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Telecoms PM Fiber

Telecoms Polarization Maintaining (PM) fibers (HB-T) are mode-matched to standard 'telecoms' fibers. The result of this is that splice losses of less than 0.1dB can be achieved routinely, with Polarization Extinction Ratios (PERs) of better than -32dB. Similarly, HB-T's geometric precision makes it ideally suited for 45° splices across PM axes for Lyot depolarizers. All Fibercore PM fibers are designed and tested to exceed all relevant Telcordia™ standards.

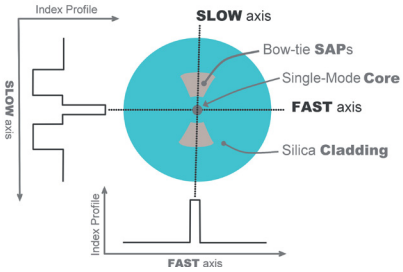
HB1250T, HB1480T and HB1500T are also available with a 400µm dual acrylate buffer for enhanced ruggedness and reduced PER degradation during packaging.

HB980T and HB1480T have been designed specifically for the polarization multiplexing and pigtailing of pump diodes.

HB14XXT, HB1250T(9/125) and HB980T(6.6/125) are short beat length fibers suitable for Raman pump depolarizers, PM Pigtails and applications requiring the shortest beat length with a telecoms friendly core.

Fibercore's 'Bow-Tie' design is capable of creating more birefringence than any other stressed design. This is simply because it is based on two opposing wedges, the most simple and efficient means of applying stress to a point.

Typical 'Bow-Tie' HiBi Fiber Geometry



Advantages:

- Highly Birefringent (HB)
- Short Beat Lengths (SB)
- Strong PER maintaining

Typical applications:

- Telecoms
- Erbium Doped Fiber Amplifier (EDFA)
- Cable Television (CATV)
- Interferometric sensors
- Fiber Lasers
- Current Sensors
- Biomedical

Related Products:

- PM Erbium Doped Fiber (DHB1500)
- Zing™ Polarizing Fiber (HB-Z)
- Standard PM Fiber (HB)
- PM Coupler Fiber (HB-C)
- PM Gyro Fiber (HB-G)
- Polyimide Coated PM Fiber (HB-P)

Product Variants:

• **HB980T**	PM pump fiber for use in telecoms style 980nm pumps
• **HB1250T(245)**	PM transmission fiber for use around 1310nm
• **HB1250T(400)**	Thick coating PM transmission fiber for use around 1310nm for improved micro-bend resistance
• **HB1480T(245)**	PM transmission fiber for 1480nm
• **HB1480T(400)**	Thick coating PM transmission fiber for use around 1480nm for improved micro-bend resistance
• **HB1500T(245)**	PM transmission and depolarizer fiber for use around 1550nm
• **HB1500T(400)**	Thick coating PM transmission fiber for use around 1550nm for improved micro-bend resistance
• **HB980T(6.6/125)**	Short beat length PM fiber for 980nm telecoms applications
• **HB1250T(9/125)**	Short beat length PM fiber for 1310nm telecoms applications
• **HB14XXT**	Short beat length 14XXnm fiber for Raman depolarizers.

T: +1 (949) 863 3144
E: sales@newport.com
www.newport.com

Newport®

FIBERCORE
www.fibercore.com

Specifications

	HB980T	HB1250T (245)	HB1250T (400)	HB1480T (245)	HB1480T (400)	HB1500T (245)	HB1500T (400)
Operating Wavelength (nm)	980 - 1310	1300 - 1480		1480 - 1550		1550 - 1650	
Cut-Off Wavelength (nm)	870 - 970	1100 - 1290		1290 - 1450		1290 - 1540	
Numerical Aperture	0.13 – 0.15	0.11 – 0.13					
Mode Field Diameter (µm)	5.3 – 6.4 @980nm	8.1 – 9.9 @1310nm		9.3 – 11.2 @1480nm		9.7 – 11.3 @1550nm	
Attenuation (dB/km)	<3 @980	<2 @1310nm		<2 @1480nm		<2 @1550nm	
Beat Length (mm) @633nm	≤2.0						
Proof Test (%)	1 or 2 (100 or 200 kpsi)						
Cladding Diameter (µm)	125 ± 1						
Core Cladding Concentricity (µm)	≤0.6						
Coating Diameter (µm)	245 ± 15		400 ± 20	245 ± 15	400 ± 20	245 ± 15	400 ± 20
Coating Type	Dual Acrylate						

Short beat length

	HB980T(6.6/125)	HB1250T(9/125)	HB14XXT
Operating Wavelength (nm)	980	1310	1300 - 1480
Cut-Off Wavelength (nm)	870 - 970	1100 - 1250	1100 - 1290
Numerical Aperture	0.11 – 0.13		
Mode Field Diameter (µm)	6.1 – 7.1 @980nm	8.1 – 9.9 @1310nm	9.5 – 11.5 @1465nm
Attenuation (dB/km)	<2 @980	<2 @1310nm	<2 @1480nm
Beat Length (mm) @633nm	≤1.2		
Proof Test (%)	1 or 2 (100 or 200 kpsi)		
Cladding Diameter (µm)	125 ± 1		
Core Cladding Concentricity (µm)	≤0.4		≤0.6
Coating Diameter (µm)	245 ± 15		
Coating Type	Dual Acrylate		

Visit **fibercore.com/fiberpaedia** for our encyclopedia of industry terms/knowledge base.

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E: sales@newport.com
www.newport.com

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