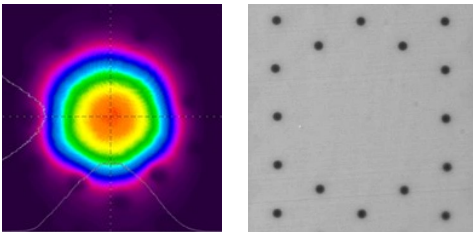




DC-200/40-PZ-Si

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

- Single mode, single polarization
- Large mode area
- High NA circular pump core
- Coil Control* ensuring excellent stability



The DC-200/40-PZ-Si is a passive (undoped), large mode area, single mode core embedded in a high NA multimode fiber structure. This fiber is substantially similar to our DC-200/40-PZ-Yb active Yb-doped fiber, but with a pure silica core, and can be used to optimize procedures that will be used with the active version.

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 fiber can also be used in applications requiring single-mode beam propagation in one direction and at the same time collection and propagation of scattered light or luminescence in the other direction for detection.

Also available with high power SMA connectors.

Specifications

Signal core

| | |
|------------------------------------|-------------------------|
| Mode properties | Single mode |
| M ² @ 1064 nm (typical) | ≤ 1.3 |
| Mode field diameter @ 1064 nm | 31 ± 2 μm |
| Mode field area (calculated) | 760±100 μm ² |
| NA @ 1064 nm | ~ 0.03 |

Multimode core

| | |
|-----------------------------|-------------|
| Numerical aperture @ 950 nm | 0.60 ± 0.05 |
|-----------------------------|-------------|

Polarization Parameters

| | |
|---|----------------------|
| Birefringence Δn @ 1100 nm | ≥ 1·10 ⁻⁴ |
| Polarization Extinction Ratio (typical) @ 1064 nm | ≥ 15 dB |

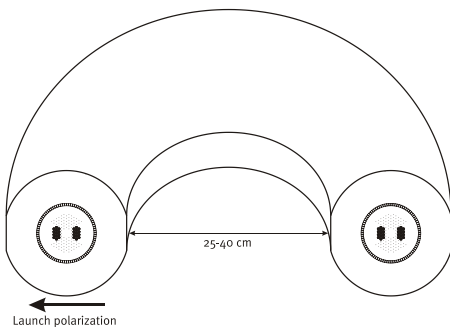
Physical Properties

| | |
|-----------------------------------|---------------------------|
| Signal core diameter | ~40 μm |
| Inner cladding diameter, | 200 ± 2 μm |
| Outer cladding diameter, | 450 ± 20 μm |
| Coating diameter | 540 ± 30 μm |
| Outer and inner cladding material | Pure silica |
| Coating material, single layer | High temperature acrylate |

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
- No coiling-induced mode area compression



***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, depending on wavelength, 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.

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

