×10