



1550nm 2x2 Polarization Beam Combiner/Splitter

Key Features

- Low Insertion Loss
- High Extinction Ratio
- Compact In-Line Package
- High Stability and Reliability

The Polarization Beam Combiner/Splitter can be used either as a polarization beam combiner to combine light beams from two PM input fibers into a single output fiber, or as a polarization beam splitter to split light from an input fiber into two output fibers of orthogonal polarization states.

DK Photonics offers a large selection of PBS/C. These devices can handle powers rang from 300mW to 100W or other on request and have center operating wavelengths ranging from 780 nm to 2050nm.

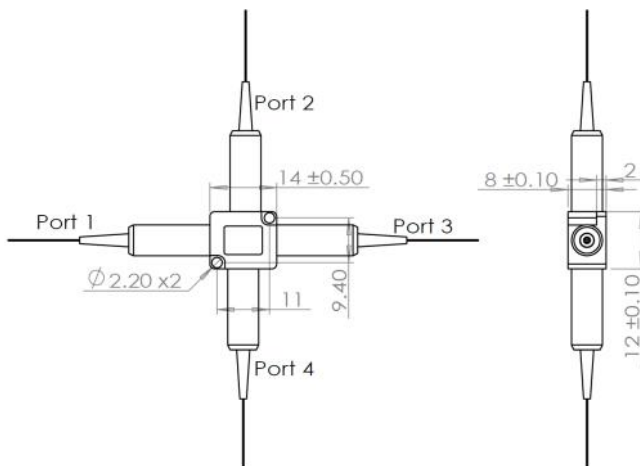
Applications

- Polarization MUX/Demux
- High power fiber laser
- Optic sensor system
- Coherent Telecommunication Systems
- Polarization Mode Dispersion Compensator

If you do not see a standard Polarization Beam Combiner/Splitter that meets your needs, we welcome the opportunity to review your desired specification and quote a custom Polarization Beam Combiner/Splitter. Requests for custom fiber pigtails, different wavelengths and handling power of operation or other specific needs will be readily addressed.



Package Dimension



* Due to ongoing design improvements, the package size is subject to change. Please contact DK Photonics for confirmation if you have special requirements.

For more Info

Please contact us at:

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Dahe Road, Longhua Dis.,

Shenzhen, China 518109

1550nm 2x2 Polarization Beam Combiner/Splitter

Performance Specifications

| Parameter | Unit | Value | |
|-----------------------|---|-------------------------|-----------------------------|
| Grade | - | P | |
| Operating wavelength | nm | 1550 | |
| Operating bandwidth | nm | ±20 | |
| Insertion loss | Typ. | dB | 0.60 |
| | Max. | dB | 1.00 |
| Min. Extinction Ratio | dB | 20 | |
| Return loss | dB | >50 | |
| Directivity | dB | >50 | |
| Max. Power Handling | W | 0.5, 1, 2, 3, 5, 10, 20 | |
| Tensile Load | N | < 5 | |
| Fiber Type | Port 3&Port 4 | - | PM1550-XP |
| | Port 1&Port2 (Same Fiber or Corresponding SM Fiber) | - | SMF-28e, or PM1550-XP Fiber |
| Operating temperature | °C | -5 ~ +70 | |
| Storing temperature | °C | -40 ~ +85 | |
| Package dimension | mm | 14x12x8 | |

1. above specifications are for device without connector. All parameters are tested at room temperature.
2. For devices with connectors, IL will be 0.3dB higher, RL will be 5dB lower and ER will be 2dB lower. The default connector key is aligned to slow axis. Power transmits through the connector less than 2W.
3. For >20W high power applications, we will use heat sink package, contact DK Photonics for details.
4. Since the light is bidirectionally reversible, PBC can also be used as PBS.

Order information P/N: PBC/PBS-2x2-①-②-③-④-⑤-⑥-⑦

When you inquire, please provide the correct P/N number according to our ordering information and attach the appropriate description would be better. If need any connector, we do not recommend choosing a 250µm bare fiber pigtail.

