



ALL-GLASS ER/YB FIBERS FOR LIDAR APPLICATIONS



INNOVATIVE OPTICAL FIBER TECHNOLOGIES

About Coractive

COR ACTIVE

We are a leading manufacturer of innovative optical fibers solutions for OEMs looking for maximum performance levels without breaking the bank. We provide our clients with a complete and integrated solution: from manufacturing glass preforms and optical fibers to supplying fiber lasers.

FOUNDED IN
1998



Headquartered
IN QUEBEC CITY, CANADA



EXPORTS



+10
DISTRIBUTORS

ASIA / NORTH AMERICA / EUROPE

**Vertically
integrated**



OPTICAL FIBER **FIBER LASER**
DEVELOPER & MANUFACTURER SUPPLIER

+60
EMPLOYEES



THE ONLY SUPPLIER OF
Phosphosilicate
YB-DOPED FIBERS

+1,000 KM
OF OPTICAL FIBER
DELIVERED YEARLY



INDUSTRIAL | TELECOM | SENSING

+17 YEARS OF
EXPERTISE
IN OPTICAL FIBER DEVELOPMENT
FOR HIGH POWER **FIBER LASERS**



+25
PATENTS



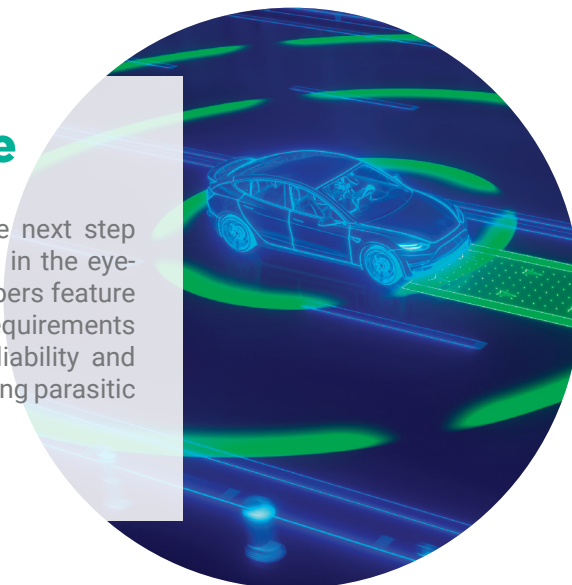
MOSTLY FOR
FIBER LASER TECHNOLOGY



ALL-GLASS ER/YB FIBERS FOR LIDAR APPLICATIONS

Toward an Autonomous Future

Coractive series of all-glass Er/Yb double-clad fibers are the next step toward a new generation of amplifiers for LIDAR applications in the eye-safe 1550 nm range. Our active Erbium/Ytterbium co-doped fibers feature all-glass design and HTA coating to meet high-temperature requirements for automotive applications. They are optimized for high reliability and efficiency while delivering excellent beam quality and suppressing parasitic 1 μ m ASE. Matching passive fibers are also available.



High-Temperature Resistance

HTA coating to meet high-temperature requirements for automotive applications.

All-Glass Design

Ensures long-term operation in harsh environments.

Free of low-index polymer.

High Energy Conversion

Low emission cross-section and high population inversion.

Allows the use of 940 nm pump diodes.

Products

	Mode Field Diameter (μ m)	Cladding Diameter (μ m)	Outer Cladding Diameter (μ m)	Cladding NA (Typical)	Core NA (Typical)	Cladding Absorption at 915 nm
Active fibers						
DCF-EY-6/105/125-21/22-HTA	6.0 $\pm$ 0.4	105 $\pm$ 5	125 $\pm$ 2	0.23 $\pm$ 0.01	0.21	1.2 $\pm$ 0.2
DCF-EY-8/105/125-14/22-HTA	9.4 $\pm$ 0.9	105 $\pm$ 5	125 $\pm$ 2	0.23 $\pm$ 0.01	0.14	4.0 $\pm$ 1.0
Passive Fibers						
DCF-UN-6/105/125-21/22-HTA	9.4 $\pm$ 0.9	105 $\pm$ 5	125 $\pm$ 2	0.23 $\pm$ 0.01	0.14	-
DCF-UN-8/105/125-14/22-HTA	9.2 $\pm$ 1.1	104 $\pm$ 2	125 $\pm$ 2	0.23 $\pm$ 0.01	0.14	-

To view all of our optical fiber products for sensing applications, visit our [website](https://www.coractive.com).

