

LMA-PM-5

Single-mode 5 μm core polarization-maintaining fiber



- Polarization Maintaining
- Endlessly single-mode
- Pure silica fiber
- Easy alignment
- Optional connectors and beam-expansion
- Mode field diameter independent of wavelength

This polarization-maintaining single-mode fiber is optimized to exhibit low loss across the widest possible wavelength region from 400 nm to above 2000 nm while keeping an almost constant mode field diameter.

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 has a standard 125 μm outer diameter and is compatible with all common fiber tools.

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. This product is also available in a non polarization-maintaining version as the LMA-5.

Applications

- Single-mode PM short wavelength delivery
- Multi-wavelength transmission
- Mode filtering
- Single-mode PM pigtailling
- Short pulse delivery

Physical properties

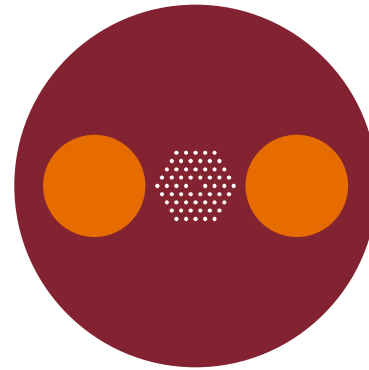
Signal core diameter	5.0 \pm 0.5 μm
Outer cladding diameter, OD	125 \pm 3 μm
Coating diameter	245 \pm 10 μm
Outer and inner cladding material	Pure silica
Coating material, single layer	Acrylate
Proof test level	0.5%

Optical properties - Signal core

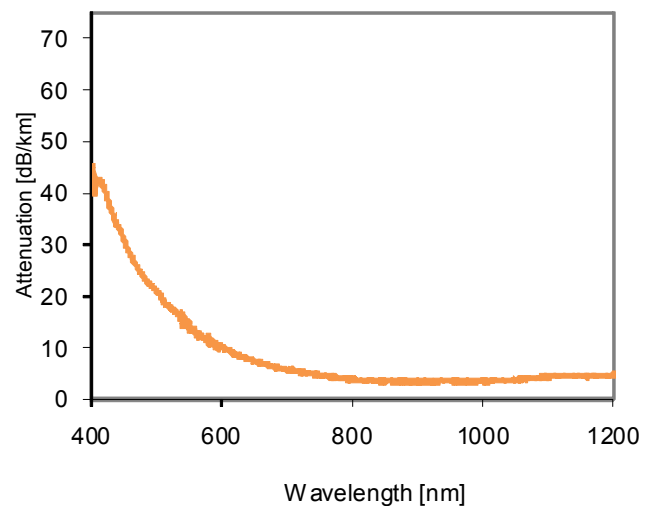
Mode properties	Single mode
Mode field diameter	4.2 \pm 0.5 μm
NA @ 470 nm	0.09 \pm 0.01
Cut-off wavelength	None
Attenuation @ 470 nm	< 30 dB/km
Attenuation @ 800 nm	< 10 dB/km

Polarization parameters

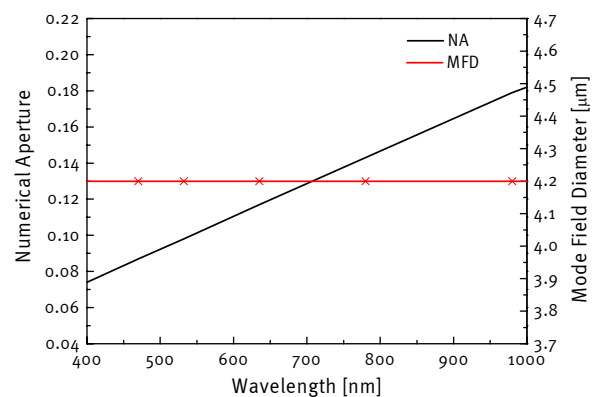
Birefringence Δn	1.5 $\cdot 10^{-4}$
Polarization Extinction Ratio	> 25 dB
Coupling coeff., h @ 1000 nm	3.8 $\cdot 10^{-4} \text{ m}^{-1}$
Coupling coeff., h @ 650 nm	1.2 $\cdot 10^{-4} \text{ m}^{-1}$



Typical measured spectral attenuation



Typical measured NA and MFD



LMA-PM-5-090727