

DCF-YB-25/400-16

Yb-Doped Fiber - True Phosphosilicate



This Yb-doped phosphosilicate fiber is designed for multimode operation in the 1 μm region. Manufactured under a carefully control process, the refractive index profile and core chemical composition allow high reproducibility. This ensures a reliable batch-to-batch consistency. With its output power of up to 4kw in multimode, this fiber allows the design of laser cavity without being limited by non-linear effects and transverse mode instabilities (TMI). It is ideal for industrial applications requiring high power output.

Features & Benefits

- **Photodarkening-free** – excellent batch-to batch consistency
- Multimode operation – no limitations caused by nonlinear effects and transverse mode instabilities (TMI)
- High fiber laser efficiency (> 70%)
- High stability against pump wavelengths between 915 nm to 970 nm
- Output power up to 4 kW in a single cavity

Applications

- High-power CW fiber lasers
- Material processing: cutting and welding

Related Products

- **DCF-UN-25/400-16**
Matched passive double-clad fiber

Specifications

Optical

Cladding Absorption @ 915 nm (dB/m)	0.50 \pm 0.10
Numerical Aperture – Core	0.16 \pm 0.01
Numerical Aperture – Cladding	> 0.46
Background Loss @ 1200 nm (dB/km)	< 10.0

Geometrical & Mechanical

Core Diameter (μm)	25.0 \pm 1.0
Cladding Diameter – Flat-to-Flat (μm)	400 \pm 15
Core/Cladding Concentricity Error (μm)	< 2.5
Cladding Geometry	Octogonal
Coating Diameter (μm)	560 \pm 20
Proof Test (kpsi)	\geq 100