

**Fiber Optics**

Passive Components

Collimation Packages

FiberBench

Optical Switches

Rackbox Systems

Connectors/  
Termination Tools

Single Mode Fiber

Rare Earth Doped

Polarization  
Maintaining Fiber

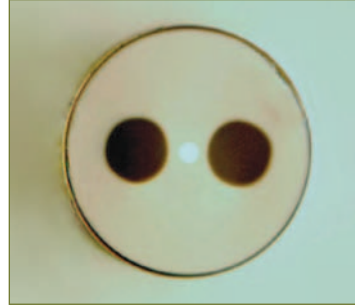
Photonic  
Crystal Fiber

Multimode Fiber:  
Step & Graded Index

Plastic Optical Fiber

**Polarization Maintaining Fiber, 460 nm to 980 nm**

Thorlabs offers “bow-tie” and “panda” style polarization maintaining fibers for laser pigtailed, sensors, spectroscopy, biomedical, and many other research applications. They have very high birefringence to ensure that the linear polarization state is maintained over the entire length of the fiber, even with environmentally induced stresses on the fiber. These fibers minimize bend-induced losses that typically occur when the fiber is bent or coiled tightly.



Panda PM Fiber



Bow-Tie PM Fiber

**Polarization Maintaining Fiber, Panda**

| ITEM#    | OPERATING WAVELENGTH <sup>1</sup> | MODE FIELD DIAMETER <sup>2</sup> | CUT-OFF WAVELENGTH | BEAT LENGTH <sup>3</sup> | ATTENUATION       | CLADDING ±1 μm | COATING ±15 μm | STRIPPING TOOL |
|----------|-----------------------------------|----------------------------------|--------------------|--------------------------|-------------------|----------------|----------------|----------------|
| PM630-HP | 630-780 nm                        | 4.5 ± 0.5 μm                     | 570 ± 50 nm        | 1.8 mm @ 630 nm          | <12dB/km @ 630 nm | 125 μm         | 245 μm         | T06S13         |
| PM780-HP | 780-980 nm                        | 5.3 ± 1.0 μm                     | 710 ± 60 nm        | 2.4 mm @ 850 nm          | <4dB/km @ 780 nm  | 125 μm         | 245 μm         | T06S13         |

**Polarization Maintaining Fiber, Bow-Tie**

| ITEM# | OPERATING WAVELENGTH <sup>1</sup> | MODE FIELD DIAMETER <sup>2</sup> | CUT-OFF WAVELENGTH | BEAT LENGTH <sup>3</sup> | ATTENUATION | CLADDING ±1 μm | COATING ±12 μm | STRIPPING TOOL |
|-------|-----------------------------------|----------------------------------|--------------------|--------------------------|-------------|----------------|----------------|----------------|
| HB450 | 488/514 nm                        | 3.6 μm                           | 350-470 nm         | <2.0 mm                  | <100dB/km   | 125 μm         | 245 μm         | T06S13         |
| HB600 | 633/688 nm                        | 3.2 μm                           | 500-600 nm         | <2.0 mm                  | <15dB/km    | 125 μm         | 245 μm         | T06S13         |
| HB750 | 780 nm                            | 4.0 μm                           | 610-750 nm         | <2.0 mm                  | <8dB/km     | 125 μm         | 245 μm         | T06S13         |

1) Typical operating wavelengths - The single mode operating window is ~200 nm above the cutoff wavelength if dual mode effects are minimized near the cutoff wavelength and bend losses are minimized at long wavelengths.

2) Mean value calculated from the relative specifications  
3) Measured at 633 nm

**Polarization Maintaining Fiber, Panda by**



| ITEM#    | PRICE/m      | \$       | £       | €       | RMB      |
|----------|--------------|----------|---------|---------|----------|
| PM630-HP | 1 to 9 m     | \$ 19.40 | £ 12.20 | € 18.00 | ¥ 185.25 |
|          | 10 to 49 m   | \$ 16.35 | £ 10.30 | € 15.20 | ¥ 156.15 |
|          | 50 to 249 m  | \$ 14.30 | £ 9.00  | € 13.30 | ¥ 136.55 |
|          | 250 to 999 m | CALL     | CALL    | CALL    | CALL     |
| PM780-HP | 1 to 9 m     | \$ 19.40 | £ 12.20 | € 18.00 | ¥ 185.25 |
|          | 10 to 49 m   | \$ 16.35 | £ 10.30 | € 15.20 | ¥ 156.15 |
|          | 50 to 249 m  | \$ 14.30 | £ 9.00  | € 13.30 | ¥ 136.55 |
|          | 250 to 999 m | CALL     | CALL    | CALL    | CALL     |

