

## PM and non PM Yb Double Clad Optical Fiber

**CorActive's** Ytterbium Doped **Double Clad Optical Fiber (DCOF)** capabilities have been specifically developed to match the requirements of Industrial LASERs and IR sources. **CorActive's** DCOF offer a higher doping concentration and among the highest QCE values in the industry. Combining these critical elements in **CorActive's** Yb DCOF ensures minimum fiber length, minimum pump power and reduced non-linearities. This translates directly into substantial savings when building a high power source or LASER.

### CorActive Yb DCOF Product Features and Benefits

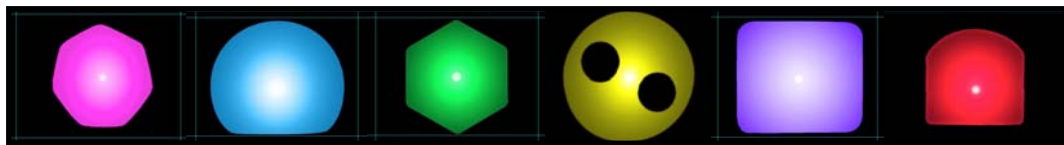
#### Yb DCOF Product Features

High Yb Doping Concentration  
Unrivaled Power Conversion Efficiency  
Unique Pump Guide Shape  
Consistent Reproducibility  
Lower Absorption Variability  
Industry Leading Fiber Geometry

#### Customer Benefits

Reduces non-linearities with minimum fiber length optimizing LASER designs  
High fiber PCE enables lower pump power which results in pump cost savings  
Reduces helical mode propagation and increase absorption efficiency  
Reduces manufacturing costs and increases production yield  
Consistent high quality fiber ensures lower production costs  
Increases signal transfer with precision core alignment

### EXAMPLE CLADDING SHAPES:



### CorActive's Unique Advantages

Appropriately scaled production facilities and an excellent financial position ensure that CorActive's Specialty Optical Fiber products are among the most cost effective available.

Focused on specialty optical fiber design and manufacture to ensure high quality products.

Full line specialty optical fiber supplier – EDF, UV Sensitive, Attenuating, IR and Double Clad optical fibers available.

Custom specialty optical fiber designs available upon request.

**Strategic supplier relationship – CorActive does not compete with its customers.**

# Yb Doped Double Clad Optical Fiber

## Optical Fiber Specifications

CorActive standard products. Custom fiber products available.

### Single Mode Yb Doped DCOF

Optical Properties	LAS-Yb-06-01	LAS-Yb-10-02	LAS-Yb-10-03	LAS-Yb-10-PM-01
Core Diameter ( $\mu\text{m}$ )	$6.5 \pm 1.0$	$10 \pm 1$	$10 \pm 1$	$10 \pm 1$
Core N.A. (nominal)	$0.12 \pm 0.02$	$0.08 \pm 0.01$	$0.08 \pm 0.01$	$0.08 \pm 0.01$
Clad Absorption @ 915nm (dB/m)	$0.65 \pm 0.15$	$2.0 \pm 0.2$	$1.0 \pm 0.1$	> 1
Clad Absorption @975nm (dB/m)	2.5 (typ.)	6.0 (typ.)	3.3 (typ.)	> 3.3 (typ.)
Beat length				< 4mm @ 633nm
Physical & Geometric Properties				
Cladding Shape	Hexagonal	Octagonal	Hexagonal	Octagonal
Cladding Diameter ( $\mu\text{m}$ )	$125 \pm 1.5$	$126.5 \pm 1.5$	$200 \pm 20$	$126.5 \pm 6$
Matching Fibers				
Matched Undoped DCOF	REL-MC-06	REL-Un-10	REL-Un-10-02	
Matched Undoped SCOF	Si-12-06	Si-08-10	Si-08-10-01	

### Large Mode Area Yb Doped DCOF

Optical Properties	HPA-Yb-20-02	HPA-Yb-20-01	HPA-Yb-28-01	HPA-Yb-44-01
Core Diameter ( $\mu\text{m}$ )	$20 \pm 1$	$20 \pm 2$	$28 \pm 2.5$	$43.5 \pm 1.5$
Core N.A. (nominal)	$0.06 \pm 0.01$	$0.06 \pm 0.01$	$0.06 \pm 0.01$	$0.06 \pm 0.01$
Clad Absorption @ 915nm (dB/m)	> 4	$1.1 \pm 0.1$	$2.0 \pm 0.3$	$2.0 \pm 0.3$
Clad Absorption @975nm (dB/m)			> 2.5	> 6
Physical & Geometric Properties				
Cladding Shape	Octagonal	Hexagonal	Hexagonal	"D" Shape
Cladding Diameter ( $\mu\text{m}$ )	$128 \pm 2$	$400 \pm 10$	$400 \pm 40$	$400 \pm 40$
Matching Fibers				
Matched Undoped DCOF	REL-Un-20-01	REL-Un-20-02	REL-Un-28-01	
Matched Undoped SCOF	Si-06-20		Si-06-28	

# Yb Doped Double Clad Optical Fiber

Optical Fiber Specifications

## Multi Mode Yb Doped DCOF

Optical Properties	HPA-Yb-13-01	HPA-Yb-25-01	HPA-Yb-37-01	HAP-Yb-34-01	HPA-Yb-140-02
Core Diameter ( $\mu\text{m}$ )	$13 \pm 1$	$25 \pm 2$	$37 \pm 2$	$33.5 \pm 2.5$	$140 \pm 10$
Core N.A. (nominal)	$0.12 \pm 0.01$	$0.10 \pm 0.02$	$0.14 \pm 0.01$	$0.14 \pm 0.01$	$0.07 \pm 0.01$
Clad Absorption @ 915nm (dB/m)			$8.0 \pm 2$	$2.0 \pm 0.3$	$6.5 \pm 1.0$
Clad Absorption @ 975nm (dB/m)	$10.5 \pm 0.5$	$> 11$			
Physical & Geometric Properties					
Cladding Shape	Rectangular	Rectangular	Hexagonal	"D" Shape	"D" Shape
Cladding Diameter ( $\mu\text{m}$ )	$130 \times 150 \pm 5$	$130 \times 150 \pm 5$	$125 \pm 5$	$400 \pm 40$	$400 \pm 40$

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