

**Polarization Maintaining Components** 



## **Key Features**

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

# 630nm Polarization Maintaining Patch-cord

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.



# 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.

# Applications

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

# For more Info

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# 630nm Polarization Maintaining Patch-cord

## Performance Specifications

Parameters	Unit	Values	
Connector type	-	FC, SC, LC	
Test wavelength	nm	630	
Operating Wavelength	nm	620 - 850	
Cutoff Wavelength	nm	570 ± 50	
Insertion loss	dB	≤1.2	
Extinction ratio	dB	≥20	
PC	dB	≥40	
Return loss APC	dB	≥55	
Fiber Type	-	PM630-HP	
Mode Field Diameter	μm	4.5 ± 0.5@630nm	
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/e2 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
630:630nm	P:P Grade	S: Slow Axis(default)	P63: PM630-HP	25:250µm(bare fiber)	05:0.5m	FP: FC/PC
XX: Others		F: Fast axis	XX: fiber name	90:900µm	10:1.0m	FA: FC/APC
				20:2.0mm	15:1.5m	SA: SC/APC
				30:3.0mm	XX: Others	LA: LC/APC
				XX: Others		XX: Others

Part Number Example: PMPC-630-P-P63-90-20-FA

**Description:** 630nm Polarization Maintaining patchcord, P grade, PM630-HP 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.