

# GRADED INDEX MULTIMODE POLYIMIDE COATED FIBER



These fibers are designed to withstand harsh environments such as high temperature, high pressure, moisture, chemicals, radiation and tight bends.

Applications, such as oil and gas downhole temperature sensing, pressure monitoring and data transmission, offshore oil and gas asset monitoring, Enhanced Oil Recovery (EOR) (especially Steam Assisted Gravity Drainage (SAGD) techniques) and borehole seismic, can benefit by using these fibers.

The Distributed Temperature Sensing (DTS) technique uses these specialty fibers to monitor and profile a downhole well in extreme harsh conditions. Fibercore has developed a unique carbon coating, which offers significant barriers against hydrogen, moisture and acid ingress of up to 150°C. The carbon coating also increases the lifetime of a fiber under tight and sharp bends, protecting the fiber from water/moisture attack/(micro cracking) to the fiber glass surface. The polyimide coating offers an enhanced operating temperature range of up to 300°C.

## FEATURES

### Advantages

- High temperature up to 300°C
- High bandwidth

### Typical Applications:

- DTS for SAGD wells
- Temperature monitoring in radiation environments
- Hydraulic fracture monitoring
- Production/injection monitoring
- Vertical seismic profiling
- Well integrity monitoring

### Product Variants

- GIMM(50/125)P  
Graded index, multimode fiber with a 50µm core and polyimide coating
- GIMM(62.5/125)P  
Graded index, multimode fiber with a 62.5µm core and polyimide coating

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22July2020\_MD42/5

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## SPECIFICATIONS

	GIMM(50/125)P *	GIMM(62.5/125)P
Operating Wavelength (nm)	800 - 1750	
Numerical Aperture	0.18 - 0.22	0.25 - 0.30
Attenuation (dB/km)	≤4.0 @850nm ≤2.0 @1300nm	
Proof Test (%)	1 or 2 (100 or 200 kpsi)	
Bandwidth (MHz.km)	400/400 @850/1300nm	160/160 @850/1300nm
Cladding Diameter (μm)	125 ± 1	
Core Cladding Concentricity (μm)	≤2.0	
Coating Diameter (μm)	155 ± 5	
Core Diameter (μm)	50	62.5
Coating Type	Polyimide	
Operating Temperature (°C)	-50 to +300	

\* Special easier to strip polyimide coating available for window stripping, for applications such as FBGs.

## COATING ORDER GUIDE

- Dual Layer Acrylate = No order code
- Polyimide = P
- Carbon High Temperature = CHT
- Carbon Polyimide = CP

### Order Code Example

SM1250SC(9/125) with a Carbon High Temperature coating: SM1250SC(9/125)CHT

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## RELATED PRODUCTS

- Graded Index Multimode Carbon Polyimide Coated Fiber
- Graded Index Multimode Carbon High Temperature Acrylate Coated Fiber
- Graded Index Multimode High Temperature Acrylate Coated Fiber
- Graded Index Multimode Pure Silica Core Fiber

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