

LMA-25

Endlessly Single-Mode 25 μm Core Fiber



- High threshold power for nonlinear effects
- Low fiber attenuation
- Endlessly single-mode
- Radiation hard pure silica fiber
- Optional connectors and beam-expansion
- Mode field diameter independent of wavelength

This single-mode large mode area fiber combines a large effective mode field area ($\sim 265 \mu\text{m}^2$) and low loss to allow high power delivery without nonlinear effects or material damage.

The fiber is endlessly single-mode (i.e. it has no higher order mode cut-off) and, therefore, delivers pristine mode quality at all wavelengths.

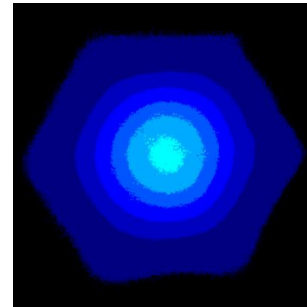
The fiber is available with hermetically sealed ends and FC/PC connectors. For a connectorized fiber, we can customize the amount of fiber end beam expansion.

Applications

- Single-mode high power delivery
- Multi-wavelength transmission
- Mode filtering
- Single-mode pigtail
- Short pulse delivery

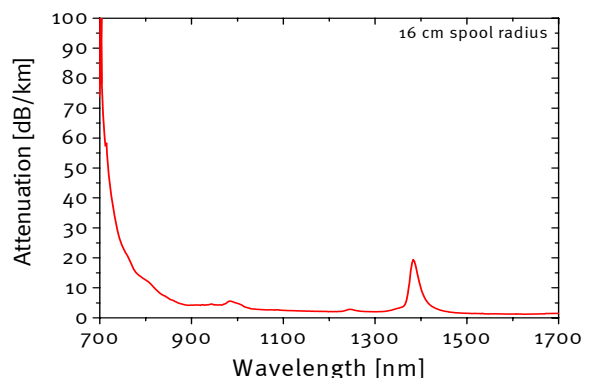
Physical properties	
Material	Pure Silica
Cladding diameter	$268 \pm 5 \mu\text{m}$
Coating diameter	$410 \pm 10 \mu\text{m}$
Coating material, single layer	Acrylate
Core size diameter	$25.2 \pm 0.4 \mu\text{m}$
Optical properties	
Attenuation @ 1064 nm*	$< 3.5 \text{ dB/km}$
Attenuation @ 1550 nm*	$< 1.5 \text{ dB/km}$
Cut-off wavelength	None
Mode field diameter	$19.8 \pm 2.0 \mu\text{m}$
Numerical aperture @ 1064 nm	0.04 ± 0.01
Numerical aperture @ 1550 nm	0.06 ± 0.01

* Measured for a bending radius of 16 cm

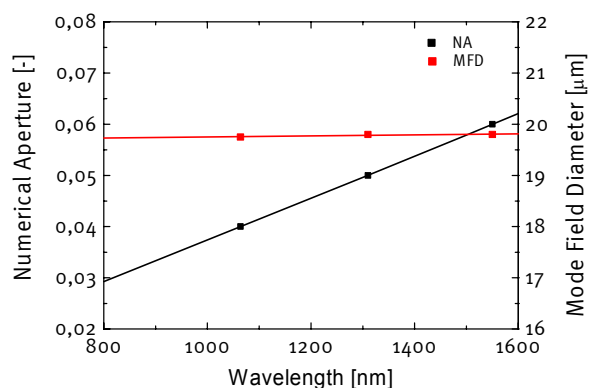


Near field obtained with White Light

Typical measured spectral attenuation



Typical measured NA and MFD



LMA-25-091221