

780 nm Polarization Maintaining Fiber Optic Connector/Patch Cord



● Product Description

These polarization-maintaining fiber optic patch cords feature high-quality, narrow-key ceramic FC/APC connectors on both ends. Produced by our equipment, each patch cord is individually tested at the test wavelength specified in the specification label, ensuring extinction ratio and low back reflection (return loss) for both the fiber and its connections. These patch cords are in stock, featuring high-quality polishing to guarantee a typical return loss exceeding 60 dB. The test data sheet provides the extinction ratio and insertion loss test results for each patch cord. Each patch cord



comes with two protective caps covering the ends to prevent dust or other contaminants from settling on the ferrule end face. We also sell protective FC/PC end caps separately, including CAPF plastic fiber caps and CAPFM metal threaded fiber caps. If you cannot find a suitable product among our in-stock patch cords, Terahertzlabs also offers custom patch cords that can be shipped on the same day.

● Product features

Slow Axis Alignment、 Polarization-maintaining fiber with a pair of FC/APC connectors、 Wavelength range of 400-2200 nm、 Narrow key (2 mm) and slow axis alignment、 Typical 60 dB return loss、 Ceramic ferrule, 8° angle (APC)、 Ø3mm outer protective sleeve、 Custom patch cords available

● Part Number

MP-FOJ-780-2-1-PA

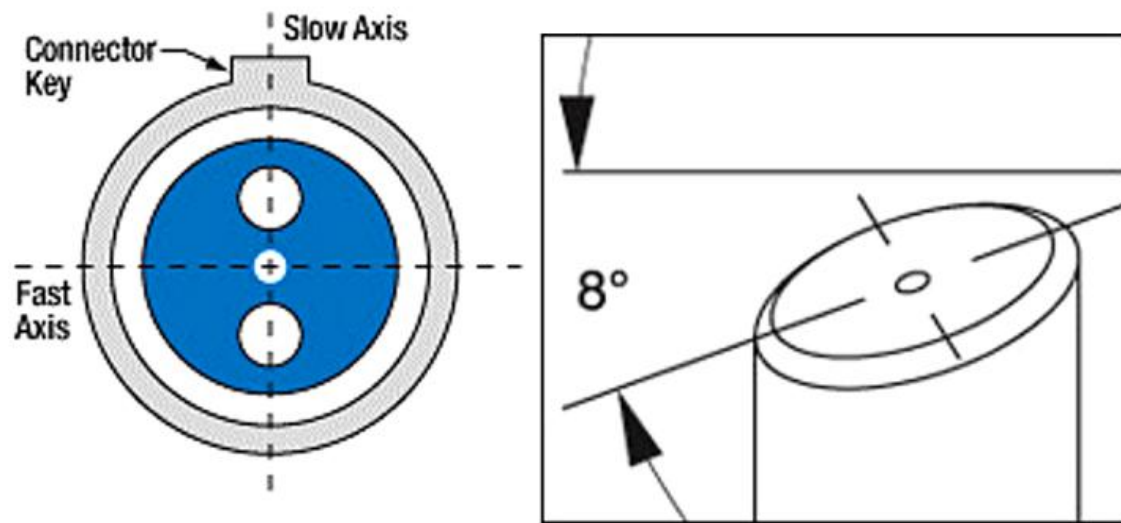
● Application area

Fiber optic communication system、 Fiber optic access network、 Fiber optic data transmission、 Fiber optic CATV、 Local area network (LAN)、 Test equipment、 Fiber optic sensor

