



## Polarization Maintaining Fused Coupler (488 - 2100 nm) (PMC Series )

Rev 11L

### Description

The Polarization Maintaining Fused Coupler offers very low insertion loss, high polarization extinction ratio and excellent environmental stability. Accurate coupling ratios from 0.01/99.99 to 50/50 are available with very good uniformity at center wavelength. These components find extensive applications to perform power splitting and monitoring functions in all kinds of optical communication systems.

### Key Features

- Wavelength 488 - 2100 nm Available
- Coupling Ratio from 0.01/99.99 to 50/50 Available
- Operating on both Fast and Slow Axis
- Low Excess Loss
- High Power Handling
- High Stability and Reliability

### Applications

- Power Monitoring
- Coherent Communication
- Fiber Gyroscope
- Fiber Laser
- Fiber Amplifier
- Test Equipment

### Specifications

Parameter	Unit	Value							
Center Wavelength ( $\lambda_c$ )	nm	488, 532, 635	780, 830	980, 1064	1310, 1480, 1550	1700, 2000			
Operating Wavelength	nm	$\lambda_c \pm 5$	$\lambda_c \pm 10$	$\lambda_c \pm 10$	$\lambda_c \pm 20$	$\lambda_c \pm 20$	$\lambda_c \pm 20$		
Typ. Excess Loss	dB	0.8	0.5	0.4	0.2	0.5			
Max. Excess Loss	dB	1.2	0.8	0.6	0.4	0.8			
Min. ER <sup>1, 2, 3</sup>	dB	18	18	20	20	20			
Max. Excess Loss for each connector	dB	1.5	0.7	0.5	0.3	0.3			
Max. Optical Power (Continuous Wave) <sup>4</sup>	W	2							
Thermal Stability	dB/°C	$\leq 0.005$							
Min. Return Loss <sup>5</sup>	dB	50							
Min. Directivity	dB	50							
Fiber Type for Signal Port	-	PM Panda Fiber							
Fiber Type for Tap Port	-	PM Panda Fiber or Singlemode Fiber							
Operating Temperature	°C	- 5 to + 70							
Storage Temperature	°C	- 40 to + 85							
Coupling Ratio & Its Tolerance <sup>6</sup>	-								
Coupling Ratio	%	1/99	2/98	5/95	10/90	20/80	30/70	40/60	50/50
Max. Coupling Ratio Tolerance, $\lambda_c$	%	$\pm 0.3$	$\pm 0.5$	$\pm 0.7$	$\pm 1.0$	$\pm 2.0$	$\pm 2.0$	$\pm 2.5$	$\pm 3.0$
Coupling Ratio	%	0.1/99.9				0.01/99.99			
Tap Ratio Tolerance, $\lambda_c$	dB	$30 \pm 3$				$40 \pm 4$			

<sup>1</sup>ER data listed in the table are for the ports with coupling ratio greater than 10%. It will be 2 dB lower for a tap port with coupling ratio between 1-10%. For 1% tap port, ER is not considered.

<sup>2</sup>ER will be 2 dB lower for Nufern FUD-3460 fiber and Nufern PM 1950.

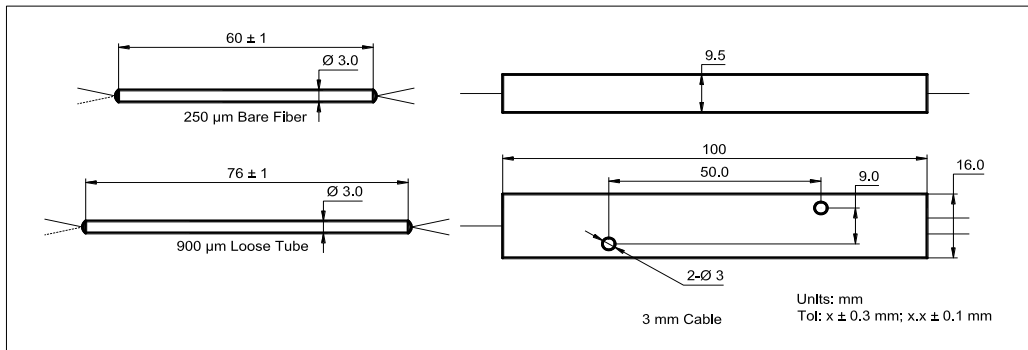
<sup>3</sup>ER is 2 dB lower for each connector added. Connector key is aligned to slow axis.

<sup>4</sup>The Optical Power is 1 W only for connector added. For visible wavelength, the limit is 50 mW.

<sup>5</sup>RL is 5 dB lower for connector added.

<sup>6</sup>Data tested at central wavelength only.

## Package Dimensions



## Ordering Information

PMC -①-②②②②-③③-④-⑤-⑥-⑦-⑧:

①: Configuration

- 1 - 1 × 2
- 2 - 2 × 2

②②②②: Wavelength

- 488 - 488 nm      1064 - 1064 nm
- 532 - 532 nm      1310 - 1310 nm
- 635 - 635 nm      1480 - 1480 nm
- 780 - 780 nm      1550 - 1550 nm
- 830 - 830 nm      1700 - 1700 nm
- 980 - 980 nm      2000 - 2000 nm
- SSSS - Specify

③③: Coupling Ratio

- 01 - 01/99      40 - 40/60
- 02 - 02/98      50 - 50/50
- 05 - 05/95      0.1 - 0.1/99.9
- 10 - 10/90      0.01 - 0.01/99.99
- 20 - 20/80      SS - Specify
- 30 - 30/70

④: Fiber Type for Tap Port

- P - PM Fiber
- S - Singlemode Fiber

⑤: Connector Type

- 1 - FC/UPC
- 2 - FC/APC
- 3 - SC/UPC
- 4 - SC/APC
- N - None
- S - Specify

⑥: Fiber Jacket

- B - 250 µm Bare Fiber
- L - 900 µm Loose Tube
- 3 - 3 mm Cable
- S - Specify

⑦: Fiber Length

- H - 0.5 m
- Q - 0.75 m
- S - Specify

⑧: Fiber Type

- 1 - Nufern PM460-HP
- 2 - Nufern PM630-HP
- 3 - Corning Panda PM 850
- 4 - Corning Panda PM 980
- 5 - Corning Panda PM 1310
- 6 - Corning Panda PM 1550
- 7 - Nufern PM1950
- 8 - Nufern FUD-3460
- S - Specify