

# Polarization Beam Combiner/Splitter

(patent pending)

## Product Description

Agiltron's PB Series Polarization Beam Combiner/Splitter is used to combine two polarized light signals or split one light signal into two polarized outputs with their polarization states orthogonal to each other. Employing Agiltron's proven advanced micro-optic design, it features low insertion loss, epoxy-free optical path, high extinction ratio, compact package, high reliability, and high stability. These quality components have excellent characteristics, making them an ideal choice for application in fiber amplifier systems, pump lasers, and optical fiber sensors.



## Features

- Low Insertion Loss
- Epoxy -Free Optical Path
- High Extinction Ratio
- Compact Package
- High Reliability & Stability
- Cost Effective

## Performance Specifications

Parameter	Min	Typical	Max	Unit
Wavelength <sup>[1]</sup>	780		2300	nm
Insertion Loss <sup>[2]</sup> 1900 – 2300nm		0.8	1.2	dB
Insertion Loss <sup>[2]</sup> 1700 – 1900nm		0.7	1.1	
Insertion Loss <sup>[2]</sup> 1260 – 1650nm		0.6	1	
Insertion Loss <sup>[2]</sup> 960 – 1100nm		1	1.2	
Insertion Loss <sup>[2]</sup> 780 – 950nm		1.2	1.5	
Extinction Ratio <sup>[2]</sup>	20	22	30	dB
Return Loss	45	50	60	dB
Wavelength Dependent Loss			0.15	dB
Optical Power Handling <sup>[3]</sup>		0.3	5	W
Directivity (2→3 or 3→2)	50			dB
Operating Temperature	-10		50	°C
Storage Temperature	-40		80	°C

[1] Operation bandwidth is +/- 40nm approximately at 1550nm.

[2] Measured without connectors. Each connector adds about 0.25dB loss

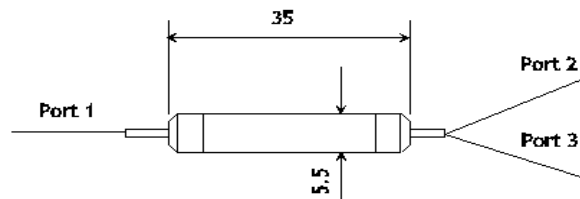
[3] Deff[4] Defined at 1310nm/1550nm. For the shorter wavelength, the handling power may be reduced.

## Applications

- Optical Fiber Amplifier
- Fiber Optic Sensor
- Instrumentation

Revised on 11/18/22

### Mechanical Dimensions Standard (mm)



\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

### Ordering Information

Prefix	Type	Wavelength	Package Type	Port 1 Fiber Type	Ports 2 Fiber Type	Ports 3 Fiber Type	Fiber Cover	Fiber Length	Connector
PBCS-	Regular=1 Special=0	1060=1 1310=3 1480=4 1550=5 980=9 Special=0	Regular=1 Special=0	SMF-28 =1 PM1500 =2 PM1900 =5 PM980 =6 PM850=7 PM400=8 HI 1060=9 Special=0	SMF-28 =1 PM1500 =2 PM1900 =5 PM980 =6 PM850=7 PM400=8 HI 1060=9 Special=0	SMF-28 =1 PM1500 =2 PM1900 =5 PM980 =6 PM850=7 PM400=8 HI 1060=9 Special=0	Bare fiber=1 900um tube=3 Special=0	0.25m=1 0.5m=2 1.0 m=3 Special=0	None=1 FC/PC=2 FC/APC=3 SC/PC=4 SC/APC=5 ST/PC=6 LC=7 Special=0