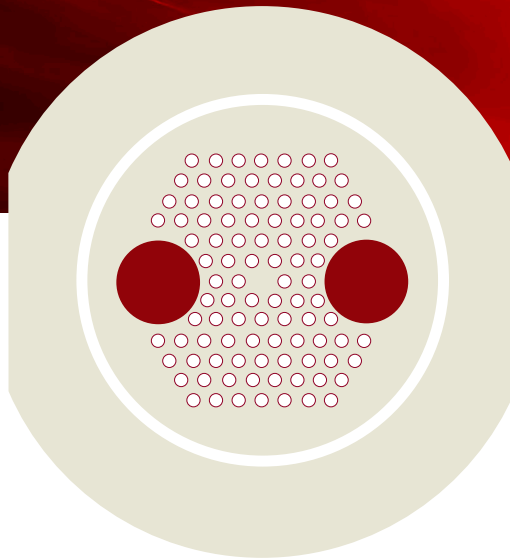


# DC-200/40-PZ-Si

Single-mode, polarizing double-clad Si fiber



## LARGE AREA, SINGLE-MODE FIBER

The DC-200/40-PZ-Si is a passive, large mode area, single-mode core embedded in a high NA multimode fiber structure. It is substantially similar to our DC-200/40-PZ-Yb active ytterbium-doped fiber apart from the core material and can be used to optimize procedures that will be used with the active version.

With a mode area of more than  $700 \mu\text{m}^2$ , this fiber represents the best in flexible single-mode passive fibers. The single-polarization core improves the PER compared to normal PM fibers.

### The single-mode advantages

Our single-mode fibers offer several advantages compared to standard multi-mode large area fibers:

- Excellent output stability
- Outstanding beam quality
- No need for tight coiling
- No coiling-induced mode area compression

Multi-mode pump light is guided by our proven air clad technology, ensuring low loss, high damage threshold, and a large numerical aperture. The large NA relaxes the tolerances on coupling optics and facilitates the use of lower brightness diodes.

### Coil Control

Coil Control ensures that the fiber coils in one plane leading to superior mode stability. Depending on the wavelength, we recommend a 25-40 cm coiling diameter and operating the fiber in the slow (in-plane) axis.

### Features

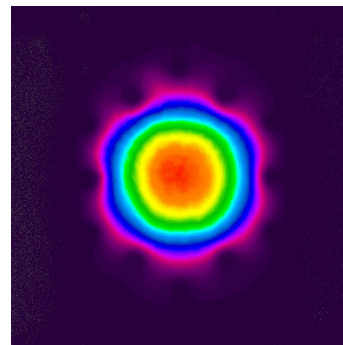
- Single-mode polarizing
- Large mode area
- High NA circular pump core
- Coil Control ensuring excellent stability

Also available in a Yb-doped version:  
DC-200/40-PZ-Yb

## SPECIFICATIONS

Signal core	
Mode properties	Single-mode
Beam quality, typical @ 1064 nm	$M^2 < 1.2$
Mode-field diameter, $1/e^2$ @ 1064 nm [ $\mu\text{m}$ ]	$31 \pm 2$
Numerical aperture @ 1064 nm	$\approx 0.03$
Multi-mode pump core	
Numerical aperture @ 950 nm	$0.60 \pm 0.05$
Polarization parameters	
Birefringence $\Delta n$ @ 1100 nm	$\geq 1 \times 10^{-4}$
Physical properties	
Signal core diameter [ $\mu\text{m}$ ]	$\approx 40$
Pump cladding diameter [ $\mu\text{m}$ ]	$200 \pm 3$
Outer cladding diameter [ $\mu\text{m}$ ]	$450 \pm 20$
Coating diameter [ $\mu\text{m}$ ]	$540 \pm 30$
Outer and pump cladding material	Pure silica
Coating material, single-layer	High-temperature acrylate

### Typical near field intensity profile



All NKT Photonics fiber products are produced under our quality management system certified in accordance with the ISO 9001:2015 standard.

