

## PM Patchcord

### Description:

The polarization maintaining (PM) singlemode optical patchcords for use in a number of applications, including interferometric sensors, polarization sensitive components, and high data rate communications systems. The FC and SC connectors are offered with UPC and APC polishing method.



### Features:

- Wide range of Polarization Maintaining fibers
- Available both UPC and APC polishing:
- Alignment options:
  - Slow axis (Y-axis)
  - Fast axis (X-axis)
  - Specified by customer
  - Free
- Dust cover

### Specifications:

Insertion loss (IL)	typ.: 0.40 dB (depending on fiber type)
Return loss (RL)	UPC > 50 dB, APC > 60 dB
Extinction ratio	typ. 25 dB
Strain relief	200 N
Operating temperature	-40°C to +80°C, conditioned by type of cable
Durability	min 1000 cycles
Assembly procedure	glue and polish
Connection	physical contact
Lock mechanism	coupling nut

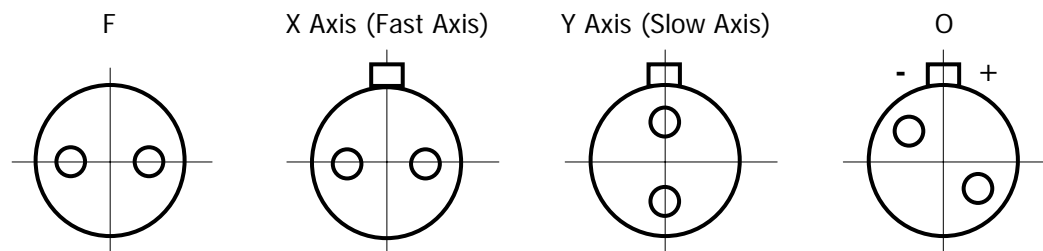
### Material

Coupling Nut	stainless steel
Plug Body	stainless steel, thermoplastic
Ferrule Material	full ceramic zirconia (the other type on demand)
Boot and Dust Cover	thermoplastic rubber (flame retardant)

### Applications:

FOG (Fiber Optic Gyroscope)  
LDV (Laser Doppler Velocimeter)  
Measurement sensors  
Testing and instrument systems  
Coherent transmission i.e. next generation of telecommunication  
PMD compensators

### Polarization:



The stress applying members are free to the key.	The stress applying members are horizontal to the key ( $0 \pm 3^\circ$ ).	The stress applying members are vertical to the key ( $0 \pm 3^\circ$ ).	The stress applying members are at the specific angle to the key.
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### Ordering code:

**PM - AAA - X - XX - (PM Fiber)\* - X - XX**

AAA	
Connector Type	Connector Description
UPC	FC/UPC
NPC	FC/APC
USC	SC/UPC
NSC	SC/APC

X - Axis:
F - free
X - X axis
Y - Y axis
O - $\pm^\circ$

X - Pigtail or Jumper type:
J jumper
P pigtail

XX - Jacket type:
09 fiber 0.9 mm jacket
28 cable 2.8 mm jacket

XX - Length [m]
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\*) See Polarization maintaining fiber Ordering code

