

## Fiber Optics

Passive Components

Collimation Packages

FiberBench

Optical Switches

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Connectors/  
Termination Tools

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Rare Earth Doped

Polarization  
Maintaining Fiber

Photonic  
Crystal Fiber

Multimode Fiber:  
Graded Index

Multimode Fiber:  
Step Index

Plastic Optical Fiber

# Polarization Maintaining Highly Doped Ytterbium Fibers

## Liekki DND Technology

Liekki uses its proprietary Direct Nanoparticle Deposition (DND) technology and long-term experience of conventional fiber manufacturing technologies to provide customers with high-quality, state-of-the-art fibers. Highly doped Liekki fibers minimize required application fiber length while providing strong amplification, high efficiency, a broad and flat gain profile, excellent beam quality, and reduced nonlinear effects.

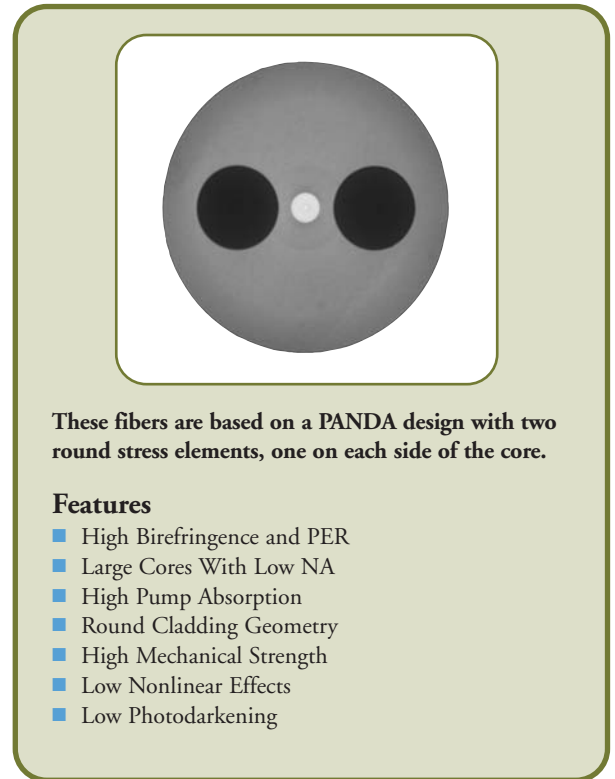
### PM Passive Double Cladding Fibers

Liekki's matched passive fibers are designed and manufactured to match to commercially available large-mode-area active fibers, such as Liekki's YB1200 product series of LMA fibers. They will maintain excellent beam quality when incorporated into fiber lasers or amplifiers.

#### Features and Benefits

- Matching With Industry Standard Active Fiber Geometries 125, 250, and 400µm
- Round Cladding for Easy Cleaving, Splicing, and Handling
- Low Signal and Pump Coupling Losses From Passive to Active Fiber
- Low Index Fluoroacrylate Coating With >0.46 NA
- Excellent Beam Quality and Matching to LMA Fibers

**See Page 1072**



These fibers are based on a PANDA design with two round stress elements, one on each side of the core.

#### Features

- High Birefringence and PER
- Large Cores With Low NA
- High Pump Absorption
- Round Cladding Geometry
- High Mechanical Strength
- Low Nonlinear Effects
- Low Photodarkening

## Optical, Geometrical, and Mechanical Parameters

PARAMETERS		Double Cladding SM & MM Fibers			
		YB1200-6/125DC-PM	YB1200-10/125DC-PM	YB1200-20/400DC-PM	YB1200-25/250DC-PM
Optical	MFD	6.0 ± 0.8µm	—	—	—
	Peak Absorption @ 976nm <sup>1</sup>	2.6dB/m Nom	6.9dB/m Nom	3.0dB/m Nom	11.2dB/m Nom
	Absorption @ 920nm <sup>2</sup>	0.6 ± 0.2dB/m	1.6 ± 0.4dB/m	0.7 ± 0.2dB/m	2.6 ± 0.7dB/m
	Core NA	0.15 ± 0.01	0.08 ± 0.01	0.07 ± 0.01	0.07 ± 0.01
	Cladding NA	>0.46	>0.46	>0.46	>0.46
	Cutoff Wavelength	—	—	—	—
Mechanical	Birefringence	>1.7E-04	>1.4E-04	>1.4E-04	>0.2E-04
	Core Diameter	5.5 ± 0.5µm	10 ± 1µm	20 ± 2µm	25 ± 2.5µm
	Core Concentricity Error	<1.5µm	<1.5µm	<1.5µm	<1.5µm
	Cladding Dia.	125 ± 2µm	125 ± 2µm	400 ± 15µm	250 ± 15µm
	Cladding Geometry	Round	Round	Round	Round
	Coating Dia.	245 ± 15µm	245 ± 15µm	500 ± 15µm	350 ± 15µm
	Coating Material	Low Index Acrylate	Low Index Acrylate	Low Index Acrylate	Low Index Acrylate
	Proof Test	>100kpsi	>100kpsi	>50kpsi	>100kpsi

