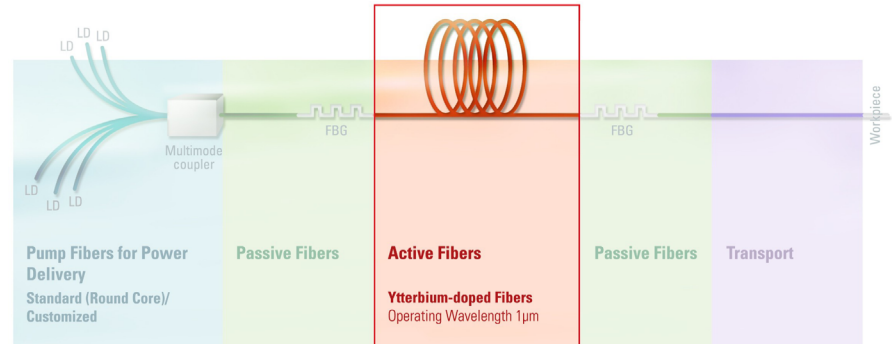


# j-YDCF Series Ytterbium Doped Fibers

**j-fiber offers a comprehensive solution of optical fibers for laser gain and laser delivery for advanced mid to high-power fiber lasers**



All fibers and preforms are subject to j-fiber's ongoing process and quality improvement programs ensuring excellent performance and high reliability. We reserve the right to make changes to the above specification without notice.

Copyright © 2010 j-fiber GmbH  
Confidential with regard to ISO DIN 16016

DB-FA-502-02-0310  
Issued March 2010  
Supersedes DB-FA-502-01-0608

Officially registered facility according to EWG No. 1836/93



For further information about our j-YDCF and other j-fiber products and services, please contact us:

**j-fiber GmbH**  
Im Semmicht 1  
D-07751 Jena, Germany  
Tel.: +49-3641-352 100  
Fax: +49-3641-352 101  
Email: [info@j-fiber.com](mailto:info@j-fiber.com)  
Internet: [www.j-fiber.com](http://www.j-fiber.com)

Designed for near infrared spectral range j-fibers portfolio of j-YDCF ytterbium doped double clad active fibers offer a unique combination of high power delivery, high beam quality and high coupling efficiency. Its unmatched reliability and stability makes it ideal to support ultra-long pump diode lifetimes of modern fiber laser systems and provide a cost-efficient solution for high-power fiber laser applications in industry, military and medical applications.

## Application

- Mid- to High-Power Fiber Lasers, CW Amplifiers
- Material processing (cutting, welding, ablation)
- Printing industry
- Material marking

## Features and Benefits

- Maximum absorption efficiency, high coupling efficiency and good splicing performance
- Excellent fiber geometry increases power transfer via precise core alignment
- High long term stability output power from 20W to >400W cw
- High temperature stability and increased operating temperature range
- High power conversion efficiency for pump cost savings on high power diode pumping
- High power output and high quality beam shape profile
- Large, high NA cladding
- High Yb-dopant concentration reduces minimum fiber length for optimized laser system designs

## Specifications

Double Clad Fiber (Yb) Design	j-YDCF 7/130	j-YDCF 12/400	j-YDCF 15/250	j-YDCF 20/400
Core Diameter	7±1	12±2	15±2	20±2
Cladding Diameter (Pump Core)	130±3	400±15	250±5	400±15
Coating Diameter	250±15	520±15	340±15	520±15
Outer Cladding Material	Low Index Polymer	Low Index Polymer	Low Index Polymer	Low Index Polymer
Operating Wavelength	1040-1110	1040-1110	1040-1110	1040-1110
Cladding Absorption at 915 nm	0.6 dB/m	0.6 dB/m	0.6 dB/m	0.25 dB/m
Cladding Absorption at 975 nm	1.8 dB/m	1.8 dB/m	1.8 dB/m	0.8 dB/m
Core NA	0.12±0.02	0.12±0.02	0.08±0.015	0.06±0.01
Cladding NA	0.46	0.46	0.46	0.46
Slope Efficiency (typical)	75%	75%	75%	75%
Matching Passive Fiber	j-PFL 7/130	j-PFL 12/400	j-PFL 15/250	j-PFL 20/400

**For one-stop-solutions check our portfolio of pump fibers.**