● Core parameters

Operating Wavelength	Fiber Type
770-1100nm	PM780-HP

● General Parameters



Parameter

PN#	MP-FOJ-40	MP-FOJ-488	MP-FOJ-630	MP-FOJ-78	MP-FOJ-9
	5-2-1-PA	-2-1-PA	-2-1-PA	0-2-1-PA	80-2-1-PA
Test wavelength	405 nm	488 nm	630 nm	780 nm	980 nm
Operating wavelength	400 - 680 nm	460 - 700 nm	620 - 850 nm	770 - 1100 nm	970 - 1550 nm
Cut-off wavelength	380 ± 20 nm	420 ± 30 nm	570 ± 50 nm	710 ± 60 nm	920 ± 50 nm
Fiber type	PM-S405-	PM460-HP	PM630-HP	PM780-H	PM980-X



	XP (Panda)	(Panda)	(Panda)	P (Panda)	P (Panda)
Maximum insertion loss a	1.5 dB	1.5 dB	1.2 dB	1.0 dB	0.7 dB
Minimum extinction ratio a	15 dB	18 dB	20 dB	20 dB	22 dB
Mode field diameter b	3.6 ± 0.5 um @ 405nm	3.4 um @ 488nm	4.2 um @ 630nm	4.9 um @ 780nm	6.6 ± 0.7 um @ 980nm
Numerical aperture c	0.12	0.12	0.12	0.12	0.12
Return loss a	60 dB Typical				
Fiber connector	FC/APC				
Connector groove width	2.00 ± 0.02 mm				
Alignment method	Narrow Key Aligned to Slow Axis				
Fiber length	1.0 +0.075/-0 m for Item Numbers Ending in -1				
Loose tube type	2.0 +0.075/-0 m for Item Numbers Ending in -2				
Operating temperature	5.0 +0.075/-0 m for Item Numbers Ending in -5				
	10.0 +0.075/-0 m for Item Numbers Ending in -10				



Storage temperature	
Cut-off wavelength	900um/2mm/3mm armor can be choose
Fiber type	0 to 70 °C
Maximum insertion loss a	-45 to 85 °C

PN#	MP-FOJ-10 64-2-1-PA	MP-FOJ-13 10-2-1-PA	MP-FOJ-15 50-2-1-PA	MP-FOJ-20 00-2-1-PA
Test wavelength	1064 nm	1310 nm	1550 nm	2000 nm
Operating wavelength	970 - 1550 nm	1270 - 1625 nm	1440 - 1625 nm	1850 - 2200 nm
Cut-off wavelength	920 ±50 nm	1200 ±70 nm	1370 ±70 nm	1720 ±80 nm
Fiber type	PM980-XP(Panda)	PM1300-X P(Panda)	PM1550-XP (Panda)	PM2000(P anda)
Maximum insertion loss a	0.7 dB	0.5 dB	0.5 dB	0.5 dB
Minimum extinction ratio a	22 dB	23 dB	23 dB	23 dB
Mode field diameter b	7.7 um@ 1064 nm	9.3 ±0.5 um @ 1300 nm	9.9 ±0.5 um @ 1550 nm	8.6 um @ 2000 nm



Numerical aperture c	0.12	0.13	0.125	0.2
Return loss a	60 dB Typical			
Fiber connector	FC/APC			
Connector groove width	2.00 mm ±0.02			
Alignment method	Narrow Key Aligned to Slow Axis			
Fiber length	1.0 +0.075/-0 m for Item NumbersEnding in -1			
	2.0 +0.075/-0 m for Item NumbersEnding in -2			
	5.0 +0.075/-0 m for Item NumbersEnding in -5			
	10.0 +0.075/-0 m for Item NumbersEnding in -10			
loose tube type	900um 2mm 3mm Armor is optional			
Operating temperature	0 to 70 °C			
storage temperature	-45 to 85°C			

Note:

a. Measured at the test wavelength.

