

# LMA-PM-5

## Single-mode 5 $\mu\text{m}$ core polarization-maintaining fiber

- Low loss fiber from 400 to 1200 nm
- Single-mode at all wavelengths
- Polarization maintaining
- Radiation hard pure silica fiber
- Wavelength independent MFD

This polarization-maintaining single-mode fiber is optimized to exhibit low loss from 400 nm to 1200 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 delivers pristine mode quality at all wavelengths.

The fiber has a standard 125  $\mu\text{m}$  outer diameter and is compatible with all common fiber tools. This product is also available in a non polarization-maintaining version as the LMA-5.

Optical properties	
Single mode cut-off wavelength*	None
Attenuation @ 532 nm	< 20 dB/km
Attenuation @ 632 nm	< 10 dB/km
Attenuation @ 1064 nm	< 5 dB/km
Mode field diameter @ 532 nm ( $1/e^2$ )	$4.2 \pm 0.5 \mu\text{m}$
Mode field diameter @ 1064 nm ( $1/e^2$ )	$4.4 \pm 0.5 \mu\text{m}$
NA @ 1064 nm (5%)	$0.23 \pm 0.02$
Birefringence $\Delta n$ @ 1064 nm	$1.5 \cdot 10^{-4}$
Polarization Extinction Ratio**	> 18 dB
Physical properties	
Core diameter	$5.0 \pm 0.5 \mu\text{m}$
Outer cladding diameter, OD	$125 \pm 2 \mu\text{m}$
Coating diameter	$245 \pm 10 \mu\text{m}$
Core and cladding material	Pure silica
Coating material, single layer	Acrylate
Coating concentricity	< 10 $\mu\text{m}$
Proof test level	0.5 %

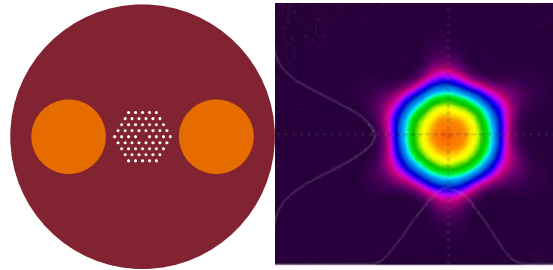
Standard interfacing options	
FC/PC PM connector	$0.0 \pm 0.5$ deg angle
FC/APC PMconnector	$8.0 \pm 0.5$ deg angle
Collapse and cleave	$0.0 \pm 0.5$ deg angle

All interfaces are provided with a  $150 \pm 25 \mu\text{m}$  sealing length of the PCF structure. PM connectors are keyed to the slow axis.

Please contact us for other custom interfacing options.

\* TIA-455-80-C standard

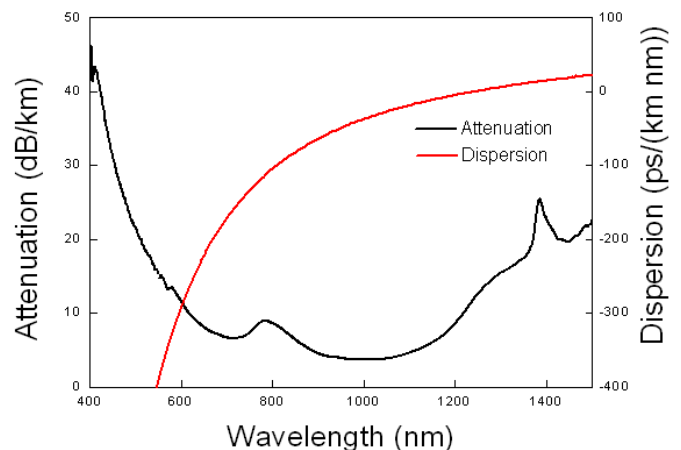
\*\* AKA PXtalk on a 2 m sample



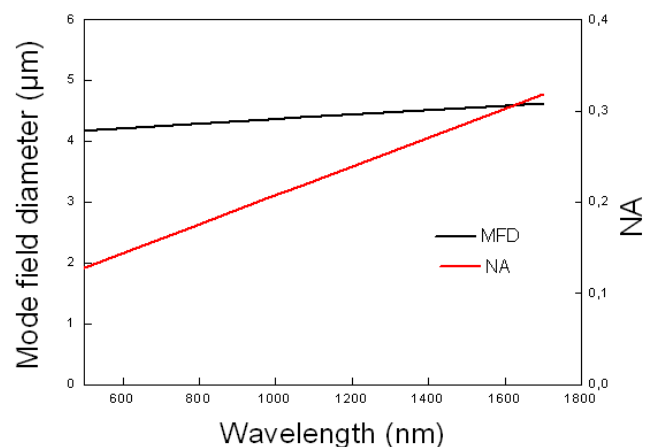
### Applications

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

### Typical spectral attenuation and dispersion



### Typical NA and MFD



LMA-PM-5-111222