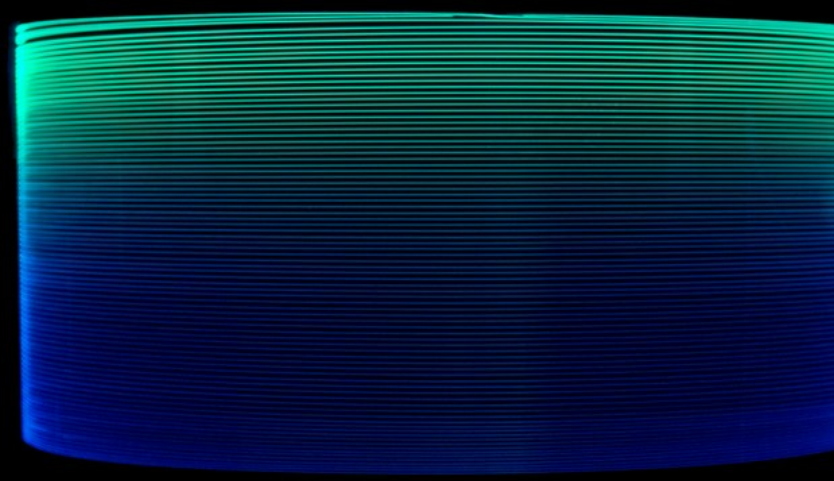
LIEKKI®

Yb1200-20/400 – Large Mode Area Ytterbium Doped Fiber

LIEKKI® Yb1200-20/400 fibers are very highly doped fibers for high power fiber lasers and amplifiers. The fibers feature a large, low-NA core to provide excellent beam quality with large mode field diameter, very high pump absorption, low photodarkening loss and a 400 µm cladding capable of accepting high pump powers.

LIEKKI® Yb1200-20/400 fibers are available as double-clad (Yb1200-20/400DC) and double-clad polarization maintaining (Yb1200-20/400DC-PM) fibers.



Features

- Industry leading fiber deposition process — Direct Nanoparticle Deposition
- *real*NA — most accurate fiber core NA to enable superior predictability of fiber performance and minimal splice loss
- Large, low-NA core for excellent beam quality and low nonlinearity
- Combining high pump absorption and low photodarkening loss
- Low intrinsic loss for highest efficiency
- Acrylate coating enables fiber applications in extreme environmental conditions: Proven to operate up to 120˚C and in extreme humidity.
- Matching passive fibers available for minimal splice loss

Applications

- High average power fiber lasers and amplifiers
- kW-class CW fiber lasers and amplifiers
- High beam quality applications
- Medical, industrial and scientific applications
- IR source for frequency doubling

Typical Fiber Specifications

Fiber Optical	Units	LIEKKI® Yb1200-20/400DC	LIEKKI® Yb1200-20/400DC-PM
Peak Cladding Absorption at 976 nm (nominal)	dB/m	(3.0)	(3.0)
Cladding Absorption at 920 nm	dB/m	0.6 ± 0.1	0.6 ± 0.1
Mode Field Diameter [1] (nominal)	µm	(16.6)	(16.6)
Core Numerical Aperture (*real*NA)		0.070 ± 0.005	0.070 ± 0.005
Cladding Numerical Aperture, ≥		0.48	0.48
Core background loss at 1200 nm, ≤	dB/km	15	15
Birefringence, ≥	1E-04	-	1.6
Geometrical and mechanical			
Core Diameter	µm	20.0 ± 1.5	20.0 ± 1.5
Core Concentricity Error, ≤	µm	1.2	1.2
Cladding Diameter (flat-to-flat)	µm	400 ± 10	400 ± 10
Cladding Geometry		Octagonal	Round, PANDA
Coating Diameter		520 ± 15	520 ± 15
Coating Material		Dual coated low index acrylate	Dual coated low index acrylate
Proof Test, ≥	kpsi	100	85

[1] Far-field Mode Field Diameter at 1060nm

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