

LMA-20

Endlessly single-mode 20 µm core fiber



- High threshold power for nonlinear effects
- Endlessly single-mode
- Pure silica fiber
- Mode field diameter independent of wavelength
- Optional connectors and beam-expansion

This single-mode large mode area fiber combines a large effective mode field area (~ 175 µm²) 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

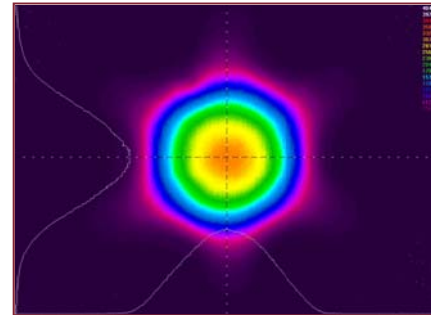
Physical properties

Signal core diameter	20 ± 0.4 µm
Outer cladding diameter, OD	230 ± 5 µm
Coating diameter	350 ± 10 µm
Outer and inner cladding material	Pure silica
Coating material, single layer	Acrylate
Coating concentricity	< 3 µm

Optical properties

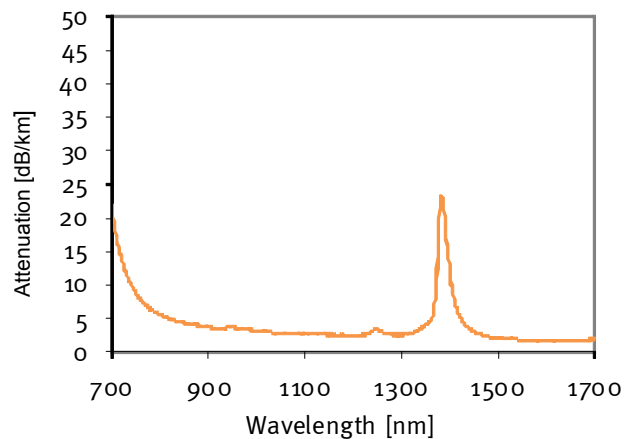
Mode properties	Single mode
Mode field diameter	15 ± 1.5 µm
Attenuation @ 780 nm*	< 7 dB/km
Attenuation @ 1060 nm	< 5 dB/km
NA @ 780 nm	0.04 ± 0.01
NA @ 1060 nm	0.05 ± 0.01

* Measured at a bending radius of 16 cm

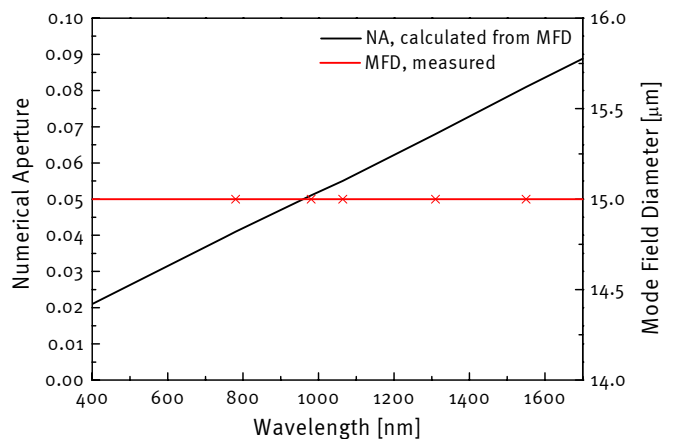


Near Field @ 1064 nm

Typical measured spectral attenuation



Typical NA and Mode field diameter



LMA-20-100409