



Specialty Fiber



Issue date: 09/11
Supersedes:

Product Type: Radiation hardened erbium doped fiber

Coating Type: Dual Layer Primary Coating (DLPC9)

For components in

- Spatial
- Nuclear
- Defense
- Military
- ...

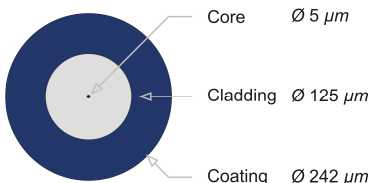
industries

The Draka's eNanoElite family gathers erbium doped fibers using Draka patented NanoElite technology. The erbium ions are included in nano-particles that permit a sharp control of their chemical environment. Notably it avoids erbium ions pairing and its associated quenching effect.

It permits the inclusion of erbium in the core of the fiber without the need of any additional co-dopant, to the benefit of the radiation resistance of the fiber. It enlarges then the scope of the applications to radiations exposed devices, like in the spatial industry.



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
No aluminium or phosphorus co-dopants in the fiber core	Very low sensitivity to radiation, reduced attenuation increase under radiations
Excellent fiber uniformity	Easy to design amplifiers
Industrial process control	Insensitivity to hydrogen ageing
Exceptional spectral uniformity	Ensures a high quality, reliable EDFA product
Consistent reproducibility	Reduces manufacturing costs and increases production yield
Industry leading fiber geometry	Increases signal transfer with precision core alignment
Standard Dual Acrylate coating	Provides superior mechanical resistance specifications

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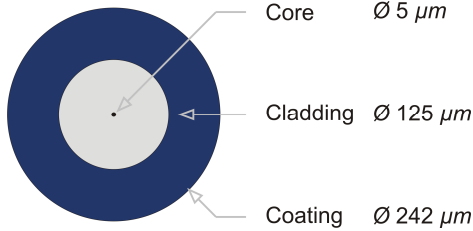
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Optical Specifications

Parameters	Typical	Specified Value
Peak absorption coefficient ¹ at 1532 nm (Max [1530 – 1534 nm])	3 dB/m	[2 – 4] dB/m
Background Loss (min. 1100 – 1300 nm)	≤ 5 dB/km	≤ 9 dB/km
Bending sensitivity (at 100 m, over 15 mm radius, $\lambda < 1620$ nm)		0.1 dB
Cut-off wavelength	1150 nm	≤ 1300 nm
Mode Field Diameter (at 1550 nm)		$4.2 \pm 0.7 \mu\text{m}$
Numerical Aperture		0.29 ± 0.02

Geometrical Specifications

Parameters	Typical	Specified Value
Cladding Diameter	$125 \pm 1 \mu\text{m}$	$125 \pm 2 \mu\text{m}$
Core/Cladding Offset	≤ 0.3 μm	≤ 0.5 μm
Coating Diameter		$242 \pm 15 \mu\text{m}$
Coating/Cladding Offset		≤ 12.5 μm



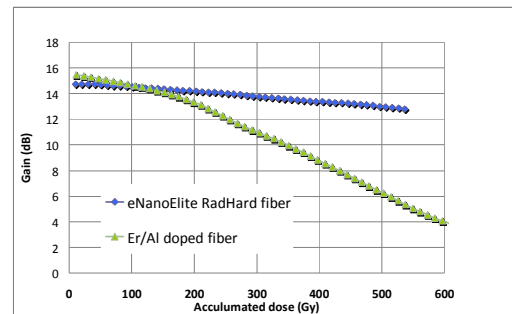
Mechanical Specifications

Parameters	Specified Value
Elongation proof test (1 second) ¹	1.5 % kpsi

Environmental Specifications

Parameters	Specified Value
Storage Temperature	- 40°C to + 85°C
Operating Temperature range	- 40°C to + 85°C
Storage Humidity range (non condensing)	5 % to 95 %
Operating Humidity range (non condensing)	5 % to 95 %

¹ Other values available on request



Typical gain loss experimented
(gamma irradiation Co⁶⁰ source 13 Gy/h)

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