

# High Temperature Acrylate Coated Optical Fiber

Specialty Fiber

## FEATURES

High Operating Temperature  
Low Loss  
Dual Layer Special Acrylate coating  
Excellent Core/cladding concentricity  
Single Mode or Multimode

## APPLICATIONS

Fiber Bragg Grating  
Avionics  
Fiber Sensors arrays  
Military  
Oil and Gas

| Test Parameters                              | Specifications              |                             |
|--|-----------------------------|-----------------------------|
| <b>Geometrical Properties</b>                | <b>Multimode</b>            | <b>Single Mode</b>          |
| Numerical Aperture                           | 0.275+/-0.015               | 0.12+/-0.01                 |
| Cladding Diameter                            | 125 +/- 1.0 $\mu\text{m}$   | 125 +/- 1.0 $\mu\text{m}$   |
| Core Diameter                                | 62.5 $\mu\text{m}$          | 9.8 $\mu\text{m}$           |
| Cladding Non-circularity                     | < 1.0 %                     | < 1.0 %                     |
| Core / cladding Concentricity error          | -----                       | < 1.0 $\mu\text{m}$         |
| Coating Diameter                             | 245 +/-5 $\mu\text{m}$      | 245 +/-5 $\mu\text{m}$      |
| Coating / cladding concentricity error       | <10.0 $\mu\text{m}$         | <10.0 $\mu\text{m}$         |
| Mode Field diameter                          | -----                       | 10.4 +/- 0.8 $\mu\text{m}$  |
| Bandwidth at 850nm                           | 160MHz Km                   |                             |
| At 1300nm                                    | 200MHz KM                   |                             |
| <b>Mechanical Properties</b>                 |                             |                             |
| Fiber proof test level                       | 0.70 Gpa<br>100 (1%) (kpsi) | 0.70 Gpa<br>100 (1%) (kpsi) |
| Operating Temperature Range                  | -50 to +200 °C              | -50 to +200 °C              |
| Short Term                                   | 200°C                       | 200°C                       |
| Long Term                                    | 150°C                       | 150°C                       |
| <b>Optical Properties</b>                    |                             |                             |
| Attenuation                                  | <1.0 dB / km                | <0.5 dB / km                |
| Attenuation at 850nm                         | max 3.2dB/Km                |                             |
| Cut off wavelength                           | <1400+/-50 nm               | <1300+/-50 nm               |
| Operating Wavelength                         | 1450-1600nm                 | 1300-1600nm                 |
| Bend Lossat 1550nm,<br>per 100turns 25mm dia | <0.02dB                     | <0.02dB                     |

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