

BUY NOW 

Fiber Optical Polarization Beam Combiner

(Low-Loss, Bidirectional, All Wavelengths)

Features

- High Reliability
- High Efficiency
- Low loss
- Compact

Product Description

The FPBC Series fiber optical polarization beam combiner is based on a proven micro-optic configuration, featuring low optical loss, high power handling, and wide temperature operation. The device efficiently combines two beams within a specified wavelength band into a single fiber output. We produce combiner with all possible output polarization status: 1) Circularly polarized single mode; 2) Same polarization as the input; 3) two orthogonally polarizations. Slow axis is the default fiber axis. The device works with variable light intensity ratio between the two inputs. Custom configuration is available.

The FPBC polarization beam combiner is designed to meet the most demanding requirements of ultra-high reliability, vibration insensitive, and wide operation temperature. They are Telcordia GR1221 qualified.



Performance Specifications

PM Combiner	Min	Typical	Max	Unit
Insertion Loss ^[1]	1900-2200nm	0.8	1.8	dB
	1260-1650nm	0.6	1.0	
	960-1100nm	0.8	1.3	
	780-960nm	1.2	1.5	
	520 - 680nm	1.5	2.3	
IL Temperature Dependency		0.25	0.5	dB
Wavelength Dependent Loss			0.15	dB
Polarization Extinction Ratio ^[2]	18	22	28	ps
Return Loss	50	50		dB
Polarization Alignment		Slow Axis		
Digital Modulation Rate ^[3]	DC		1	MHz
Optic power Handling ^[4]	1260 - 2200nm	300		mW
	520-480	100		mW
Operating Temperature	Standard	-5	75	°C
	Special version	-30	85	
Storage Temperature		-40	100	°C

[1] Measured without connectors. Connector increase loss about 0.3dB
 [2] Measured without connectors. Connector reduce extinction ratio about 2dB
 [3] The maximum phase change is set at a predetermined value
 [4] High Power up to 10W is available

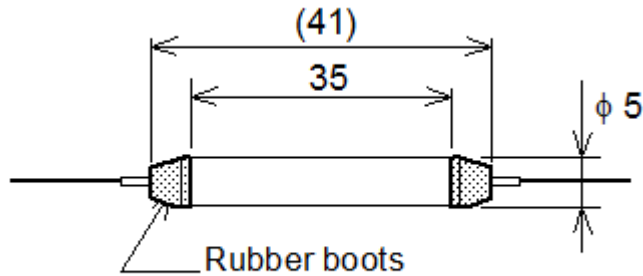
Red color indicates special orders

Applications

- Sensor
- Coherent System
- Instrumentation

Revised on 9/27/21
 (Click here for latest revision)

Mechanical Dimension



Unit : mm

Typical low power package

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

Ordering Information

PBCB -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Optical Power	Wavelength ^[1]	Temperature Range	Input Fiber	Output Fiber	Cable Type	Fiber Length	Connector
	0.3W = 11 1W = 01 5W = 05 10W = 10 20W = 20 Special = 00	1060=1 2000=2 1310=3 1550=5 1625=6 780=7 850=8 650=E 550=F 400=G Special=0	Standard=1 Large = 2	SM28 =1 PM1550=5 PM850=8 PM980=9 PM 650=6 PM 540 =7 PM 380 =8 PM 780=9 Special=0	SM28 =1 PM1550=5 PM850=8 PM980=9 PM 650=6 PM 540 =7 PM 380 =8 PM780 =9 Special=0	Bare fiber=1 900um tube=3 Special=0	0.25m=1 0.5m=2 1.0 m=3 Special=0	None=1 FC/PC=2 FC/APC= 3 SC/PC=4 ST/PC=5 LC/PC=7 LC/APC=8 Special=0

[1]. Wavelength <850nm or > 1700nm is only available in the special version with a long lead time.