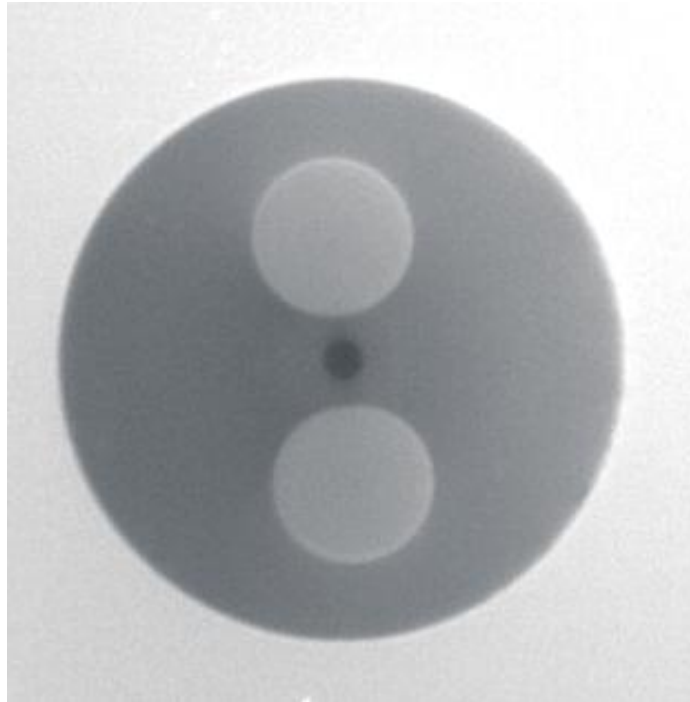
b. Mode field diameter (MFD) is a nominal value. The diameter at the $1/e^2$ power position in the near field.

c. Numerical aperture (NA) is a nominal value.

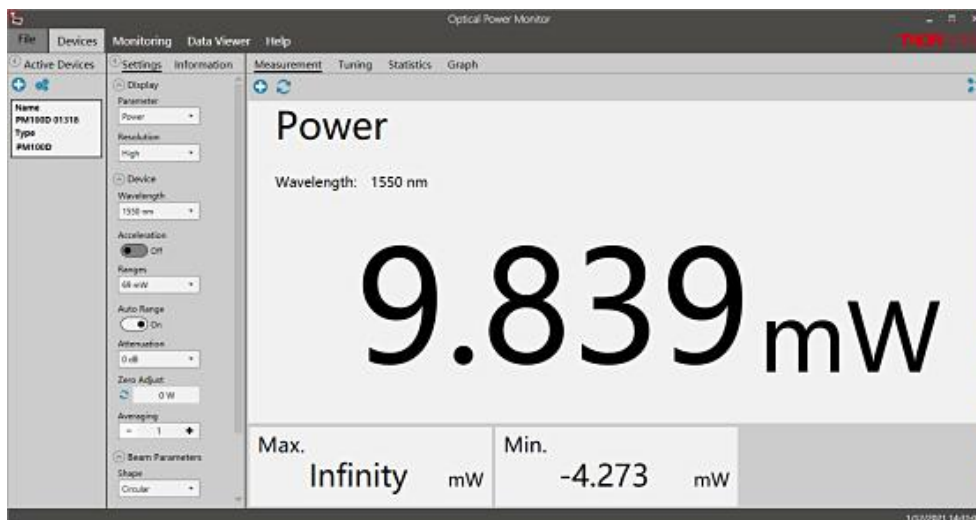


1550PM Fiber Optic Patch Cord Experimental Test:

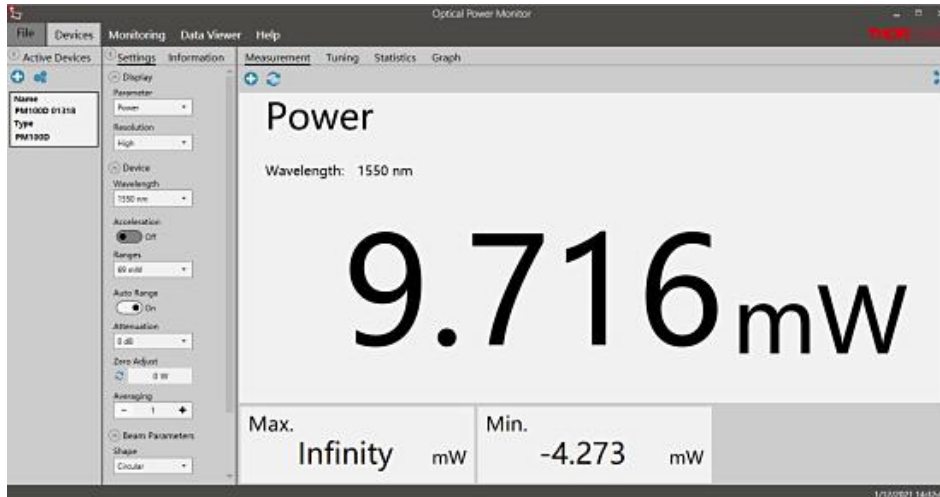
1. End-face inspection



2. IL test

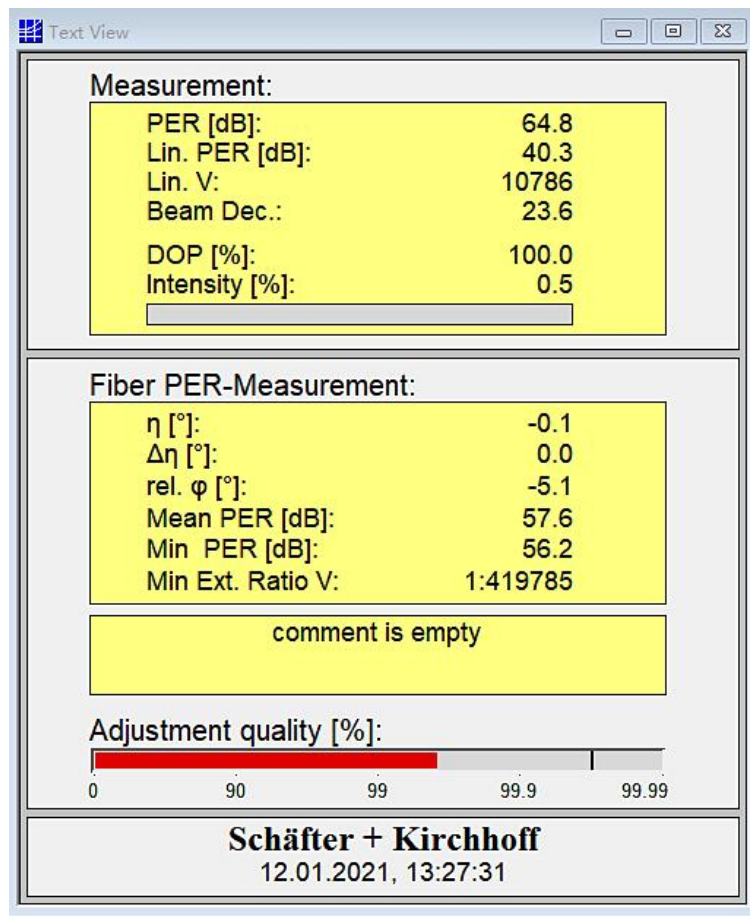


Laser power before connection



Power after connecting the fiber optic patch cord

3. Extinction Ratio Testing



Laser Direct Testing



Measurement:

PER [dB]:	37.3
Lin. PER [dB]:	32.0
Lin. V:	1582
Beam Dec.:	14.8
DOP [%]:	100.0
Intensity [%]:	1.0

Fiber PER-Measurement:

η [°]:	-0.8
$\Delta\eta$ [°]:	0.0
rel. φ [°]:	-11.6
Mean PER [dB]:	37.3
Min PER [dB]:	37.2
Min Ext. Ratio V:	1:5204

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Adjustment quality [%]:

0 90 99 99.9 99.99

Schäfter + Kirchhoff
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After Connecting Optical Fiber Patch Cord