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
|-------|----------------------|------------------------|----------------------|-------------------|--------------|------------|
| Grade | Operating Wavelength | Power Handling (Total) | Fiber type (Port1&2) | Pigtails Diameter | Fiber Length | Connector |
| P:P | 15:1550nm | L:<0.5W | SM:SM fiber | 25:250µm | 08:0.8m | 00: None |
| | XX: Others | 1:1W | PM1:PM fiber-0° | 90:900µm | 10:1.0m | FP: FC/PC |
| | | 2:2W | PM2:PM fiber-45° | XX: Others | XX: Others | FA: FC/APC |
| | | 5:5W | | | | XX: Others |
| | | 10:10W | | | | |

Part Number Example: PBS-2X2-P-15-L-PM1-90-10-FA

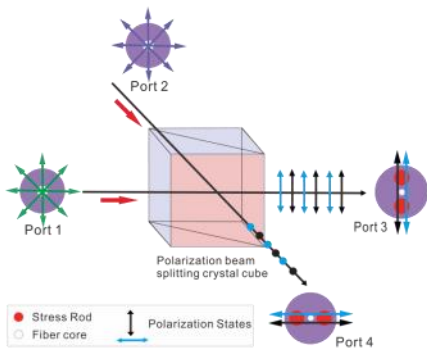
Description: 1550nm 2X2 Polarization Beam Splitter, 0.5W power, P grade, M1550 fiber for port 1 & 2, 0 degree alignment output, 0.9mm loose tube, 1.0m fiber length, and FC/APC connectors at all ports.

Ordering Information for Custom Parts

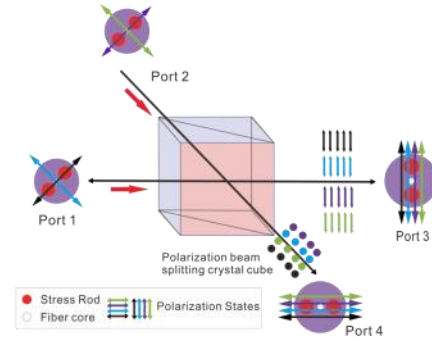
If you need to customize other specifications, please provide detailed description for your requirement.

2X2 PBS More Details Regarding Routing path:

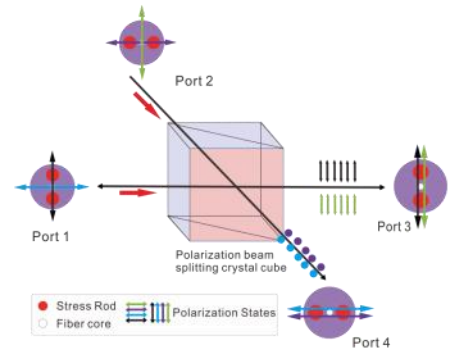
Polarization Beam Splitter, Port 1/Port 2 SM fiber
Port 1 & Port 2: SM fiber, Input non polarized light



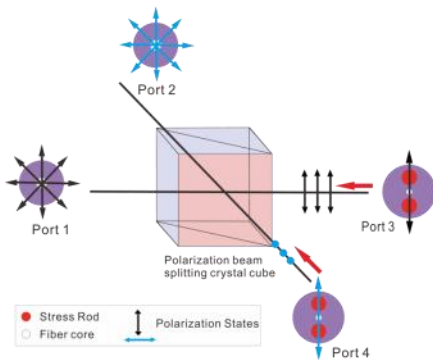
Polarization Beam Splitter, all PM fiber
Port 1 : slow axis aligned 45° to Port 3
Port 2 : slow axis aligned 45° to Port 4



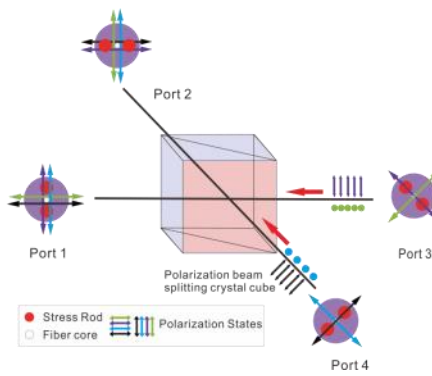
Polarization Beam Splitter, all PM fiber
Port 1 : slow axis aligned 0° to Port 3
Port 2 : slow axis aligned 0° to Port 4



Polarization Beam Combiner, Port 1/Port 2 SM fiber
Port 1 & Port 2: SM fiber, Input non polarized light



Polarization Beam Combiner, all PM fiber
Port 1 : slow axis aligned 45° to Port 3
Port 2 : slow axis aligned 45° to Port 4



Polarization Beam Combiner, all PM fiber
Port 1 : slow axis aligned 0° to Port 3
Port 2 : slow axis aligned 0° to Port 4

