



Isolator Polarization Beam Combiner/Splitter (IPBC/IPBS Series)

Rev 11

Description

The Isolator Polarization Beam Combiner/Splitter is a compact device that provides both polarization beam combining and optical isolation in one integrated component. The most common application is to combine two pump lasers into one single fiber to double the pump power in EDFA or Raman Amplifier. The Beam Combiner/Splitter has extremely low insertion loss, and it can improve the amplifier performance.

Key Features

- Low Insertion Loss

Applications

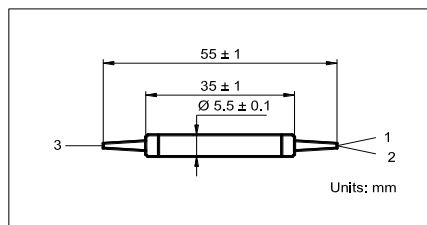
- EDFA
- Raman Amplifier

Specifications

Parameter	Unit	Value	
		Single Stage	Dual Stage
Stage	-	Single Stage	Dual Stage
Center Wavelength (λ_c)	nm	1310, 1480 or 1550	
Operating Wavelength Range	nm	$\lambda_c \pm 20$	
Typ. Insertion Loss	dB	0.45	0.55
Max. Insertion Loss	dB	0.7	0.8
Min. Isolation	dB	20	42
Min. Extinction Ratio (for Splitter Only), 23 °C	dB	20	20
Min. Return Loss	dB	50	
Directivity	dB	50	
Max. Optical Power (Continuous Wave)	mW	500	
Fiber Type	-	PM Panda Fiber for Ports 1 & 2	
	-	SMF-28 or PM Panda Fiber for Port 3	
Max. Tensile Load	N	5	
Operating Temperature	°C	- 5 to + 70	
Storage Temperature	°C	- 40 to + 85	

¹IL is 0.3 dB higher, RL is 5 dB lower, and ER is 2 dB lower for each connector added. Connector key is aligned to slow axis.

Package Dimensions



Ordering Information

IPBC-①-②②-③-④-⑤-⑥

①: Stage	②②: Wavelength	③: Connector Type
1 - Single Stage	31 - 1310 nm	1 - FC/UPC N - None
2 - Dual Stage	48 - 1480 nm	2 - FC/APC S - Specify
	55 - 1550 nm	3 - SC/UPC
	SS - Specify	4 - SC/APC

IPBS-①-②②-③-④-⑤-⑥

④: Fiber Jacket
B - 250 μ m Bare Fiber
L - 900 μ m Loose Tube
S - Specify

⑤: Fiber Type for Port 3

1 - SMF-28 Fiber

2 - Slow Axis Aligned 45° to Port 1

3 - Slow Axis Aligned to Port 1

S - Specify

⑥: Fiber Length

Q - 0.75 m

S - Specify