



## 850nm Polarization Maintaining Filter Coupler (1x2/2x2)

### Key Features

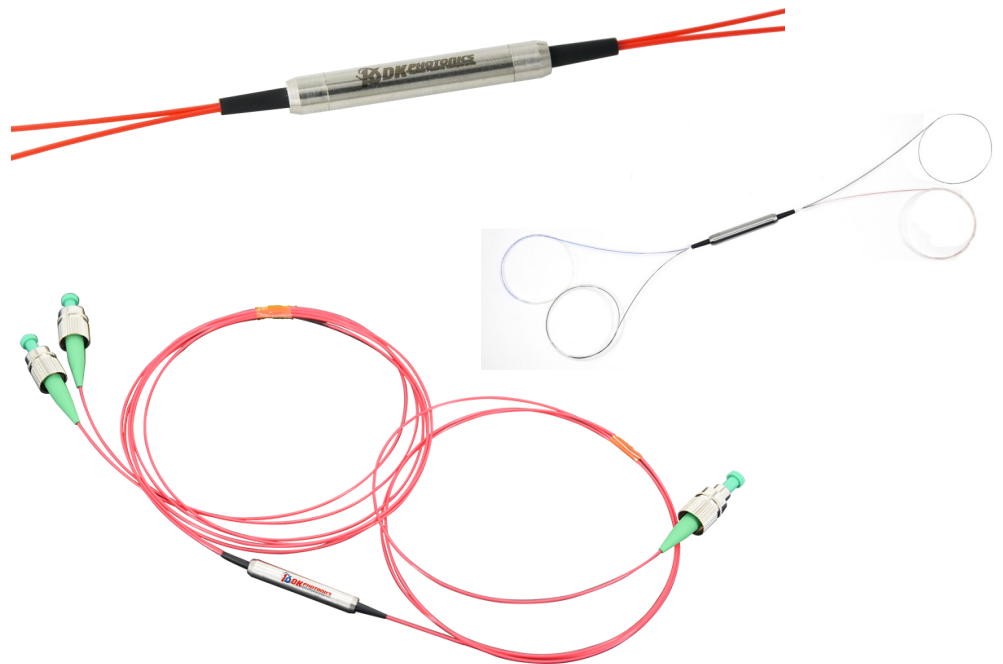
- Low Insertion Loss
- High Extinction Ratio
- Compact In-Line Package
- High Stability and Reliability

The Polarization Maintaining Filter Coupler is a polarization maintaining coupler which splits the light from the input PM fiber into two output PM fibers. The PM Filter Coupler supports the lightwave of each polarization to work, without blocking any polarization. The rugged stainless-steel package is designed for high optical performance and stability. This compact device offers low excess insertion loss, low back reflection, and high extinction ratio. Split ratios from 1% to 50% are available.

The PM Filter Coupler can be used to split high power linearly polarized light into multiple paths without perturbing the line are state of polarization (SOP). It can also be used as a power tap to monitor signal power in a PM fiber system without disturbing the linear SOP of light propagating in the PM fiber. Applications include PM fiber interferometers, power sharing in polarization sensitive systems, and signal monitoring in PM fiber systems.

### Applications

- Fiber Optic Instruments
- Fiber Sensors
- Coherent Detecting
- Research



## For more Info

### Please contact us at:

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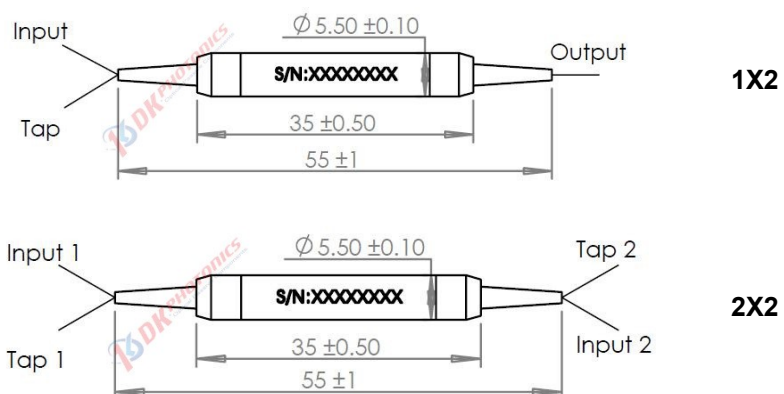
Add.:

4F, Bldg. 18, Qinghu Industrial Park,

Dahe Road, Longhua Dis.,

Shenzhen, China 518109

### Package Dimension:



\*Due to ongoing design improvements, the package size is subject to change. Please contact DK Photonics for confirmation if you have special requirements.



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### Performance Specifications

Parameter	Unit	Values
Configuration	-	1x2                      2x2
Center Wavelength	nm	850
Operating Wavelength Range	nm	±20
Tap Coupling Ratio	%	1±0.5%, 5±1.0%, 10±2.0%, and 50%
Max. Insertion Loss	dB	IL related to CR
Max. Excess Lose	dB	0.8                      1.2
Uniformity(Only for 50/50)	dB	0.5                      0.8
Mini. Extinction Ratio	Type B(Both of axis working) dB	20                      18
Return Loss	dB	≤50
Max. Power Handling	W	0.5, 1, 2, 5
Max. Tensile Load	N	5
Fiber Type	-	780-HP or PM780-HP Panda fiber for tap port PM780-HP Panda fiber for input & output ports
Operating Temperature	°C	-5 to +70
Storage Temperature	°C	-40 to +85
Package Dimensions	mm	Ø5.5 x L35

- Above specifications are for device without connector. All parameters are tested at room temperature.
- If tap port coupling ratio is ≤ 5%, ER will be 2dB lower; for ≤1% tap port, ER is out of concern.
- For devices with connectors, IL will be 0.3dB higher, RL will be 5dB lower and ER will be 2dB lower. The default connector key is aligned to slow axis. Power transmits through the connector less than 2W.
- For >10W high power applications, we will use heat sink package, contact DK Photonics for details.
- If there is pulse application, please be sure to inform us of pulse energy and peak power.

### Order information      P/N: PMFC-①-②-③-④-⑤-⑥-⑦-⑧-⑨

When you inquire, please provide the correct P/N number according to our ordering information and attach the appropriate description would be better. If need any connector, we do not recommend choosing a 250µm bare fiber pigtail.

①	②	③	④	⑤	⑥	⑦	⑧	⑨
Port	Operating Wavelength	Power Handling	Axis Alignment	Coupling Ratio	Fiber Type for Tap Port	Pigtails Diameter	Fiber Length	Connector
102:1x2 202:2x2	85:850nm XX: Others	L:<0.5W 1:1W 2:2W	B: Both axis working	50:50/50 40:40/60 30:30/70 20:20/80 10:10/90 01:1/99 XX: others	0:SM Fiber 1: PM Panda fiber X: Others	25:250µm bare fiber 90:900µm Loose Tube XX: Others	08:0.8m 10:1.0m XX: Others	00: None FP: FC/PC FA: FC/APC SP: SC/PC LA: LC/APC XX: Others

**Part Number Example:** PMFC-102-85-2-B-50-1-90-10-FA

**Description:** 850nm Polarization Maintaining Filter 1x2 Coupler - 2W, both axis working, 50:50 coupling ratio, 1.0m PM Panda Fiber with 0.9mm OD loose tube, and FC/APC connectors at all ports.

### Ordering Information for Custom Parts

If you need to customize other specifications, please provide detailed description for your requirement.