

# Polarization Beam Combiner/Splitter (PBC/PBS)

## Description

The Polarization Beam Combiner/Splitter is a micro-optic device that can combine two polarized light signals into one output fiber, or split one light into two polarized outputs with their polarization states orthogonal to each other. The typical configuration of PBC uses the two PM fiber for input and the SM fiber for output. It is ideal choice for application in EDFA, Raman amplifier, pump lasers, high speed communication systems and optical fiber sensors.

## Key Features

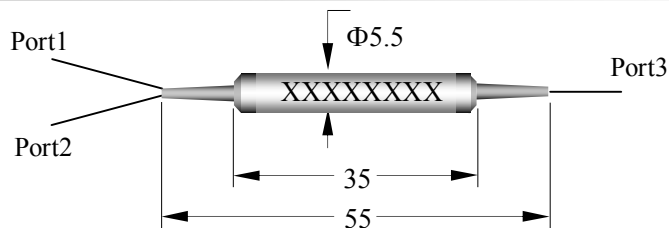
- Low insertion loss
- High extinction ratio
- Excellent stability and reliability

## Applications

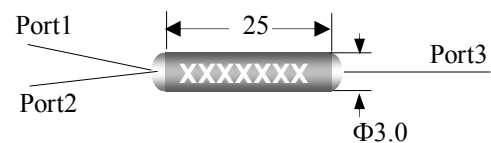
- EDFA
- Raman amplifier
- Optical Communications
- Laboratory R&D



## Mechanical Dimension



Normal Size



Mini Size

## Specifications

Parameter	Type	Unit	Polarization Beam Combiner/Splitter					
			PBC		PBS		PBC	
Center wavelength		nm	1064		1310,1480 or 1550			
Operating bandwidth		nm	±20		±40			
Insertion loss	Working axis type		PBC	PBS		PBC	PBS	
			0, 1, 2	1	0&2	0, 1, 2	1	0&2
		dB	≤0.8	≤0.8	≤3.8	≤0.6	≤0.6	≤3.6
Extinction ratio		dB	≥22(for PBS)					
Return loss		dB	≥50					
Directivity		dB	≥50					
Handling power		mW	≤300			≤500		
Fiber type		/	Port 1 & Port 2: PM Panda Fiber, Port 3: PM Panda fiber or SM fiber					
Operating temperature		°C	-5~+70					
Storage temperature		°C	-40~+85					
Dimensions		mm	Φ5.5×L35 or Φ3.0×L25					

Parameter	Type	Unit	Polarization Beam Combiner/Splitter								
Center wavelength		nm	780			820/850/880			980		
Operating bandwidth		nm	±20			±20			±20		
Insertion loss	Working axis type		PBC	PBS		PBC	PBS		PBC	PBS	
			0, 1, 2	1	0&2	0, 1, 2	1	0&2	0, 1, 2	1	0&2
		dB	≤1.5	≤1.5	≤4.5	≤1.2	≤1.2	≤4.2	≤1.0	≤1.0	≤4.0
Extinction ratio		dB	≥22(for PBS)								
Return loss		dB	≥50								
Directivity		dB	≥50								
Handling power		mW	≤300								
Fiber type		/	Port 1 & 2: PM Panda Fiber, Port 3: PM Panda Fiber or SM Fiber								
Operating temperature		°C	-5~+70								
Storage temperature		°C	-40~+85								
Dimensions		mm	Φ5.5×L35 or Φ3.0×L25								

\* For PBS with working axis type 0, Insertion loss is for un-polarized light input;

\* For PBS with working axis type 2, Insertion loss is for polarized light input.

\* IL is 0.3dB (1310~1550nm) or 0.50dB (980~1060) or 0.80dB (780~850) higher, RL is 5dB lower and ER is 2dB (1310~1550nm, 980~1060nm) or 3dB (780~850nm) lower for each connector added. The default connector key is aligned to slow axis.

### Ordering Information

PBC(S)-XXX-XXXX-X-X-XX/XXX-XX\*XX-X

