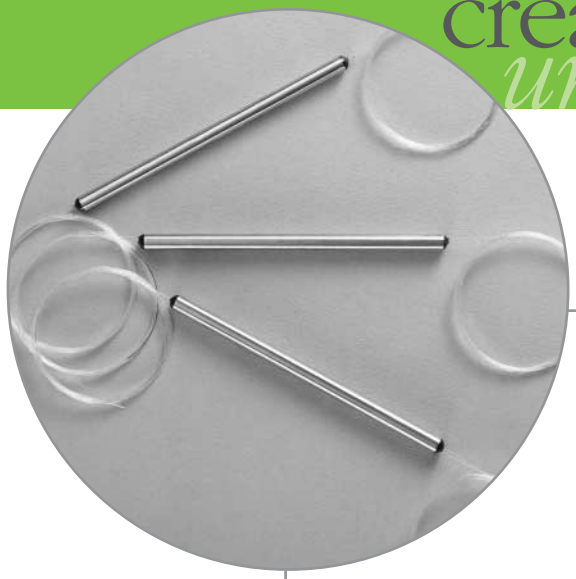
creating *unique advantages* together



WavePump™ PBC Polarization Beam Combiner

Features

- High optical power handling
- Very low insertion loss
- Custom design

Benefits

- Increased amplifier power
- Enhanced amplifier reliability
- Integrated assembly capability

Product Capabilities and Value

Raman amplifiers and higher power EDFAs are needed to address longer haul, increasing channel counts, and higher bit rates in next-generation optical networks. Polarization beam combiners (PBCs) enable the efficient combination of two orthogonally polarized pump lasers doubling the input power and reducing the polarization dependent gain effect. WaveSplitter's PBCs offer high reliability and low insertion loss in a compact package, and can be used in both EDFAs and Raman amplifiers, with the wavelength customized to the customer's application. These new products complement the WavePump product family, offering a complete all-fiber pump combiner solution with high pump power handling capability required by the Raman amplifier system.

WaveSplitter understands that excellent performance is just one of the many selection criteria for choosing a pump laser combiner, and the WavePump PBC has been designed to meet high reliability standards. In addition, WaveSplitter has the capability to offer integrated assembly to fit our customers' needs.

WAVESPLITTER™
Lighting the Internet on Fiber™

Preliminary Performance Specifications for WavePump PBC Polarization Beam Combiner

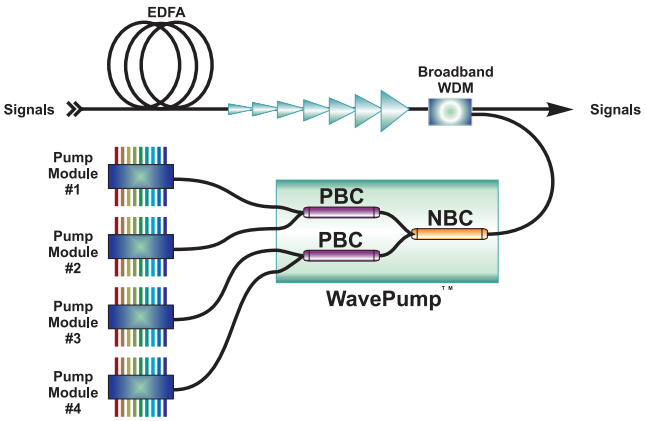
Parameters	Min.	Typ.	Max.
Center Wavelength (nm)	1420	–	1520
Operating Wavelength Range (nm)		±4	
Insertion Loss (Slow Axis) (dB)	–	0.25	0.4
Insertion Loss (Fast Axis) (dB)	–	0.4	0.5
Return Loss (dB)	55	–	–
Directivity (dB)	50	–	–
CrossTalk (dB)	17	–	–
Optical Power (mW)	1000	–	–
Operating Temperature (°C)		0 to 70	
Storage Temperature (°C)		-40 to 85	
Fiber Type		PANDA® 1550 fiber	
Dimensions[1-3] (LxD) (mm)		67.5 x 3.2	

Insertion loss and crosstalk are measured at target wavelengths and at room temperature.

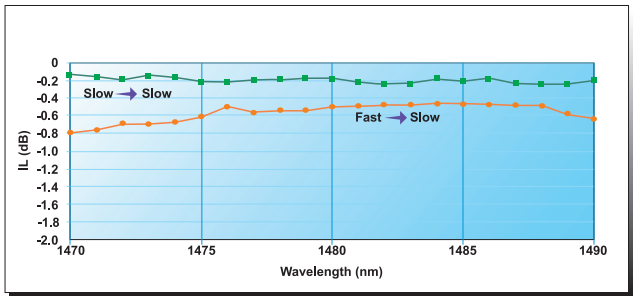
1 - Unused port is internally terminated.
2 - Standard pigtail length = 100 (±10) cm.
3 - Exclusive of strain relief.
Note: All data taken prior to connectorization.

Schematic picture showing the layout of input and output ports.

For more information on any WaveSplitter product contact your sales representative listed on our web site www.wavesplitter.com. Or contact WaveSplitter Technologies, Inc. directly at 510.580.8888.



The WavePump™ is used to combine pump lasers in a Raman amplifier. PBC stands for polarization beam combiner, and NBC stands for narrow band combiner.



Insertion loss spectra for the polarization beam combiner.

WaveSplitter™ Technologies, Inc.

WaveSplitter Technologies, Inc. • 46430 Fremont Blvd., Fremont, CA 94538 • Tel 510.580.8888 Fax 510.580.1395

This product specification sheet is revision 1.0; December, 2000.