# 1550nm Polarization Maintaining Fiber

# Polarization Beam Splitter



## ● 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、 Through GR-1209-CORE、 Through GR-1221-CORE、 ROHS
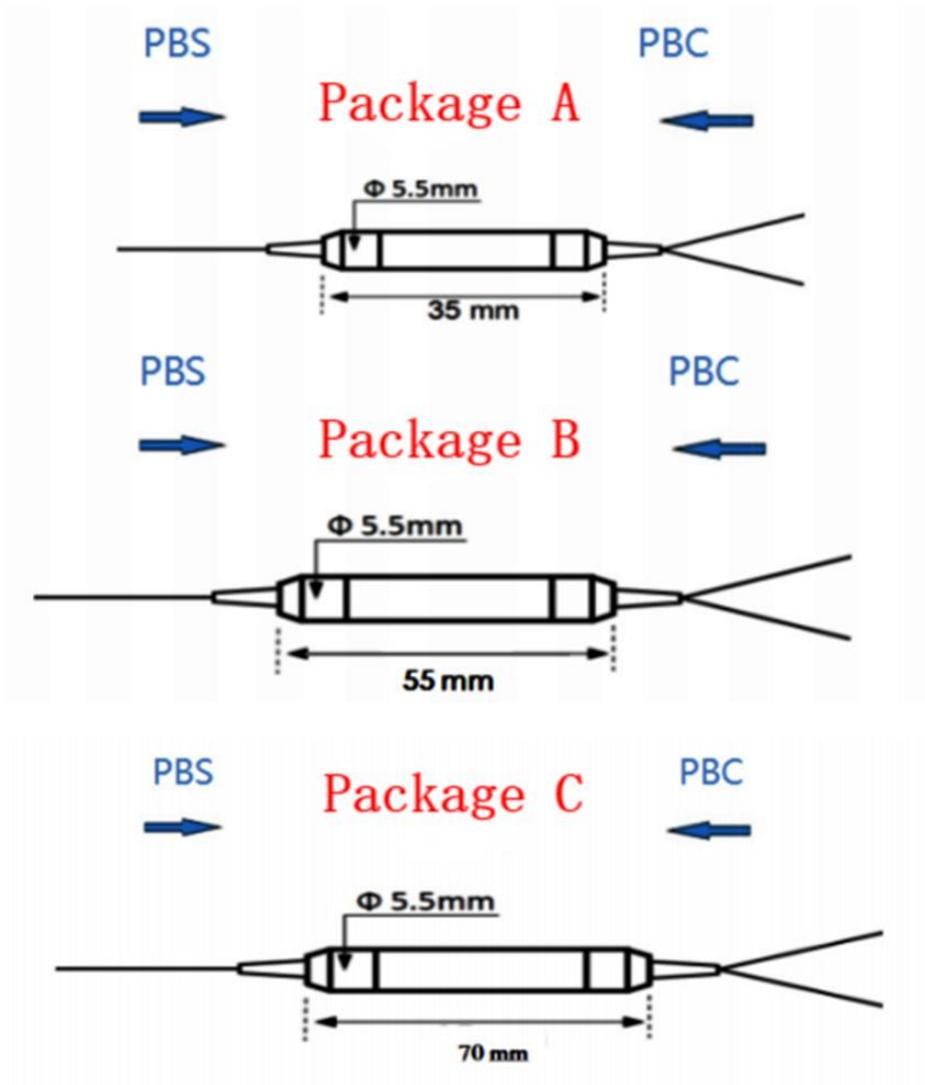
## ● Part Number

MP-PBS-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

PBS    Package A    PBC

Φ 5.5mm

35 mm

PBS    Package B    PBC

Φ 5.5mm

55 mm

PBS    Package C    PBC

Φ 5.5mm

70 mm

## ● General Parameters

**Technical Parameters**

| Category | Parameter | Unit | Performance Index |
|----------|-----------|------|-------------------|
|          |           |      |                   |

| | | | |
|---|---|---|---|
| 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 | |

(Row label: **Optical Performance**)

| | | | |
|---|---|---|---|
| | Minimum Directivity | dB | 50 |
| | Minimum Return Loss | dB | 50 |
| | Maximum Power Handling | mw | 500 |
| | Maximum Tensile Strength (CW) | N | 5 |
| Mechanical Structure | Package Size | mm | ¢5.5×35 (customizable) |
| | Pigtail Length | m | ≥1 (customizable) |
| | Pigtail Type — Port1&Port2 | / | PM Fiber (SM13/14/15-PS-U25A) |
| | Pigtail Type — Port3 | / | SM Fiber(SM) or PM Fiber (PMPandaFiber) (customizable) |
| Environmental Indicators | Operating Temperature | ℃ | -5～+70 |
| | Storage Temperature | ℃ | -40～+85 |

**Notes:**

① For products with connectors, the insertion loss is 0.30dB more, the return loss is 5dB less, and the extinction ratio is 2dB lower.

② The default setting for polarization-maintaining fiber is slow axis to axis.

# 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 |