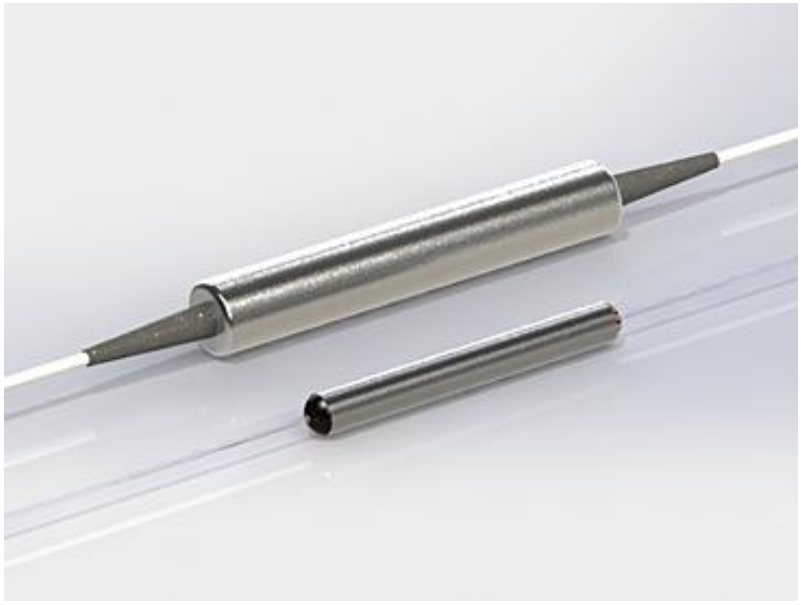
1550nm Polarization-Maintaining Fiber Polarization Combiner



Product Description

The Polarization Beam Splitter (PBS/PBC) is used to couple two orthogonal polarized light beams into a single optical fiber, or to couple the orthogonal polarized light from a single output into two separate optical fibers. It can also be used in reverse to couple two orthogonal polarized light beams from a polarization-maintaining fiber into a single-mode output fiber. These devices are commonly used for power combining in pump lasers, improving the power of fiber lasers. An important application of these devices is in

polarization multiplexing and demultiplexing technology, which enhances the capacity of optical systems.

Product features

Compact appearance、 Low insertion loss performance、 High power handling performance 、 Highly reliable stable characteristics 、 Customization services available 、 Product Reliability Certifications, Compliant with GR-1209-CORE, Compliant with GR-1221-CORE, RoHS (Restriction of Hazardous Substances)

