

# LMA-PM-10

*Endlessly single-mode polarization-maintaining large mode area fiber*



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

This large core polarization maintaining photonic crystal fiber is optimized for single-mode operation in the visible to to IR wavelength range.

It combines stress rod applied birefringence, a relatively large effective mode field area ( $\sim 45 \mu\text{m}^2$ ) and low loss to allow short wavelength light delivery without nonlinear effects or material damage.

The fiber is endlessly single mode making it suitable for use over a wide wavelength range.

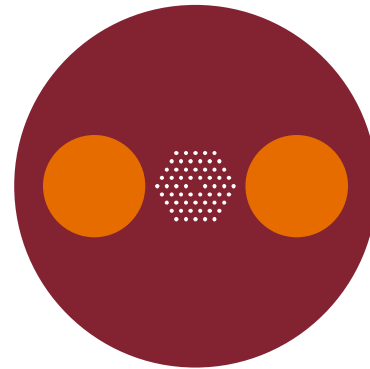
The fiber is available with hermetically sealed ends and FC/PC connectors. For a connectorized fiber, we can customize the amount of fiber end beam expansion to allow high power operation.

## Applications

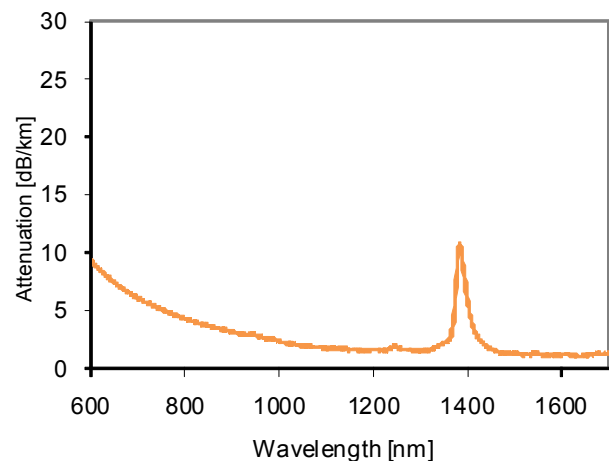
- Single-mode PM short wavelength delivery
- Multi-wavelength transmission
- Mode filtering
- Single-mode PM pigtailing
- Short pulse delivery

Physical properties	
Core diameter	10 ± 1 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
Proof test level	0.5%

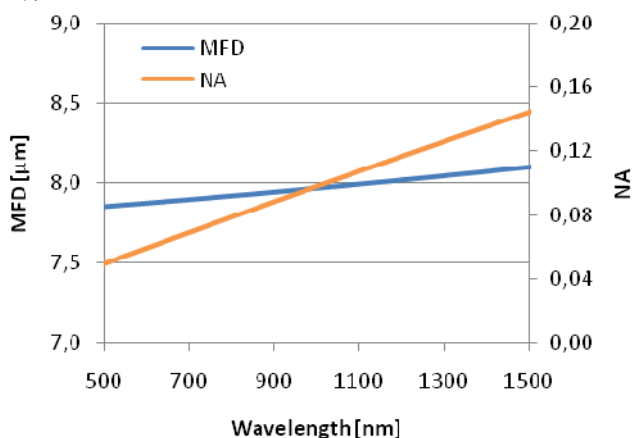
Optical properties	
Mode properties	Single mode
Higher order mode cut-off	None
Mode field diameter	8 ± 0.8 μm
Mode field area	45 ± 10 μm <sup>2</sup>
NA @ 1060 nm	0.10 ± 0.05
Attenuation @ 470 nm	< 30 dB/km
Attenuation @ 1060 nm	< 5 dB/km
Attenuation @ 1550 nm	< 5 dB/km
Birefringence Δn	~1.4 · 10 <sup>-4</sup>
Polarization Extinction Ratio	> 20 dB



Typical attenuation



Typical measured NA and MFD



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