

1×2(2×2) 80μm Fused Polarization Maintaining Fiber Splitter

(patent pending)

Product Description

The reduced cladding (80μm) optical fiber splitter is a passive device that splits or combines light at 1550 nm in forms of 1×2 or 2×1 for most frequent used optical routing designs. There are many various applications requiring this type of coupler such as optical amplifier, power monitoring, coherent communication and fiber gyroscope.



Performance Specifications

Reduced Cladding PM Fiber Splitter	Specification		Unit
	Premium	A grade	
Operation Wavelength	1550 ± 20		nm
Port Configuration	1×2 or 2×2		
Excess Loss ^[1] (Typical)	≤0.4	≤0.7	dB
Excess Loss ^[1] (Maximum)	≤0.6	≤0.9	dB
Polarization Extinction Ratio ^[2] (Minimum)	≥18	≥16	dB
Return Loss* ^[3] (Minimum)	≥50		dB
Directivity* (Minimum)	≥55		dB
Operating Power (Maximum)	≤2		W
Operating Temperature	-40 ~ +85		°C
Storage Temperature	-50 ~ +85		°C
Package Type (for 165 μm Bare Fiber)	∅3.0 x L30		mm
* Test at central wavelength only All specification are based on slow-axis alignment and without connector			

[1]. without connector. Each connector adds 0.3dB and 0.5dB for short wavelength

[2]. without connector. Each connector adds 2dB

[3]. without connector. Each connector adds 5dB

Features

- Compact Size
- Low Excess Loss
- High Power Handling
- High Reliability
- Low Cost

Applications

- Optical Amplifier
- Power Monitoring
- Coherent Communication
- Fiber Gyroscope

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Splitting Ratio & Its Tolerance

Splitting Ratio	Maximum Splitting Ratio Tolerance (%)	
	Premium	A Grade
99/1	±0.5	±0.7
95/5	±1.5	±1.7
90/10	±2.2	±2.8
80/20	±2.5	±3.3
70/30	±3.0	±4.5
60/40	±4.0	±6.0
50/50	±5.0	±8.0

Ordering Information (Part Number)

Prefix	Configuration	Wavelength	Grade	Package	Fiber Type	Fiber Length	Coupling Ratio	Connector* ^[1]
FCPR-	1×2 = 12 2×2 = 22	1310 = 3 1550 = 1 1480 = 4 Special = 0	Premium = 1 A Grade = 2 Special = 0	∅3.0×30=1 Special = 0	80/165 Bare Fiber = 1 Special = 0	0.25m = 1 0.5m = 2 1.0m = 3 1.5m = 4 2.0m = 5 Special = 0	01/99 = 1 05/95 = 2 10/90 = 3 20/80 = 4 30/70 = 5 40/60 = 6 50/50 = 7 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0

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

•[1]. The connector cannot be installed directly onto bare fiber, as it is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer can remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SM28 fiber and decreases further with smaller core fibers.

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