

# CorActive Active Single Clad Fibers

## For Low-Power/High-Efficiency Lasers and Amplifiers

CorActive offers one of the most extensive selection of active single clad fibers on the market. CorActive highly efficient specialty optical fibers are specifically designed to meet the needs of low-power laser and amplifier applications where high core absorption and high efficiency are required. CorActive offers several models of rare-earth doped single-clad fibers (PM and non-PM) in different optical and geometrical configurations.

### ADVANTAGES

- Extensive product selection to suit most fiber laser and amplifier applications
- High absorption for reduced fiber length and non-linear effects
- High QCE values allows lower pump power requirements
- Custom products available upon request

### APPLICATIONS

- Low-Power Lasers and Amplifiers
- Pre-amps/Seed Lasers
- Ultrafast Lasers
- Military
- Scientific/Research

### SPECIFICATIONS

#### Material Specification

Core Material	Doped Silica Glass
Clad Material	Silica Glass
Coating Material	Acrylate

#### Geometrical and Mechanical Specifications

Coating Diameter	245 ± 15 <sup>1</sup>
Core/clad Concentricity Error (µm)	< 1
Proof Test Level (kpsi)	100 <sup>2</sup>

<sup>1</sup> Unless otherwise specified. Consult product datasheet to verify exact coating dimensions of specific model

<sup>2</sup> Unless otherwise specified. Consult product datasheet to verify exact proof test level of specific model

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Specialty Optical Fiber Manufacturer

## STANDARD MODELS

### Ytterbium (YB) Doped Single Clad Fibers

Model	Core Diameter (μm)	Clad Diameter (μm)	MFD @ 1060nm (μm)	Core NA	Core Absorption @ 915nm (dB/m)	Birefringence	Note
YB 103	N/A	125 ± 1	3.5 ± 1.0	0.26 ± 0.02	> 9	N/A	
SCF-YB25-6/125-13	6.0 ± 1.0	125 ± 1	N/A	0.13 ± 0.02	25 ± 5	N/A	
SCF-YB40-4/125-16	4.0 ± 1.0	125 ± 1	N/A	0.16 ± 0.02	40 ± 10	N/A	
YB 118	N/A	125 ± 1	4.0 ± 1.0	0.22 ± 0.02	> 75	N/A	Photosensitive (high Ge content)
YB 164	N/A	125 ± 1	6.0 ± 1.0	0.14 ± 0.02	> 125	N/A	Matched to HI 1060, Confined <sup>1</sup> Matched PM Version: Yb 500
YB 198	N/A	125 ± 1	4.0 ± 1.0	0.22 ± 0.02	> 250	N/A	
YB 214	N/A	125 ± 1	6.0 ± 1.0	0.14 ± 0.02	> 300	N/A	
YB 125	N/A	125 ± 1	5.0 ± 1.0	0.18 ± 0.02	> 350	N/A	
SCF-YB550-4/125-19	4.0 ± 1.0	125 ± 1	N/A	0.19 ± 0.02	550 ± 100	N/A	
YB 100 (PM)	N/A	125 ± 1	5.0 ± 1.0	0.16 ± 0.02	> 8	≥ 2.0E-04	PM
YB 200 (PM)	N/A	125 ± 1	5.0 ± 1.0	0.16 ± 0.02	> 12	≥ 2.0E-04	PM
YB 500 (PM)	N/A	125 ± 2	6.0 ± 1.0	0.14 ± 0.02	> 100	> 1.0E-04	PM, Confined <sup>1</sup> Matched Non-PM Version: Yb 164

### Erbium (ER) and Erbium/Ytterbium (EY) Doped Single Clad Fibers

Model	Core Diameter (μm)	Clad Diameter (μm)	MFD @ 1550nm (μm)	Core NA	Core Absorption @ 980nm (dB/m)	Birefringence	Note
ER 105	5.0 ± 1.0	125 ± 2	7.0 ± 1.0	0.18 ± 0.02	5.0 ± 1	N/A	Confined <sup>1</sup>
ER 614	20.0 ± 2.0	125 ± 2	N/A	0.18 ± 0.02	> 10	N/A	
ER 637	5.0 ± 3.0	125 ± 2	N/A	0.22 ± 0.02	> 25	N/A	
SCF-EY190-6/125-17	6.0 ± 1.0	125 ± 1	N/A	0.17 ± 0.02	190 ± 20	N/A	
SCF-EY575-9/125-22	9.0 ± 1.0	125 ± 1	N/A	0.22 ± 0.02	575 ± 50	N/A	
EY 110	N/A	125 ± 1	8.0 ± 1.0	0.18 ± 0.02	> 1000	N/A	
EY 302	N/A	125 ± 1	6.0 ± 1.0	0.18 ± 0.02	> 500	N/A	Photosensitive, Confined <sup>1</sup>
EY 305	N/A	125 ± 1	7.0 ± 1.0	0.18 ± 0.02	> 500	N/A	Photosensitive, Confined <sup>1</sup>

### Thulium (TM) & Thulium/Holmium (TH) Doped Single Clad Fibers

Model	Core Diameter (μm)	Clad Diameter (μm)	MFD @ 1550nm (μm)	Core NA	Core Absorption @ 790nm (dB/m)	Birefringence	Note
TM 134	3.0 ± 0.5	125 ± 1	N/A	0.16 ± 0.02	> 30	N/A	
TH 550	11.5 ± 1.0	125 ± 1	N/A	0.14 ± 0.02	> 100	N/A	
TH 512	9.0 ± 1.0	125 ± 1	N/A	0.16 ± 0.02	> 120	N/A	
TH 530	6.0 ± 1.0	125 ± 1	N/A	0.18 ± 0.02	> 140	N/A	
TH 540	8.0 ± 1.0	125 ± 1	N/A	0.18 ± 0.02	> 150	N/A	

Note 1: A confined optical fiber refers to an active fiber where only a fraction of the core is doped. This is typically done to improve fiber efficiency.

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## STANDARD MODELS (CONTINUED)

### Neodymium (ND) Doped Single Clad Fibers

Model	Core Diameter (µm)	Clad Diameter (µm)	Core NA	Core Absorption @ 805nm (dB/m)	Birefringence	Note
ND 102	5.0 ± 0.5	125 ± 1	0.14 ± 0.02	> 10	N/A	
ND 103	5.0 ± 0.5	125 ± 1	0.14 ± 0.02	> 35	N/A	
ND 127	4.0 ± 0.5	125 ± 2	0.18 ± 0.02	> 350	N/A	

### Samarium (SM) Doped Single Clad Fibers

Model	Core Diameter (µm)	Clad Diameter (µm)	Core NA	Core Absorption @ 1458nm (dB/m)	Birefringence	Note
SM 119	6.5 ± 1.0	125 ± 1	0.14 ± 0.02	> 15	N/A	
SM 633	3.0 ± 1.0	125 ± 1	0.14 ± 0.02	> 15	N/A	

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