![NKT Photonics logo]

DC-135/14-PM-Yb

Single-mode PM double-clad Yb fiber

LARGE AREA, SINGLE-MODE GAIN FIBER

Ideal for pulsed fiber amplifiers

The DC-135/14-PM-Yb is a truly single-mode, all-solid-core step-index gain fiber.

Based on a unique refractive index control, the 14 μm polarization-maintaining core delivers diffraction-limited output in a single mode covering the entire ytterbium emission bandwidth. The mode quality is stable over time and independent of coiling.

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

High reliability and a large numerical aperture

Multi-mode pump light is guided by our proven airclad technology, ensuring high reliability, high damage threshold, and a large numerical aperture. The large numerical aperture relaxes the tolerances on coupling optics.

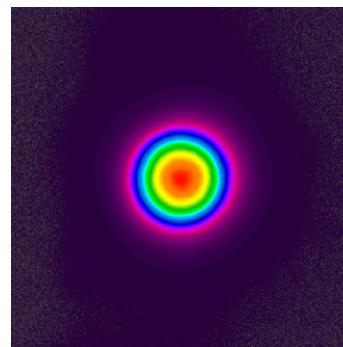The fiber is spliceable to commercially available pump/signal combiners.

Features

- Truly single-mode
- Large 15 μm mode diameter
- Solid step-index
- Polarization maintaining
- High NA pump cladding
- High pump absorption

SPECIFICATIONS

Signal core	
Mode properties	Single-mode
Cut-off [nm]	≤ 1000
Beam quality (typical) @ 1064 nm	$M^2 \leq 1.3$
Mode-field diameter, $1/e^2$ @ 1064 nm [μm]	15 ± 1
Multi-mode pump core	
Numerical aperture @ 950 nm	≥ 0.5
Pump absorption @ 915 nm [dB/m]	2.30 ± 0.35
Pump absorption @ 976 nm, typical [dB/m]	≈ 7
Polarization parameters	
Birefringence Δn @ 1100 nm, typical	$\geq 1 \times 10^{-4}$
PER, typical @ 1064 nm [dB]	≥ 15
Physical properties	
Signal core diameter [μm]	≈ 14
Pump cladding diameter [μm]	135 ± 3
Outer cladding diameter [μm]	275 ± 8
Coating diameter [μm]	360 ± 15
Coating material, single-layer	High-temperature acrylate
Minimum bending diameter [cm]	18

Typical near field intensity profile

FORCE Certification
Systemcertificering
DS/EN ISO 9001 - Kvalitet