JDS Uniphase

Product Bulletin

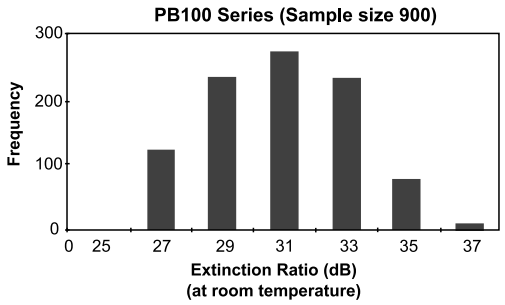
PB100 Series
Polarization Beam Splitters/ Combiners

The PB100 Series Polarization Beam Splitters/ Combiners are bidirectional devices that selectively split or combine the two orthogonal polarization components into one or two output fibers.

The PB100 splitters/combiners are used in applications that change the polarization of the light. Splitting or combining the orthogonal polarization components is required in instruments such as interferometers or in various R&D and lab experiments.

Used as splitters, these devices guarantee extinction ratios greater than 25 dB.

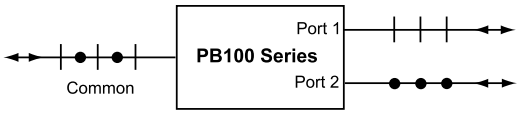
Typical Performance



Key Features
- Typical excess loss of 0.4 dB
- Typical extinction ratio of 30 dB
- Bidirectional–can be used either as a splitter or as a combiner

Applications
- Splits or combines light of two orthogonal polarization states
- Interferometers
- Instruments
- R&D and lab experiments

Configuration



Specifications

Parameter		Specifications
Wavelengths		980, 1310, 1480, or 1550 nm ±20 nm
Excess loss[1]		0.7 dB maximum, 0.4 dB typical for 1310, 1480, or 1550 nm 0.8 dB maximum for 980 nm
Extinction ratio[2] (room temperature)		25 dB minimum
Return loss[1]		50 dB minimum (1480 and 1550 nm band) 45 dB minimum (980 and 1310 nm band)
Maximum optical power		300 mW
Fiber type	PM fiber	Fujikura Panda 8/125/400 µm (900 µm) for 1550 nm Fujikura Panda 7/125/400 µm (900 µm) for 1310 and 1480 nm Fujikura Panda 6/125/400 µm (900 µm) for 980 nm
	SM fiber	Corning SMF-28 9/125/500 µm (900 µm) or equivalent for 1310, 1480, or 1550 nm
		Flexcor 1060, 900 µm loose tube buffered for SM for 980 µm
Fiber length		1.0 m minimum
Dimensions (WxHxD)		77.0 x 16.0 x 8.2 mm
Operating temperature		0 to 50 °C
Storage temperature		-20 to 70 °C

1. Excluding connectors.
2. Extinction ratio is defined as the ratio of the optical power launched into the two orthogonal axes of a PM fiber. The direction of linear polarization is aligned with the slow axis of the fiber (axis through the stress rods).Due to the intrinsic properties of polarization maintaining fiber, a broadband source such as a LED is used to characterize the extinction ratio.

Note: These specifications are applicable over operating temperature unless otherwise specified.

Ordering information

Indicate your requirements by selecting one option from each configuration table. Please print the corresponding codes in the available boxes to form your part number. For more information on this or other products and their availability, please contact your local JDS Uniphase sales representative or JDS Uniphase directly at 613 727-1303, or by at fax 613 727-8284, or via e-mail at sales@ca.jdsunph.com, or visit our Web site at www.jdsunph.com.

Sample: PB100+1B5NC5NC

PB100+1 ☐ ☐ ☐ ☐ ☐ ☐ ☐

Code	Wavelength
B	980 nm
2	1310 nm
4	1480 nm
1	1550 nm

Code	Common Connector Type[3]
NC	No connector
FP	FC/PC
FA	FC/APC

Code	Ports 1 and 2 Connector Type[3]
NC	No connector
FP	FC/PC
FA	FC/APC

Code	Common Pigtail Type
1	PM 400 µm tight buffer
2	PM 900 µm tight buffer
3	SM 500 µm tight buffer[1]
4	SM 900 µm tight buffer[1]
5	SM 5/125/250 µm with 900 µm PVC loose tube[2]

Code	Ports 1 and 2 Pigtail Type
1	PM 400 µm tight buffer
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3	SM 500 µm tight buffer[1]
4	SM 900 µm tight buffer[1]
5	SM 5/125/250 µm with 900 µm PVC loose tube[2]

Complementary polarization products are available from JDS Uniphase:

- In-line polarizers
- Polarization maintaining fiber splitter/coupler
- Rotating polarizers
- Depolarizers
- Faraday rotator mirrors

1. Not available for 980 nm wavelength.
2. For 980 nm wavelength only.
3. Key of the FC connector is aligned with the slow axis of the PM fiber.

JDS Uniphase

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