



## **Key Features**

- Low Insertion Loss
- **High Isolation**
- **High Extinction Ratio**
- High power handling
- Polarization-Insensitive
- High Stability and Reliability

## **Applications**

- Fiber laser
- Fiber amplifier
- Fiber Sensor
- Monitoring in Coherent Systems
- Communications

### 633/780nm PM fiber Fused WDM

DK Photonics' short wavelength PM Fiber Fused wavelength division multiplexers (WDMs), also known as Fiber Combiners, consist of two separate input fibers that each accept a different wavelength of light and a single, common output fiber accepting both input wavelengths. Designed for laser lines commonly used in life science applications, these fused WDM are ideal for dual-color fluorescence imaging using confocal microscopy or laser scanning microscopy setups. DK Photonics also offers fused WDM with a 780 nm channel that are designed for near-IR applications such as Raman microscopy. In total, up to 20 different combinations of combiners are available; please refer to the table to the right for a list of available combinations. Because fused WDM are reversible, they can also be used to split two colors entering the common port into two separate output ports.



## For more Info

#### Please contact us at:

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#### Add.:

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# Port 3

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

Port 2

**Package Dimension** 





## **Performance Specifications**

| Parameter              | Unit                 | Vaules  |  |
|------------------------|----------------------|---|--|
| Operating wavelength   | nm                   | 633 / 780   |  |
| Operating bandwidth    | nm                   | ±5  |  |
| Insertion loss         | dB                   | ≤1.00   |  |
| Isolation              | dB                   | ≥18   |  |
| PER                    | dB                   | ≥18   |  |
| Return Loss            | dB                   | ≥55   |  |
| Fiber Type             | -                    | PM630-HP  |  |
| Maximum Power Handling | mW                   | 300 mW (With Connectors or Bare Fiber),500 mW (Spliced) |  |
| Operating temperature  | $^{\circ}$ C         | -40 ~ +85   |  |
| Storage Temperature    | $^{\circ}\mathrm{C}$ | -50 ~ +85   |  |
| Package Dimension      | mm                   | Φ3.0×60(bare fiber), or Φ3.0×70(900μm loose tube)       |  |

- 1. Other wavelengths can also be customized according to requirements.
- 2. Above specifications are for device without connector, and the PM fused coupler is both axis working, no axis can be blocked; default test extinction ratio is on the slow axis. All parameters are tested at room temperature at central wavelength only.
- 3. For devices with connectors, IL will be 1.5dB higher, RL will be 5dB lower and ER will be 2dB lower. The default connector key is aligned to slow axis.

## Order information P/N: PMFBTWDM-1-2-3-4-5

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            | <b>5</b>   |
|---------|------------|-------------------|--------------|------------|
| Port    | Wavelength | Pigtails Diameter | Fiber Length | Connector  |
| 102:1x2 | 633/780    | 25:250µm          | 05:0.5m      | 00: None   |
|         |            | 90:900µm          | 10:1.0m      | FP: FC/PC  |
|         |            | XX: Others        | 15:1.5m      | FA: FC/APC |
|         |            |                   | XX: Others   | XX: Others |

**Part Number Example:** PMFBTWDM-102-633/780-25-10-00

**Description:** 1x2 633/780nm PM fiber fused WDM, PM630-HP fiber, bare fiber, 1.0m length fiber pigtails, without connectors at all ports.

## **Ordering Information for Custom Parts**

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