

DC-250/50-PM-Tm

Single-mode, PM double-clad Tm fiber

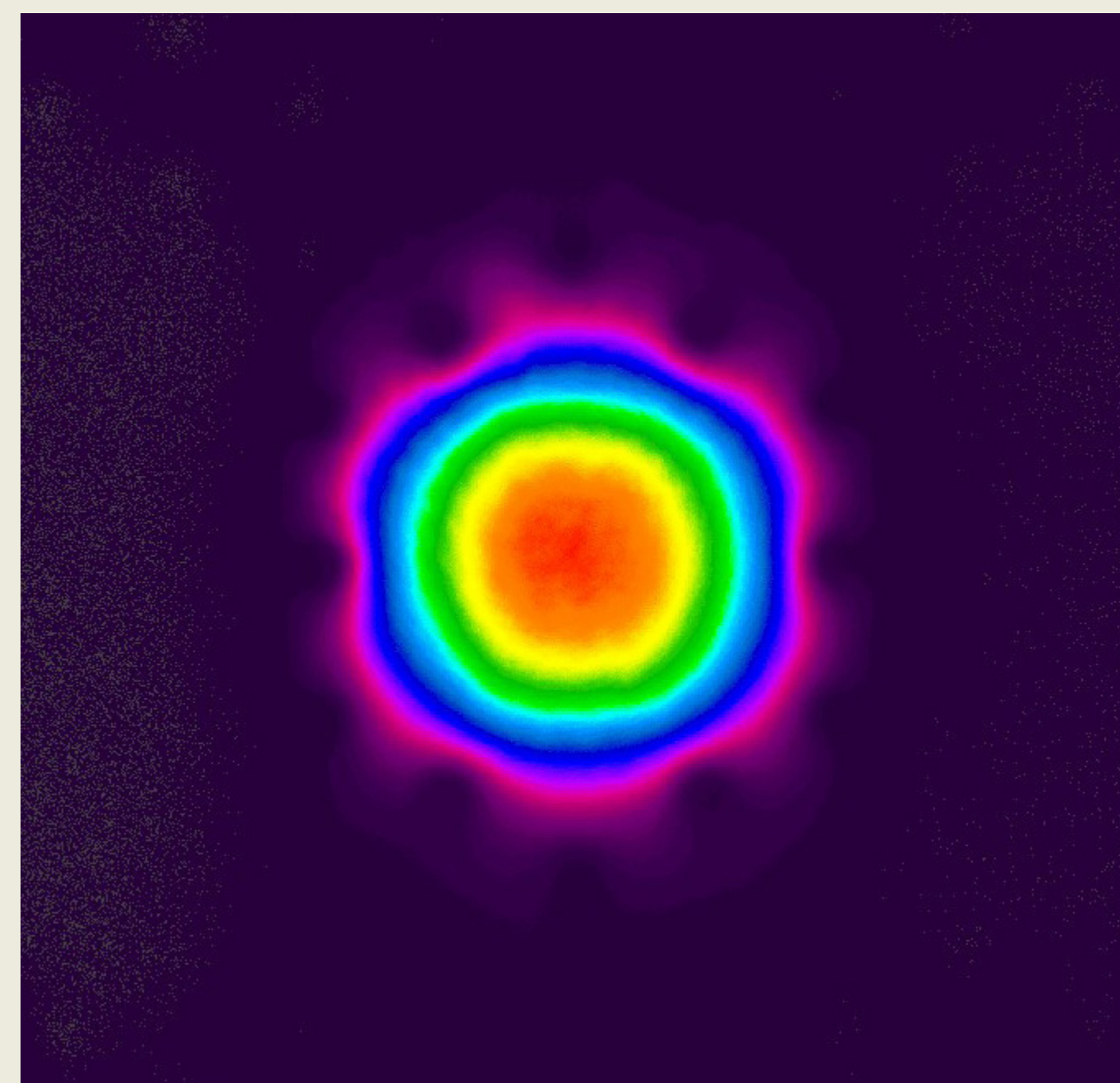
Large area, single-mode gain fiber

Ideal for industrial fiber lasers

With a mode area of more than 900 μm^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.

Typical near field intensity profile



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

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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**

Specifications

Optical

Signal core	
Mode properties	Single-mode
Mode-field diameter, 1/e ² @ 1930 nm [μm]	38.0 ± 2.5
Multi-mode pump core	
Numerical aperture @ 800 nm	≥ 0.5
Pump absorption @ 1180 nm [dB/m]	1.35 ± 0.30
Pump absorption, typical @ 793 nm [dB/m]	≈ 5.5
Polarization parameters	
Birefringence Δn @ 2 μm	≥ 1 × 10 ⁻⁴

Physical

Signal core diameter [μm]	≈ 50
Pump cladding diameter [μm]	250 ± 5
Outer cladding diameter [μm]	560 ± 30
Coating diameter [μm]	640 ± 40
Outer and pump cladding material	Pure silica
Coating material, double-layer	High-temperature acrylate

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



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