

# Yb-MCOF-35/250-07-0.9-PM

## PM Yb-Doped Large Mode Area Fiber

The Yb-MCOF-35/250-PM fibers are designed for  $M^2$  lower than 1.15 making it the perfect choice for applications requiring superior beam quality. Our fiber design features a confined core for selective gain amplification and multi-layer cladding for superior suppression of higher order modes.



### SPECIFICATIONS

Optical Properties	
Core NA	$0.07 \pm 0.01$
Cladding NA	$> 0.47$
Pump guide absorption @ 915 nm	$0.9 \pm 0.1$ dB/m
Nominal pump guide absorption @ 975 nm	4.0 dB/m
Birefringence	$\geq 1.4 \times 10^{-4}$
Beam quality factor $M^2$	$< 1.15$
Physical Properties	
Optical cladding	Multi
Core diameter	$35.0 \pm 3.0$ $\mu\text{m}$
Silica cladding diameter	$250.0 \pm 5.0$ $\mu\text{m}$
Coating diameter	$390.0 \pm 20.0$ $\mu\text{m}$
Cladding geometry	Round
Screen proof tested	$\geq 100$ kpsi
Recommended coiling diameter	$\geq 12$ cm
Confined core	Yes
Depressed cladding	Yes

### Features

- Designed for output  $M^2$  less than 1.15
- Large core diameter of 35  $\mu\text{m}$
- Low photodarkening
- High birefringence
- Confined core for selective gain amplification
- Increased differential bending losses
- Designed to amplify narrow linewidth seed lasers operated in pulsed mode

### Typical Applications

- Material processing
- Frequency conversion
- Biophotonics
- Range finding

# Yb-MCOF-35/250-07-0.9-PM

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3 versions of this fiber are available. Please refer to the table below for specifications comparison.

### SPECIFICATIONS COMPARISON TABLE

Optical Properties	Yb-MCOF-35/250-07-0.9-PM	Yb-MCOF-35/250-07-2.5-PM	Yb-MCOF-35/250-05-2.0-PM
Core NA	0.07 ± 0.01		0.05 ± 0.01
Cladding NA	> 0.47		
Pump guide absorption @ 915 nm	0.9 ± 0.1 dB/m	2.5 ± 0.5 dB/m	2.0 ± 0.4 dB/m
Nominal pump guide absorption @ 975 nm	4.0 dB/m	10.0 dB/m	8.0 dB/m
Birefringence	$\geq 1.4 \times 10^{-4}$		
Beam quality factor M <sup>2</sup>	< 1.15		
Physical Properties	Yb-MCOF-35/250-07-0.9-PM	Yb-MCOF-35/250-07-2.5-PM	Yb-MCOF-35/250-05-2.0-PM
Optical cladding	Multi		
Core diameter	35.0 ± 3.0 μm		
Silica cladding diameter	250.0 ± 5.0 μm		
Coating diameter	390.0 ± 20.0 μm		
Cladding geometry	Round		
Screen proof tested	≥ 100 kpsi		
Recommended coiling diameter	≥ 12 cm	≥ 14 cm	≥ 25 cm
Confined core	Yes		
Depressed cladding	Yes		

**R&D CONTRACTS – PROTOTYPING – PREPRODUCTION**  
**SHORT-RUN PRODUCTION – TECHNOLOGY TRANSFERS**