JDS Uniphase

Product Bulletin

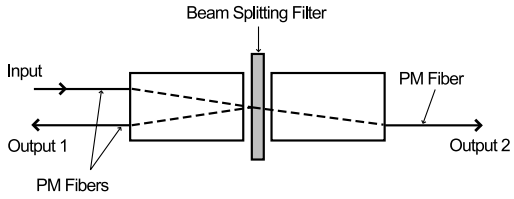
ACPM Series
Polarization Maintaining Fiber Splitter/Couplers

The ACPM Series couplers divide light while maintaining a high polarization extinction ratio. They have one input port and two output ports of polarization maintaining fiber and are available with 50/50, 30/70, 10/90, 05/95, 2/98, and 1/99 splitting ratios. These couplers are based on a beam splitting filter design. As shown in the schematic, the polarized light from the input fiber is partially reflected and transmitted by the filter and refocused into the two output fibers. The use of the beam splitter filter allows for consistent output ratios over a broad operational wavelength range. These devices guarantee extinction ratios greater than 20 dB.

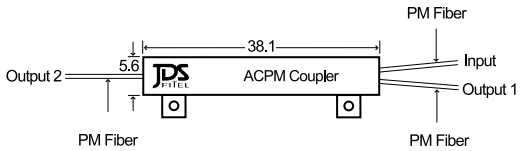
Key Features
- Standard output ratios of 50/50, 30/70, 10/90, 5/95, 2/98, and 1/99
- Operational wavelengths of 1310/1480/1550 nm
- Typical excess loss of 0.5 dB
- Typical return loss of 60 dB

Applications
- Interferometers
- Splitting light in PM fiber
- Fiber gyroscopes
- Coherent transmission systems
- Sensor systems
- Instruments

Configuration



Dimensions



Specifications

Parameter	Specification
Wavelengths	1310, 1480, or 1550 nm ±20 nm
Excess loss[1]	0.8 dB maximum, 0.5 dB typical
Return loss[1]	50 dB minimum, 60 dB typical
Extinction ratio[2] (at room temperature)	20 dB minimum
Maximum optical power	100 mW
Splitting ratios (Output 1/Output 2)	50/50 ±5%, 30/70 ±5%, 10/90 ±2%, 5/95 ±1%, 2/98 ±0.2%, and 1/99 ±0.2%
Number of ports[3]	3
Fiber type	Fujikura Panda 8/125/400 µm (900 µm) for 1550 nm Fujikura Panda 7/125/400 µm (900 µm) for 1310 and 1480 nm
Fiber length	1.0 minimum
Dimensions (WxHxL)	5.6 x 5.6 x 38.1 mm with tabs (with 400 µm tight buffer fiber) 8.9 x 8.9 x 45.7 mm (with 900 µm loose tube buffer)
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 ratios.
3. Custom version with 4 ports or other wavelengths (980 nm) is available.

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 fax at 613 727-8284, or via e-mail at sales@ca.jdsunph.com, or visit our Web site at www.jdsunph.com.

Sample: ACPM+13716NC

ACPM+1 □ □ □ □ □ □

Code	Output Ports Ratio
11	50/50
37	30/70
19	10/90
59	5/95
29	2/98
09	1/99

Code	Wavelength
2	1310 nm
4	1480 nm
1	1550 nm

1. Key of the FC connector is aligned with the slow axis of the PM fiber.

Code	Connector Type[1]
NC	No connector
FP	FC/PC
FA	FC/APC

Code	Pigtail Type (all ports)
1	PM 400 µm tight buffer
6	PM 400 µm tight buffer with 900 µm PVC loose tube

Complimentary polarization products are available from JDS FITEL:

- Polarization beam splitter/combiners
- In-line polarizers
- Rotating polarizers
- Depolarizers
- Faraday rotator mirrors

JDS Uniphase

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