1) Peak Core Absorption for "core-pumped" fibers; Peak Cladding Absorption for "double cladding" fibers

2) Core Absorption for "core-pumped" fibers; Cladding Absorption for "double cladding" fibers

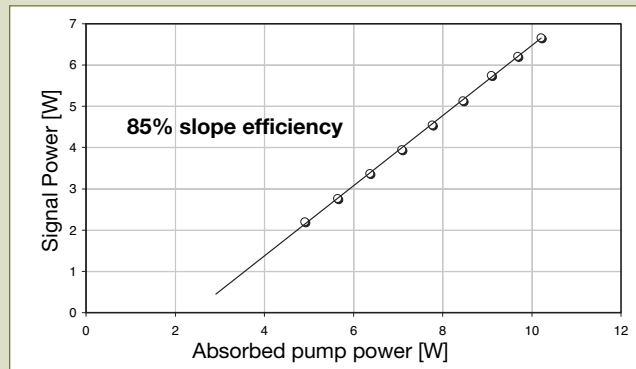
## PRICE SCHEDULE - Call For Quantities Over 250m

ITEM#	PRICE/m	\$	£	€	RMB
YB1200-6/125DC-PM	1 to 9m	\$ 145.00	£ 91.35	€ 134.85	¥ 1,384.75
	10 to 49m	\$ 112.90	£ 71.15	€ 105.00	¥ 1,078.20
	50 to 249m	\$ 94.05	£ 59.25	€ 87.45	¥ 898.20
YB1200-10/125DC-PM	1 to 9m	\$ 295.00	£ 185.85	€ 274.35	¥ 2,817.25
	10 to 49m	\$ 236.00	£ 148.70	€ 219.50	¥ 2,253.80
	50 to 249m	\$ 196.60	£ 123.85	€ 182.85	¥ 1,877.55
YB1200-20/400DC-PM	1 to 9m	\$ 485.00	£ 305.55	€ 451.05	¥ 4,631.75
	10 to 49m	\$ 387.85	£ 244.35	€ 360.70	¥ 3,703.95
	50 to 249m	\$ 323.05	£ 203.50	€ 300.45	¥ 3,085.15
YB1200-25/250DC-PM	1 to 9m	\$ 631.00	£ 397.55	€ 586.85	¥ 6,026.05
	10 to 49m	\$ 559.50	£ 352.50	€ 520.35	¥ 5,343.25
	50 to 249m	\$ 419.65	£ 264.40	€ 390.25	¥ 4,007.65

# Polarization-Maintaining Highly Doped Ytterbium Fibers

Double Cladding, Single Mode, and Multimode PM Yb-Doped Fibers

Typical Efficiency Plot



### YB1200-6/125DC-PM

Liekki YB1200-6/125DC-PM is a highly doped, polarization-maintaining, single mode, double cladding fiber for medium-power fiber laser and amplifier applications. The fiber is compatible with many fiber-based components such as fiber gratings and combiners.

### YB1200-10/125DC-PM

Liekki YB1200-10/125DC-PM is a highly doped, polarization maintaining, double cladding fiber for medium-power fiber laser and amplifier applications. The combination of a high cladding absorption and a single mode core makes the fiber ideal for compact fiber-based power amplifiers.

### YB1200-20/400DC-PM

Liekki YB1200-20/400DC-PM is a highly doped, polarization maintaining, double cladding fiber for high-power fiber lasers and amplifiers. The fiber combines a large core with excellent beam quality and a 400µm cladding that is compatible with industry standard high-power pump lasers and delivery fibers.

### YB1200-25/250DC-PM (Optionally 30/250 Available)

Liekki YB1200-25/250DC-PM is a highly doped, polarization maintaining, double cladding fiber featuring very high cladding absorption, high efficiency per application length, and excellent beam quality. The fiber is ideal for high-average-power pulsed fiber amplifiers.

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**See Pages 671 or 995 for More Details**