COR ACTIVE

PRODUCTS SPECIFICATIONS

DCF-EY-6/105/125-21/22-HTA

All-Glass Erbium/Ytterbium co-doped double-clad fiber



This Erbium/Ytterbium co-doped fiber offers single-mode operation for excellent beam quality, and its core composition is expertly designed for efficient pump energy conversion in 1.5 μm fiber lasers and amplifiers. Featuring an all-glass design and a high-temperature resistant coating, this fiber is made for the rigorous environmental requirements of the automotive industry and other demanding applications.

Features & Benefits

- High-temperature resistant coating
- All-glass second cladding design - free of low index polymer
- High energy conversion
- Optimized Er/Yb core composition - reduces 1 μm parasitic emission

Applications

- Eye-safe fiber lasers and amplifiers for LIDAR
- Space communications
- High-power telecom amplifiers
- Industrial and harsh environment laser sensing

Related Products

- [DCF-UN-6/105/125-21/22-HTA](#)
Matched all-glass double-clad passive fiber

Spécifications

Optical

Cladding Absorption @ 915 nm (dB/m)	1.2 $\pm$ 0.2
Core Absorption @ 1535 nm (dB/m)	75 $\pm$ 20
Numerical Aperture - Core (Typical)	0.21
Numerical Aperture - Cladding (Typical)	0.23 $\pm$ 0.01
Cutoff Wavelength (nm)	1385 $\pm$ 95
Mode Field Diameter @ 1550 nm (μm)	6.0 $\pm$ 0.4

Geometrical & Mechanical

Core Diameter (Typical) (μm)	5.5
Cladding Diameter - Flat-To-Flat (μm)	105 $\pm$ 5
Outer Cladding Diameter (μm)	125 $\pm$ 2
Core/Cladding Concentricity Error (μm)	$\leq$ 0.8
Cladding Geometry	Octagonal
Coating Diameter (μm)	245 $\pm$ 15
Proof Test (kpsi)	$\geq$ 100

Environmental

Operating Non-Condensing Humidity (%)	5 - 85
Operating Temperature ($^{\circ}\text{C}$)	0 to +150
Storage Non-Condensing Humidity (%)	5 - 85
Storage Temperature ($^{\circ}\text{C}$)	-40 to +150

DCF-EY-8/105/125-14/22-HTA

All-Glass Erbium/Ytterbium co-doped double-clad fiber



This Erbium/Ytterbium co-doped fiber offers high absorption to minimize fiber length required and non-linear effects. Its core composition is expertly designed for efficient pump energy conversion in 1.5 μm fiber lasers and amplifiers. Featuring an all-glass design and a high-temperature resistant coating, this fiber is made for the rigorous environmental requirements of the automotive industry and other demanding applications.

Features & Benefits

- High-temperature resistant coating
- All-glass second cladding design - free of low index polymer
- High absorption - shorter fiber length and reduced non linear effects
- High energy conversion
- Optimized Er/Yb core composition - reduces 1 μm parasitic emission

Applications

- Eye-safe fiber lasers and amplifiers for LIDAR
- Space communications
- High-power telecom amplifiers
- Industrial and harsh environment laser sensing

Related Products

- [DCF-UN-8/105/125-14/22-HTA](#)
Matched all-glass double-clad passive fiber
- [SCF-UN-8/125-14](#)
Matched single-clad passive fiber

Specifications

Optical

Cladding Absorption @ 915 nm (dB/m)	4.0 $\pm$ 1.0
Core Absorption @ 1535 nm (dB/m)	75 $\pm$ 20
Numerical Aperture - Core (Typical)	0.14
Numerical Aperture - Cladding (Typical)	0.23 $\pm$ 0.01
Cutoff Wavelength (nm)	1400 $\pm$ 110
Mode Field Diameter @ 1550 nm (μm)	9.4 $\pm$ 0.9

