2.0μm PM Components

Key Features

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

Applications

- Testing Instrumentations
- Polarization MUX/Demux
- High power EDFA
- Optic sensor system
- Optic transmit system

2μm Polarization Beam Splitter/Combiner

The 2000nm 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. The most common application is to combine the light of two pump lasers into one single fiber to double the pump power in EDFA or Raman Amplifier.

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.
## 2μm Polarization Beam Splitter/Combiner

### Performance Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>-</td>
<td>P</td>
</tr>
<tr>
<td>Operating wavelength</td>
<td>nm</td>
<td>2000</td>
</tr>
<tr>
<td>Operating bandwidth</td>
<td>nm</td>
<td>±40</td>
</tr>
<tr>
<td>Typical insertion loss</td>
<td>dB</td>
<td>0.60</td>
</tr>
<tr>
<td>Max. insertion loss</td>
<td>dB</td>
<td>1.20</td>
</tr>
<tr>
<td>Min. Extinction Ratio</td>
<td>dB</td>
<td>20</td>
</tr>
<tr>
<td>Return loss</td>
<td>dB</td>
<td>&gt;50</td>
</tr>
<tr>
<td>Directivity</td>
<td>dB</td>
<td>&gt;50</td>
</tr>
<tr>
<td>Max. Power Handling</td>
<td>W</td>
<td>0.5, 1, 2, 3, 5, 10</td>
</tr>
<tr>
<td>Tensile Load</td>
<td>N</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>
| Fiber Type                      | Port 1 & Port 2 | - | PM1550 Panda Fiber or PM1950 fiber(same to port 3)
| Port 3                          | -    | SMF-28e, or PM1550 Panda Fiber, or PM1950 fiber |
| Operating temperature           | °C   | -5 to +70                             |
| Storing temperature             | °C   | -40 to +85                            |
| Package dimension               | mm   | Ø5.5 x 35                             |
| Power Handling(Total)           |      |                                       |
| Fiber Length                    |      |                                       |
| Connector                       |      |                                       |
| Pigtails Diameter               |      |                                       |
| Fiber Length                    |      |                                       |

1. Above specifications are for device without connector.
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 transmit through the connector less than 2W.
3. For >10W high power applications, we will use heat sink package, contact DK Photonics for details.

### Order Information

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.

<table>
<thead>
<tr>
<th>①</th>
<th>②</th>
<th>③</th>
<th>④</th>
<th>⑤</th>
<th>⑥</th>
<th>⑦</th>
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</thead>
<tbody>
<tr>
<td>Grade</td>
<td>Operating Wavelength</td>
<td>Power Handling(Total)</td>
<td>Fiber type (Port3)</td>
<td>Pigtails Diameter</td>
<td>Fiber Length</td>
<td>Connector</td>
</tr>
<tr>
<td>P,P</td>
<td>2000-2000nm</td>
<td>L:&lt;0.5W</td>
<td>5:SMF-28e fiber</td>
<td>25:250μm</td>
<td>08:0.8m</td>
<td>00:None</td>
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<tr>
<td>A,A</td>
<td>XXXX: Others</td>
<td>1:1W</td>
<td>1:15PM1550 fiber, slow axis 45° to port 1</td>
<td>90:900μm</td>
<td>10:1.0m</td>
<td>PP: FC/PC</td>
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<td>2:2W</td>
<td>219:PM1950 fiber, slow axis 45° to port 1</td>
<td>XX: Others</td>
<td>XX: Others</td>
<td>FA: FC/APC</td>
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<td></td>
<td>3:3W</td>
<td>315:PM1550 fiber, slow axis aligned to port 1</td>
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<td></td>
<td>5:5W</td>
<td>319:PM1950 fiber, slow axis aligned to port 1</td>
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<tr>
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<td></td>
<td>10:10W</td>
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</tbody>
</table>

**Part Number Example**: PBC-P-2000-L-319-25-10-00

**Description**: 2000nm Polarization Beam Combiner, 0.5W power, P grade, PM1950 fiber at port 3, slow axis aligned to port 1, with bare fiber, 1.0m fiber length, and no connectors at all ports.

### Ordering Information For Custom Parts

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