

## Polarization Maintaining Fiber (Panda)

Drawing of fiber cross section:



### Description:

Heracle's PANDA-style fiber combine uniform birefringence and low attenuation across any optical communication band. The product is supplied in 80  $\mu\text{m}$  or 125  $\mu\text{m}$  cladding diameters to accommodate compact coil assemblies and standard connectorized hardware.

Our PANDA fibers are especially suited for co-packaged optics in data centers providing excellent polarization maintaining properties, extremely high birefringence, and low attenuation. Other applications include polarization-controlled fiber lasers, fiber-optic gyroscopes, interferometric strain and acoustic sensors, coherent DWDM transceivers, quantum key-distribution links, and other applications where stable polarization and low loss are essential.

### Key Features:

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| <b>Stable Polarization Axis:</b>            | Precisely positioned stress rods keep excellent control of birefringence.  |
| <b>Low Intrinsic &amp; Macro-bend Loss:</b> | High-purity core material and controlled waveguide parameters keep attenuation low in both straight fiber and small-radius coils.  |
| <b>Mechanical Reliability:</b>              | Industry-standard acrylate coating guards against micro-bend, moisture ingress, and repetitive thermal cycling.  |
| <b>Customization:</b>                       | Tailoring of cutoff wavelength, mode-field diameter, geometrical and coating parameters to match specific laser sources, bend-radius constraints, or packaging requirements. |

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General Information:					
Product Name		P-8/125-CWL1.3-PM	P-8/125-CWL1.5-PM	P-8/80-CWL1.5-PM	Custom
Mode Properties	Single Mode				
Core Material	Ge-Doped fused silica				
Cladding Material	Pure fused silica				
Coating Type	Dual layer coating				
Typical Application	Co-packaged optics, fiber lasers				
Performance Properties					
Parameter	Unit	Specification			
Operating Wavelength	nm	1310	1550	700 – 1700	
Cutoff wavelength	nm	< 1270	< 1500	700 – 1700	
Tensile proof test	kpsi (GPa)	200 (1.38)		TBD	
Optical Properties					
Mode Field Diameter	μm	9 ± 0.5 @ 1310 nm	8.9 ± 0.3 @ 1550 nm	3 – 20	
Attenuation	dB/km	< 2		TBD	
Polarization Extinction Ratio	dB / 100 m	> 30		TBD	
Beat Length	mm	< 5		TBD	
Geometrical Properties					
Cladding Diameter	μm	125 ± 1	80 ± 1	80 – 500	
Core-to-Clad Offset	μm	< 0.5		TBD	
Clad Non-Circularity	%	< 2.0			
Coating Diameter	μm	250 ± 15	165 ± 10	TBD	