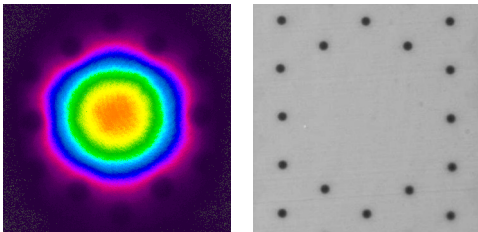




DC-200/40-PZ-Yb

Single-mode, polarizing double-clad Ytterbium-fiber with large mode area

- Single mode, single polarization
- Large mode area
- High NA circular pump core
- High pump absorption - no skew rays
- Coil Control* ensuring excellent stability



With a mode area of more than $700 \mu\text{m}^2$, the DC-200/40-PZ-Yb represents the best in flexible single-mode ytterbium fibers and the single polarization core improves PER compared to normal PM fibers.

The multimode pump light is guided by our proven airclad technology, ensuring low loss, high damage threshold and a large NA. The large NA relaxes tolerances on coupling optics and facilitates the use of lower brightness diodes.

The combination of robust single-mode guidance, excellent PER and a large mode-area, has made the DC-200/40-PZ-Yb the preferred choice for many industrial fiber laser manufactures in the high end segment.

Also available with high power SMA connectors in our aeroGAIN FLEX range.

Specifications

Signal core

Mode properties	Single mode
M^2 @ 1064 nm (typical)	≤ 1.3
Mode field diameter @ 1064 nm	$31 \pm 2 \mu\text{m}$
Mode field area (calculated)	$760 \pm 100 \mu\text{m}^2$
NA @ 1064 nm	~ 0.03

Multimode pump core

Numerical aperture @ 950 nm	0.60 ± 0.05
Pump absorption @ 915 nm	$\sim 3.5 \text{ dB/m}$
Pump absorption @ 976 nm (nominal)	$\sim 10 \text{ dB/m}$

Polarization Parameters

Birefringence Δn @ 1100 nm	$\geq 1 \cdot 10^{-4}$
Polarization Extinction Ratio (typical) @ 1064 nm	$\geq 15 \text{ dB}$

Physical Properties

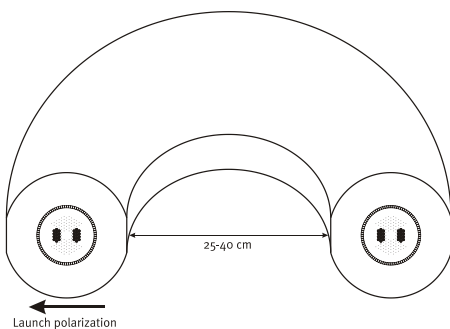
Signal core diameter	$\sim 40 \mu\text{m}$
Inner cladding diameter	$200 \pm 2 \mu\text{m}$
Outer cladding diameter	$450 \pm 20 \mu\text{m}$
Coating diameter	$540 \pm 30 \mu\text{m}$
Outer and inner cladding material	Pure silica
Coating material, single layer	High temperature acrylate

***Coil Control** ensures that the fiber coils in one plane leading to superior mode stability and easy use. We recommend a 25-40 cm coiling diameter and operating the fiber in the slow (in-plane) axis. Degradation of PER and efficiency can occur if the fiber is forced to coil in a different plane or twisted in the coil.

The single mode advantage

All our fibers are single-mode leading to several advantages compared to standard multimode LMA fibers:

- Better output stability
- Excellent beam quality
- No need for tight coiling



NKT Photonics A/S (Headquarters)
Blokken 84, 3460 Birkerød, Denmark
Phone: +45 4348 3900
Fax: +45 4348 3901

NKT Photonics GmbH
Schanzenstrasse 39, Bldg D9-D13
51063 Cologne, Germany
Phone: +49 221 99511-0
Fax: +49 221 99511-650

NKT Photonics Inc.
1400 Campus Drive West
Morganville NJ 07751, USA
Phone: +1 732 972 9937
Fax: +1 732 414 4094

All NKT Photonics products are produced under our quality management system certified in accordance with the ISO 9001:2008 standard.

