

Improved performance at 1550 nm operating wavelength



### Specialty Fiber



Issue date: 12/09  
Supersedes: 09/09

**Product Type: E-Core – 80  $\mu\text{m}$  / 125  $\mu\text{m}$**

**Coating Type: Dual Layer Primary Coating Acrylate (DLPC9)**

For data transmission and communication

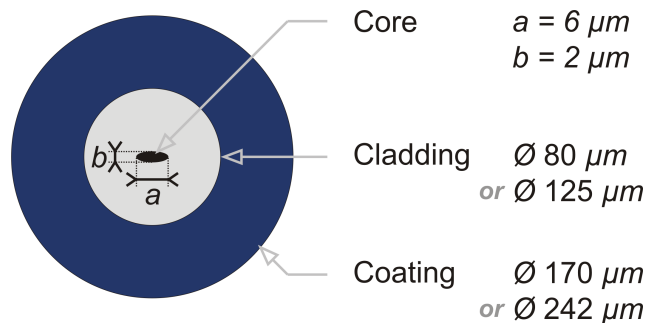
- Fiber Optic Gyroscopes (FOG)
- Fiber Optic Sensors (FOS)
- Fiber Lasers and Amplifiers
- Aeronautic, Military, Defense and Transportation
- Aerospace

Draka's Elliptical Core Single-Mode Fiber provides optimum performance at 1550 nm operating wavelength for polarization sensitive applications. The Elliptical core design of the fiber provides an improved resistance to environmental temperature variations. Available in 80  $\mu\text{m}$  or 125  $\mu\text{m}$  cladding diameter, medium or high Numerical Aperture in order to answer to most stringent applications requirements.



Value Innovation is a way of looking at the world. How we can help our customers do more, make more, save more, achieve more.

Features	Benefits
Medium or high Numerical Aperture	High bending resistance
Low attenuation loss	Better optical signal-to-noise ratio
Elliptical core design	Low temperature dependence
Phosphorous free	Suitable for use in radiative environments
Draka's proprietary manufacturing process	Superior geometry, uniformity and homogeneity

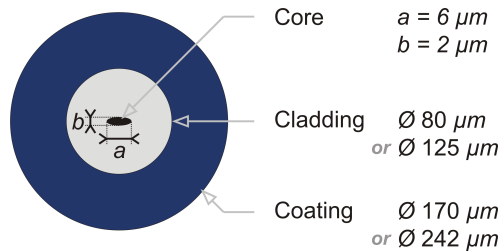


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**Optical Specifications**
**Parameters**

Numerical Aperture (Typical)	0.24
Operating Wavelength (1550 nm)	
Attenuation Coefficient at 1550 nm	≤ 1.0 dB/km
Fiber Cut-off Wavelength	≤ 1450 nm
Beat Length (1550 nm)	≤ 5 mm
Normalized Cross Talk (100 m) at 1550 nm	≤ - 25 dB
Holding Parameter (1550 nm)	≤ - 3 10 <sup>-6</sup> m <sup>-1</sup>
Mode Field Diameter at 1550 nm (Typical)	5.5 μm

**Geometrical Specifications**
**Parameters**

Core/Cladding Concentricity Error	≤ 0.7 μm
Cladding Diameter	80 ± 1.0 or 125.0 ± 1.0 μm
Cladding Non-Circularity	≤ 1.0 %
Coating Material (Acrylate coating: DLPC9) <sup>1</sup>	
Coating Diameter	170 ± 7.0 or 242 ± 7.0 μm
Length (Standard)	100, 250, 500, 1000 m


**Mechanical Specifications**
**Parameters**

Proof Test <sup>2</sup>	off line	≥ 1.0 %	≥ 100 kpsi
		≥ 8.8 N	≥ 0.7 GPa
Coating Strip Force (Typical average force)			2 N

**Environmental Specifications**
**Parameters**

Operating Temperature <sup>3</sup>	≥ - 40°C to ≤ + 85°C
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<sup>1</sup> High Temperature Resistant Acrylate Coating upon request

<sup>2</sup> Higher proof test level upon request

<sup>3</sup> Up to 150°C operating temperature upon request

## How can we be of service to you?

Value Innovation is a way of looking at the world. How can we help our customers do more, make more, save more, achieve more?

Take DrakaElite™. Based on our proprietary manufacturing process and our control of all technological building blocks, we offer an extensive portfolio of specialized optical fibers that have been designed, developed, manufactured

and tested for every environment. Whether you want to guide, amplify, transmit, process, control or sense light, Draka has the fiber you need, whatever your environment. And if for some reason we don't have exactly what you need, well, we'll just make it.

That's Value Innovation in action.

**Draka Communications**

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The Draka Communications policy of continuous improvement may cause in changed specifications without prior notice