Part Number

MP-PBC-P-15-1-2-2-2-1-3

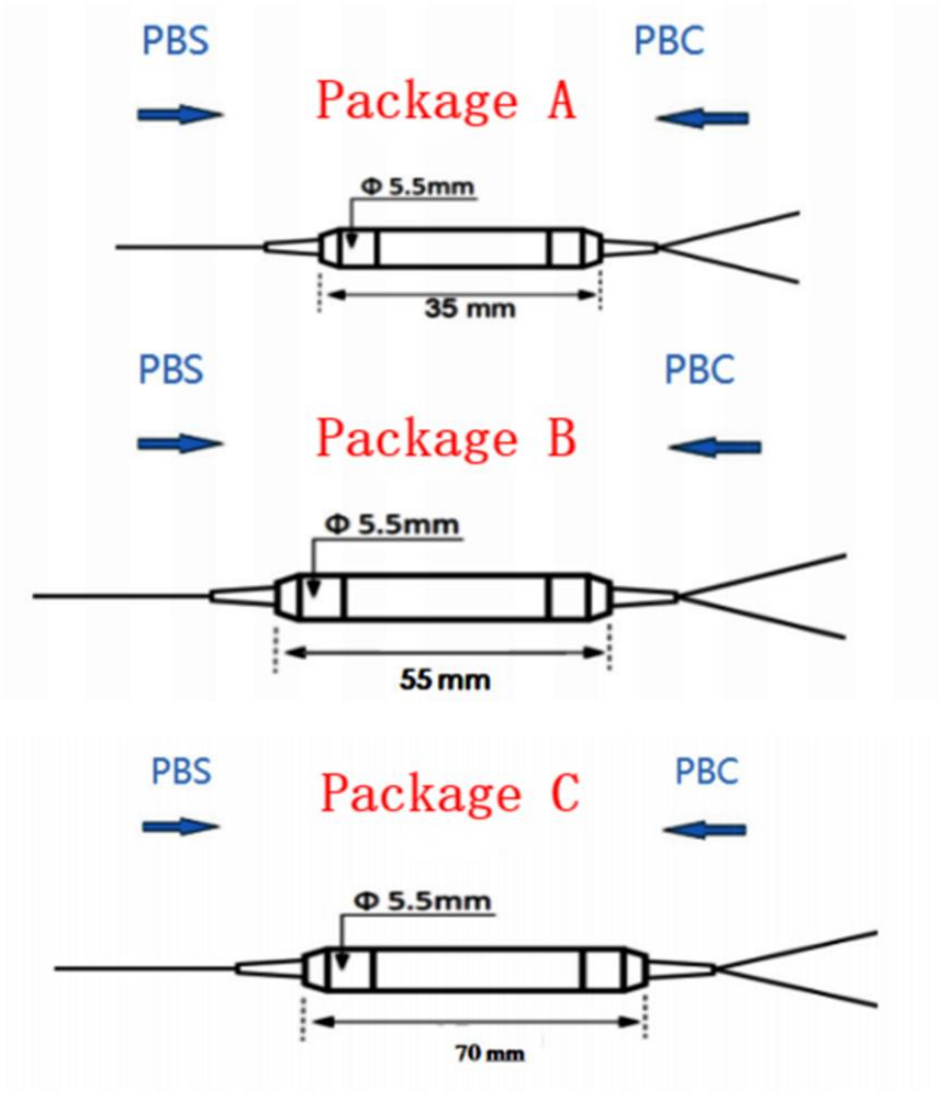
Application area

Fiber laser、 Fiber sensor、 Communication system field、 Used in testing equipment、 For polarization multiplexing and demultiplexing devices、 High-power EDFA

Core parameters

Center Wavelength	Operating Bandwidth	Connector
1550nm	±40nm	FC/APC

Dimension Drawing



General Parameters

Technical Parameters

Category	Parameter	Unit	Performance Index	
Optical Performance	Grade	/	P	A
	Center Wavelength	nm	1550	

	Operating Bandwidth	nm	±40	
	Typical Insertion Loss at Room Temperature	dB	0.4	0.5
	Maximum Insertion Loss at Room Temperature	dB	0.6	0.7
	Typical Minimum Extinction Ratio at Room Temperature	dB	22	20
	Maximum Polarization Dependent Loss at Room Temperature	dB	0.20	
	Minimum Polarization Crosstalk Loss (Port1 to Port3)	dB	50	
	Minimum Directivity	dB	50	
	Minimum Return Loss	dB	50	
	Maximum Power	mw	500	

	Handling			
	Maximum Tensile Strength (CW)		N	5
Mechanical Structure	Package Size		mm	¢5.5×35(customizable)
	Pigtail Length		m	⩾1(customizable)
	Pigtail Type (Port1 & Port2)	Port1&Port2	/	PM Fiber (SM13/14/15-PS-U25A)
		Port3	/	SM Fiber(SM) or PM Fiber (PMPandaFiber) (customizable)
Environmental Indicators	Operating Temperature		℃	-5～+70
	Storage Temperature		℃	-40～+85

Remarks:

① For products with connectors, the insertion loss should be increased by 0.30dB, the return loss should be reduced by 5dB, and the extinction ratio should be reduced by 2dB.

② Polarization maintaining fiber defaults to slow axis alignment.

Ordering info

XXX-X-XX-X-X-X-X-X-XX

PN#:XXX	PBC=Polarization Combiner; PBS=Polarization Beam Splitter
Grade:X	P = P-grade; A = A-grade
Wavelength:XX	13=1310nm;14=1480nm;15=1550nm;XX=Customizable
Pigtail Model for Port 1 & 2:X	1=PM Fiber; 2=SM Fiber; 3=Customizable
Pigtail Model for Port 3:X	1=SM Fiber; 2=Slow Axis Alignment with Port 1; 3=Slow Axis 45° Alignment with Port 1
Pigtail type:X	1=250μm Bare Fiber; 2=900μm Loose Tube; 3=2mm Kevlar; 4=3mm Kevlar; 5 = Customizable
Pigtail Length:X	1=0.5m;2=1m;3=Customizable
Package Size:X	1 = Package A; 2 = Package B; 3 = Package C; 4 = Customizable
Connector Type:XX	1 = None; 2 = FC/PC; 3 = FC/APC; 4 = SC/FC; 5 = Customizable