**Polarization Maintaining Fiber, Bow-Tie by**



| ITEM# | PRICE/m      | \$       | £       | €       | RMB      |
|-------|--------------|----------|---------|---------|----------|
| HB450 | 1 to 9 m     | \$ 18.40 | £ 11.60 | € 17.10 | ¥ 175.70 |
|       | 10 to 49 m   | \$ 16.05 | £ 10.10 | € 14.95 | ¥ 153.30 |
|       | 50 to 249 m  | \$ 13.10 | £ 8.25  | € 12.20 | ¥ 125.10 |
|       | 250 to 999 m | CALL     | CALL    | CALL    | CALL     |
| HB600 | 1 to 9 m     | \$ 18.40 | £ 11.60 | € 17.10 | ¥ 175.70 |
|       | 10 to 49 m   | \$ 16.05 | £ 10.10 | € 14.95 | ¥ 153.30 |
|       | 50 to 249 m  | \$ 13.10 | £ 8.25  | € 12.20 | ¥ 125.10 |
|       | 250 to 999 m | CALL     | CALL    | CALL    | CALL     |
| HB750 | 1 to 9 m     | \$ 18.40 | £ 11.60 | € 17.10 | ¥ 175.70 |
|       | 10 to 49 m   | \$ 16.05 | £ 10.10 | € 14.95 | ¥ 153.30 |
|       | 50 to 249 m  | \$ 13.10 | £ 8.25  | € 12.20 | ¥ 125.10 |
|       | 250 to 999 m | CALL     | CALL    | CALL    | CALL     |

**Pure Silica Core Polarization Maintaining Fiber, 350 nm to 780 nm**

These PM fibers have all the benefits of the PM fibers above but with a pure silica core, which provides protection from radiation-induced damage and color center formation.

| ITEM#      | OPERATING WAVELENGTH <sup>1</sup> | MODE FIELD DIAMETER <sup>2</sup> | CUT-OFF WAVELENGTH | BEAT LENGTH <sup>1</sup> | ATTENUATION       | CLADDING ±1 μm | COATING ±15 μm | STRIPPING TOOL |
|------------|-----------------------------------|----------------------------------|--------------------|--------------------------|-------------------|----------------|----------------|----------------|
| PM-S350-HP | 350-460 nm                        | 2.3 μm @ 350 nm                  | <340 nm            | 1.5 mm @ 350 nm          | n/a               | 125            | 245            | T06S13         |
| PM-S405-HP | 400-500 nm                        | 2.5 μm @ 405 nm                  | 365 ± 25 nm        | 2.0 mm @ 405 nm          | <30dB/km @ 460 nm | 125            | 245            | T06S13         |
|            |                                   | 2.8 ± 0.3 μm @ 460 nm            |                    |                          |                   |                |                |                |
| PM-S460-HP | 460-550 nm                        | 3.5 ± 0.3 μm @ 460 nm            | 420 ± 30 nm        | 2.3 mm @ 460 nm          | <30dB/km @ 460 nm | 125            | 245            | T06S13         |
| PM-S630-HP | 630-780 nm                        | 4.2 ± 0.5 μm @ 630 nm            | 580 ± 40 nm        | 4.7 mm @ 630 nm          | <12dB/km @ 630 nm | 125            | 245            | T06S13         |

1) Nominal  
2) 1/e<sup>2</sup> fit - near field

| ITEM#      | PRICE/m      | \$       | £       | €       | RMB      |
|------------|--------------|----------|---------|---------|----------|
| PM-S350-HP | 1 to 9 m     | \$ 33.00 | £ 20.80 | € 30.70 | ¥ 315.20 |
|            | 10 to 49 m   | \$ 26.00 | £ 16.40 | € 24.20 | ¥ 248.30 |
|            | 50 to 249 m  | \$ 22.35 | £ 14.10 | € 20.80 | ¥ 213.40 |
|            | 250 to 999 m | CALL     | CALL    | CALL    | CALL     |
| PM-S405-HP | 1 to 9 m     | \$ 30.00 | £ 18.90 | € 27.90 | ¥ 286.50 |
|            | 10 to 49 m   | \$ 23.70 | £ 14.95 | € 22.00 | ¥ 226.30 |
|            | 50 to 249 m  | \$ 20.35 | £ 12.80 | € 18.95 | ¥ 194.30 |
|            | 250 to 999 m | CALL     | CALL    | CALL    | CALL     |

| ITEM#      | PRICE/m      | \$       | £       | €       | RMB      |
|------------|--------------|----------|---------|---------|----------|
| PM-S460-HP | 1 to 9 m     | \$ 30.00 | £ 18.90 | € 27.90 | ¥ 286.50 |
|            | 10 to 49 m   | \$ 23.70 | £ 14.95 | € 22.00 | ¥ 226.30 |
|            | 50 to 249 m  | \$ 20.35 | £ 12.80 | € 18.95 | ¥ 194.30 |
|            | 250 to 999 m | CALL     | CALL    | CALL    | CALL     |
| PM-S630-HP | 1 to 9 m     | \$ 27.00 | £ 17.00 | € 25.10 | ¥ 257.90 |
|            | 10 to 49 m   | \$ 21.25 | £ 13.40 | € 19.75 | ¥ 202.90 |
|            | 50 to 249 m  | \$ 18.20 | £ 11.50 | € 16.95 | ¥ 173.80 |
|            | 250 to 999 m | CALL     | CALL    | CALL    | CALL     |