## Polarization maintaining fiber ordering code:

### Single mode polarization maintaining fibers Panda

Ordering Code	$\lambda_0^{(1)}$	MFD $\pm 1.0 \mu\text{m}$	ATTN Max dB/km	Beat length	Polarization Crosstalk Max dB/100 m	Cut-Off wavelength $\mu\text{m}$	Coating structure	Coating diameter
SM85-PS-N90A	0.85 $\mu\text{m}$	5.5 $\mu\text{m}$	3.0	1.0 – 2.0 mm	-25	0.65 - 0.80	UV/Polyamide (Black)	900 $\pm$ 100 $\mu\text{m}$
SM85-PS-U40A					-30		UV/UV	400 $\pm$ 15 $\mu\text{m}$
SM85-PS-U25A					-30		UV/UV	245 $\pm$ 15 $\mu\text{m}$
SM98-PS-N90A	0.98 $\mu\text{m}$	6.6 $\mu\text{m}$	3.0	1.5 – 2.7 mm	-25	0.80 - 0.95	UV/Polyamide (Green)	900 $\pm$ 100 $\mu\text{m}$
SM98-PS-U40A					-30		UV/UV	400 $\pm$ 15 $\mu\text{m}$
SM98-PS-U25A					-30		UV/UV	245 $\pm$ 15 $\mu\text{m}$
SM13-PS-N90A	1.30 $\mu\text{m}$	9.5 $\mu\text{m}$	1.0	2.5 – 4.0 mm	-250	1.10 - 1.29	UV/Polyamide (Black)	900 $\pm$ 100 $\mu\text{m}$
SM13-PS-U40A					-30		UV/UV	400 $\pm$ 15 $\mu\text{m}$
SM13-PS-U25A					-30		UV/UV	245 $\pm$ 15 $\mu\text{m}$
SM14-PS-N90A	1.40 - 1.49 $\mu\text{m}$	9.8 $\mu\text{m}$	1.0	2.8 – 4.7 mm	-25	1.20 - 1.38	UV/Polyamide (Black)	900 $\pm$ 100 $\mu\text{m}$
SM14-PS-U40A					-30		UV/UV	400 $\pm$ 15 $\mu\text{m}$
SM14-PS-U25A					-30		UV/UV	245 $\pm$ 15 $\mu\text{m}$
SM15-PS-N90A	1.55 $\mu\text{m}$	10.5 $\mu\text{m}$	0.5	3.0 – 5.0 mm	-25	1.29 - 1.45	UV/Polyamide (Black)	900 $\pm$ 100 $\mu\text{m}$
SM15-PS-U40A					-30		UV/UV	400 $\pm$ 15 $\mu\text{m}$
SM15-PS-U25A					-30		UV/UV	245 $\pm$ 15 $\mu\text{m}$

### Single mode polarization maintaining fibers 3M

Ordering Code	Operating Wavelength	Mode filed diameter	Cladding	Jacket	Cut-Of Wavelength	Attenuation typical	Attenuation max	NA
FS-PM-4611	820 nm	5.3 $\mu\text{m}$	80 $\mu\text{m}$	165 $\mu\text{m}$	< 780 nm	3.0@820 nm	5.0@820 nm	0.13
FS-PM-6811	1300 nm	6.1 $\mu\text{m}$	80 $\mu\text{m}$	165 $\mu\text{m}$	< 1270 nm	1.8@1300 nm	2.5@1300 nm	0.18
FS-PM-7811	1550 nm	6.0 $\mu\text{m}$	80 $\mu\text{m}$	165 $\mu\text{m}$	< 1520 nm	2.6@1550 nm	3.0@1550 nm	0.20
FS-LS-4616	820 nm	5.3 $\pm$ 0.5 $\mu\text{m}$	80 $\pm$ 2 $\mu\text{m}$	200 $\pm$ 15 $\mu\text{m}$	< 780 nm	3.0 dB/km	5.0 dB/km	0.13
FS-LS-7511	1550 nm	6.0 $\pm$ 0.5 $\mu\text{m}$	80 $\pm$ 2 $\mu\text{m}$	165 $\pm$ 10 $\mu\text{m}$	< 1520 nm	2.6 dB/km	3.0 dB/km	0.20

### Tiger polarization maintaining fibers 3M

Ordering code	Ordering code	Operating Wavelength	Mode filed diameter	Cladding	Beat length	Cut-Of Wavelength	Attenuation Max	H Parameter	Max. core to clad offset
250 $\mu\text{m}$ buffer	400 $\mu\text{m}$ buffer								
FS-TI-5129	FS-TI-5128	980 nm	5.9 $\pm$ 0.5 $\mu\text{m}$	125 $\pm$ 2.0 $\mu\text{m}$	4.25 $\pm$ 0.75 mm	910 $\pm$ 50 nm	10.0 dB/km	< 3.2 x 10 <sup>-5</sup> m <sup>-1</sup>	0.8 $\mu\text{m}$
FS-TI-B129	FS-TI-B128	14xx nm	9.8 $\pm$ 1.0 $\mu\text{m}$	125 $\pm$ 2.0 $\mu\text{m}$	3.75 $\pm$ 1.0 mm	1330 $\pm$ 50 nm	1.0 dB/km	< 3.2 x 10 <sup>-5</sup> m <sup>-1</sup>	0.8 $\mu\text{m}$
FS-TI-7129	FS-TI-7128	1550 nm	10.5 $\pm$ 1.0 $\mu\text{m}$	125 $\pm$ 2.0 $\mu\text{m}$	4.25 $\pm$ 1.25 mm	1440 $\pm$ 80 nm	1.0 dB/km	< 3.2 x 10 <sup>-5</sup> m <sup>-1</sup>	0.8 $\mu\text{m}$

