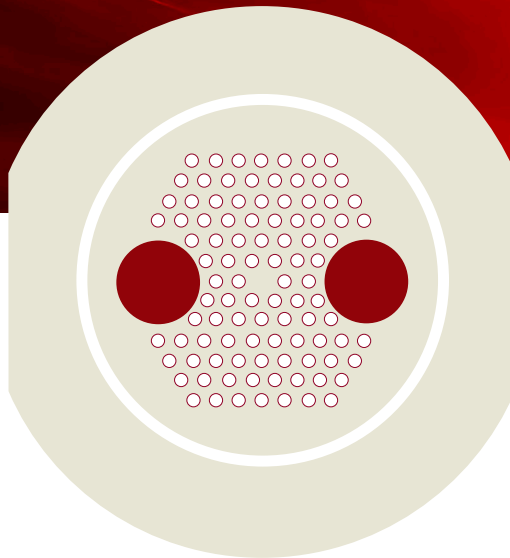


# DC-250/50-PM-Tm

Single-mode, PM double-clad Tm fiber



## LARGE AREA, SINGLE-MODE GAIN FIBER

### Ideal for industrial fiber lasers

With a mode area of more than  $900 \mu\text{m}^2$ , this fiber represents the best in flexible single-mode thulium fibers.

Multi-mode pump light is guided by our proven airclad 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.

### 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

## Coil Control

Coil Control ensures that the fiber coils in one plane leading to superior mode stability. Depending on the wavelength, we recommend a 40-50 cm coiling diameter and operating the fiber in the slow (in-plane) axis.

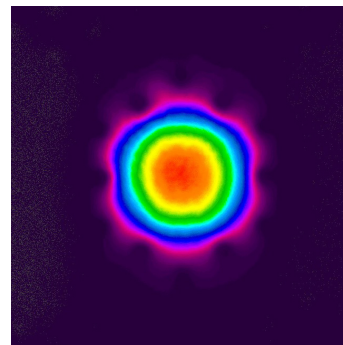
## Features

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

# SPECIFICATIONS

Signal core	
Mode properties	Single-mode
Mode-field diameter, $1/e^2$ @ 1930 nm [ $\mu\text{m}$ ]	$38.0 \pm 2.5$
Multi-mode pump core	
Numerical aperture @ 800 nm	$\geq 0.5$
Pump absorption @ 1180 nm [dB/m]	$1.35 \pm 0.30$
Pump absorption, typical @ 793 nm [dB/m]	$\approx 5.5$
Polarization parameters	
Birefringence $\Delta n$ @ 2 $\mu\text{m}$	$\geq 1 \times 10^{-4}$
Physical properties	
Signal core diameter [ $\mu\text{m}$ ]	$\approx 50$
Pump cladding diameter [ $\mu\text{m}$ ]	$250 \pm 5$
Outer cladding diameter [ $\mu\text{m}$ ]	$560 \pm 30$
Coating diameter [ $\mu\text{m}$ ]	$640 \pm 40$
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.

