

## 405nm Polarization Maintaining Patch-cord

### Key Features

- High Return Loss
- High Extinction Ratio
- Low Insertion Loss
- Excellent stability and reliability

Polarization maintaining (PM) optical patch cords are widely used in polarization sensitive fiber optical systems for transmission of light that requires the PM state to be maintained.

Polarization Maintaining Patch-cord (Polarization Maintaining jumper) have orthogonal “slow” and “fast” axis with different propagation constants. There is little coupling between the polarization modes, therefore, light launched on one axis would propagate on that axis. It features high extinction ratio as a result of very accurate active alignment between PM Major Axis and the connector key.

We provide PM patch cords at different wavelengths (from 350nm to 2100nm). Those patch cords are made using best-known PM optical fibers (such as Fujikura PM Fibers or Nufern PM Fibers) and first-class quality optical fiber connectors. Our PM patch cord features high extinction ratio, low insertion loss, high return loss and long term reliability. Various PM fiber and connectors are available.

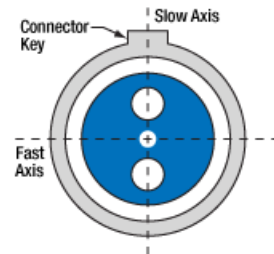
If you do not see a standard polarization maintaining patch cords that meets your needs, we welcome the opportunity to review your desired specification and quote a custom polarization maintaining patch cords. DK Photonics can respond to custom requirements with short lead times.

### Applications

- Fiber Laser
- Fiber Instruments
- Fiber I/O Port
- Optical Transmitters & Transceivers



Panda PM Fiber Cross Section



## For more Info

### Please contact us at:

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E-mail: [sales@dkphotonics.com](mailto:sales@dkphotonics.com)

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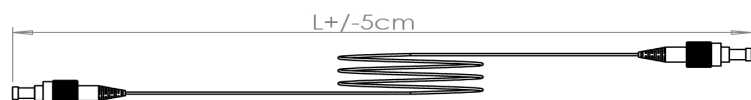
Add.:

4F, Bldg. 18, Qinghu Industrial Park,

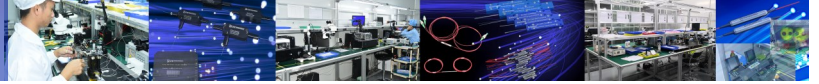
Dahe Road, Longhua Dis.,

Shenzhen, China 518109

### Drawing Example (FC patch cord):



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



## 405nm Polarization Maintaining Patch-cord

### Performance Specifications

| Parameters            | Unit  | Values             |
|-----------------------|-------|--------------------|
| Connector type        | -     | FC, SC, LC         |
| Test wavelength       | nm    | 405                |
| Operating Wavelength  | nm    | 400 - 680          |
| Cutoff Wavelength     | nm    | 380 ± 20           |
| Insertion loss        | dB    | ≤1.5               |
| Extinction ratio      | dB    | ≥15                |
| Return loss           | PC    | ≥40                |
|                       | APC   | ≥55                |
| Fiber Type            | -     | PM-S405-XP         |
| Mode Field Diameter   |       | 3.3 ± 0.5 @ 405 nm |
|                       |       | 4.6 ± 0.5 @ 630 nm |
| Numerical Aperture    | -     | 0.12               |
| Repeatability         | dB    | ≤0.2               |
| Changeability         | dB    | ≤0.3               |
| Optical Power         | mW    | ≤100               |
| Durability            | times | ≥1000              |
| Operation Temperature | °C    | -5 to 75           |
| Storage temperature   | °C    | -40°C ~ + 85 °C    |

1. Above specification may change without notice.
2. FC Connector key width: Narrow (2.0 mm). The default connector key is aligned to slow axis.
3. Mode Field Diameter (MFD) is specified as a nominal value. It is the diameter at the 1/e<sup>2</sup> power level in the near field.
4. The default length accuracy is +/-5CM, please let us know if you have special requirements.

### Order information

P/N: PMPC-①-②-③-④-⑤-⑥-⑦ (PMPig-①-②-③-④-⑤-⑥-⑦): for PM fiber pigtail with only 1 connector

When you inquire, please provide the correct P/N number according to our ordering information, and attach the appropriate description would be better.

| ①                       | ②         | ③                                     | ④                                 | ⑤  | ⑥   | ⑦   |
|-------------------------|-----------|---------------------------------------|-----------------------------------|--|---|---|
| Test Wavelength         | Grade     | Connector key Alignment               | Fiber Type                        | Pigtails Diameter  | Fiber Length                                | Connectors  |
| 405:405nm<br>XX: Others | P:P Grade | S: Slow Axis(default)<br>F: Fast axis | P40: PM-S405-XP<br>XX: fiber name | 25:250µm(bare fiber)<br>90:900µm<br>20:2.0mm<br>30:3.0mm<br>XX: Others | 05:0.5m<br>10:1.0m<br>15:1.5m<br>XX: Others | FP: FC/PC<br>FA: FC/APC<br>SA: SC/APC<br>LA: LC/APC<br>XX: Others |

**Part Number Example:** PMPC-405-P-P40-90-20-FA

**Description:** 405nm Polarization Maintaining patchcord, P grade, PM-S405-XP panda fiber, Slow Axis Connector Key Alignment, with 0.9mm OD loose tube, 2m fiber length, 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.