Geometrical & Mechanical

Core Diameter (Typical) (μm)	5.5
Cladding Diameter - Flat-To-Flat (μm)	105 $\pm$ 5
Outer Cladding Diameter (μm)	125 $\pm$ 2
Core/Cladding Concentricity Error (μm)	$\leq$ 0.8
Cladding Geometry	Octagonal
Coating Diameter (μm)	245 $\pm$ 15
Proof Test (kpsi)	$\geq$ 100

Environmental

Operating Non-Condensing Humidity (%)	5 - 85
Operating Temperature ($^{\circ}\text{C}$)	0 to +150
Storage Non-Condensing Humidity (%)	5 - 85
Storage Temperature ($^{\circ}\text{C}$)	-40 to +150

DCF-UN-6/105/125-21/22-HTA

All-Glass double-clad passive fiber



This double-clad passive fiber is precision matched to our active all-glass er/yb fibers. Featuring an all-glass design and a high-temperature resistant coating, this fiber is made for the rigorous environmental requirements of the automotive industry and other demanding applications. It is ideal for the manufacture of components used in the design of fiber lasers and amplifiers.

Features & Benefits

- High-temperature resistant coating
- All-glass second cladding design - free of low index polymer
- Matched to Coractive active fibers and compatible with industry-standards

Applications

- Eye-safe fiber lasers and amplifiers for LIDAR
- Space communications
- High-power telecom amplifiers
- Industrial and harsh environment laser sensing

Related Products

- [DCF-EY-6/105/125-21/22-HTA](#)
Matched all-glass double-clad active fiber

Specifications

Optical

Numerical Aperture – Core (Typical)	0.21
Numerical Aperture – Cladding (Typical)	0.23 ± 0.01
Cutoff Wavelength (nm)	1400 ± 110
Mode Field Diameter @ 1550 nm (µm)	6.0 ± 0.4

Geometrical & Mechanical

Core Diameter (Typical) (µm)	5.5
Cladding Diameter (µm)	105 ± 5
Outer Cladding Diameter (µm)	125 ± 2
Core/Cladding Concentricity Error (µm)	≤ 0.8
Cladding Geometry	Octagonal
Coating Diameter (µm)	245 ± 15
Proof Test (kpsi)	≥ 100

Environmental

Operating Non-Condensing Humidity (%)	5 – 85
Operating Temperature (°C)	0 to +150
Storage Non-Condensing Humidity (%)	5 – 85
Storage Temperature (°C)	-40 to +150

DCF-UN-8/105/125-14/22-HTA

All-Glass double-clad passive fiber



This double-clad passive fiber is precision matched to our active all-glass er/yb fibers. Featuring an all-glass design and a high-temperature resistant coating, this fiber is made for the rigorous environmental requirements of the automotive industry and other demanding applications. It is ideal for the manufacture of components used in the design of fiber lasers and amplifiers.

Features & Benefits

- High-temperature resistant coating
- All-glass second cladding design - free of low index polymer
- Matched to Coractive active fibers and compatible with industry-standards

Applications

- Eye-safe fiber lasers and amplifiers for LIDAR
- Space communications
- High-power telecom amplifiers
- Industrial and harsh environment laser sensing

Related Products

- [DCF-EY-8/105/125-14/22-HTA](#)
Matched all-glass double-clad active fiber
- [SCF-UN-8/125-14](#)
Matched single-clad passive fiber

Specifications

Optical

Numerical Aperture – Core (Typical)	0.14
Numerical Aperture – Cladding (Typical)	0.23 ± 0.01
Cutoff Wavelength (nm)	1400 ± 110
Mode Field Diameter @ 1550 nm (µm)	9.2 ± 1.1

Geometrical & Mechanical

Core Diameter (Typical) (µm)	7.5
Cladding Diameter (µm)	104 ± 2
Outer Cladding Diameter (µm)	125 ± 2
Core/Cladding Concentricity Error (µm)	≤ 0.8
Cladding Geometry	Octagonal
Coating Diameter (µm)	245 ± 15
Proof Test (kpsi)	≥ 100

Environmental

Operating Non-Condensing Humidity (%)	5 – 85
Operating Temperature (°C)	0 to +150
Storage Non-Condensing Humidity (%)	5 – 85
Storage Temperature (°C)	-40 to +150



For additional information please contact our sales representatives.
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or visit our website at www.coractive.com