### Nufern polarization maintaining fibers

Ordering code	Operating Wavelength	Mode filed diameter	Cladding	Jacket	Cut-Of Wavelength	Attenuation typical	Crosstalk	NA
PM980-HP	980 nm	6.6 $\pm$ 1.0 $\mu\text{m}$ @980 nm	125 $\pm$ 1.0 $\mu\text{m}$	250 $\pm$ 20 $\mu\text{m}$	910 $\pm$ 70 nm	<3.0 dB/km@980	<40 dB@4 m	0.12
PM14XX-HP	1400 – 1490 nm	9.8 $\pm$ 0.8 $\mu\text{m}$ @1450 nm	125 $\pm$ 1.0 $\mu\text{m}$	245 $\pm$ 15 $\mu\text{m}$	1320 $\pm$ 60 nm	<1.0 dB/km@1450	<40 dB@4 m	0.12
PM1550-HP	1490 – 1620 nm	10.5 $\pm$ 0.8 $\mu\text{m}$ @1550 nm	125 $\pm$ 1.0 $\mu\text{m}$	245 $\pm$ 15 $\mu\text{m}$	1370 $\pm$ 70 nm	<0.5 dB/km@1550	<40 dB@4 m	0.12

### OFS polarization maintaining fibers

Ordering code	Operating Wavelength	Mode filed diameter	Cladding	Jacket	Cut-Of Wavelength	Application	Attenuation max	NA	Beat Length	Crosstalk @ 1550 nm
BF06832	14XX-Raman	9.8 $\mu\text{m}$	125 $\mu\text{m}$	400 $\mu\text{m}$	< 1380 nm	Raman	< 1.2@1455 nm	0.13	$\leq$ 4.7mm @ 1455 nm	$\leq$ -25 dB/100 m
BF06832-01	14XX-Raman	9.8 $\mu\text{m}$	125 $\mu\text{m}$	250 $\mu\text{m}$	< 1380 nm	Raman	< 1.2@1455 nm	0.13	$\leq$ 4.7mm @ 1455 nm	$\leq$ -25 dB/100 m
BF06833	1480 nm	10.0 $\mu\text{m}$	125 $\mu\text{m}$	400 $\mu\text{m}$	< 1470 nm	Telecom	< 1.0@1480 nm	0.13	$\leq$ 4.8mm @ 1480 nm	$\leq$ -25 dB/100 m
BF06833-01	1480 nm	10.0 $\mu\text{m}$	125 $\mu\text{m}$	250 $\mu\text{m}$	< 1470 nm	Telecom	< 1.0@1480 nm	0.13	$\leq$ 4.8mm @ 1480 nm	$\leq$ -25 dB/100 m
BF06734	1480 nm	10.0 $\mu\text{m}$	125 $\mu\text{m}$	400 $\mu\text{m}$	< 1525 nm	Telecom	< 1.0@1550 nm	0.13	$\leq$ 5.0mm @ 1550 nm	$\leq$ -25 dB/100 m
BF06734-01	1480 nm	10.0 $\mu\text{m}$	125 $\mu\text{m}$	250 $\mu\text{m}$	< 1525 nm	Telecom	< 1.0@1550 nm	0.13	$\leq$ 5.0mm @ 1550 nm	$\leq$ -25 dB/100 m

## Samples of ordering code:

### PM-NPC-X- 09 - FS PM 7811 -J-02

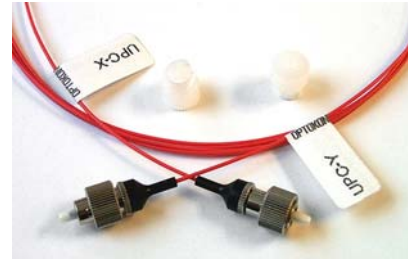
- Jumper, FC/APC connectors, X axis, Single mode polarization maintaining fibers 3M FS-PM-7811, length 2 m

### PM-USC-F- 28 - PM1550 HP -P-03

- Pigtail, SC/UPC connector, Free axis, Nufern polarization maintaining fibers PM1550-HP, length 3 m



PM-NPC-X- 28 - SM15 PS U40A -J-02



PM-NPC-Y/X- 09 - FS TI 7129 -J-02