

LMA-PM-10

Single-mode 10 μm polarization-maintaining fiber

- Low loss fiber from 500 to 1700 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 500 nm to 1700 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.

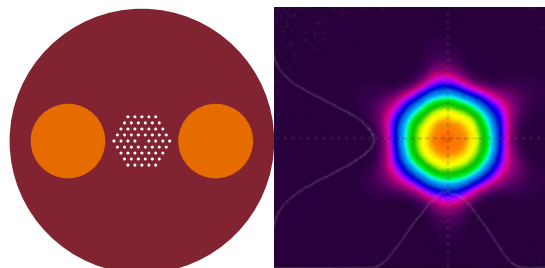
This product is also available in a non polarization-maintaining version as the LMA-10

| 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) | 8.4 ± 0.5 μm |
| Mode field diameter @ 1064 nm (1/e ²) | 8.6 ± 0.5 μm |
| NA @ 1064 nm (5%) | 0.13 ± 0.02 |
| Birefringence Δn @ 1064 nm | 1.4 · 10 ⁻⁴ |
| Polarization Extinction Ratio** | > 18 dB |
| Physical properties | |
| Core diameter | 10.0 ± 0.5 μm |
| Outer cladding diameter, OD | 230 ± 5 μm |
| Coating diameter | 350 ± 10 μm |
| Core and cladding material | Pure silica |
| Coating material, single layer | Acrylate |
| Coating concentricity | < 10 μm |
| Proof test level | 0.33 % |
| Standard interfacing options | |
| FC/PC PM connector | 0.0 ± 0.5 deg angle |
| FC/APC PMconnector | 8.0 ± 0.5 deg angle |
| SMA 905 | 0.0 or 5.0 ± 0.5 deg angle |
| Collapse and cleave | 0.0 ± 0.5 deg angle |

All interfaces are provided with a 150 ± 25 μm sealing length of the PCF structure. PM connectors are key to the slow axis. Please contact us for other custom interfacing options.

* TIA-455-80-C standard

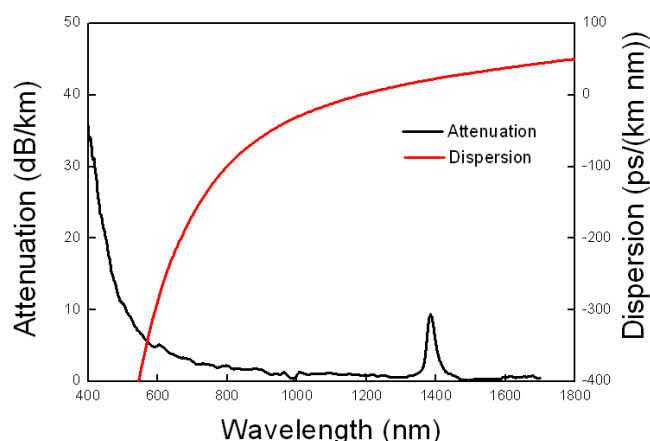
** AKA PXtalk on a 2 m sample



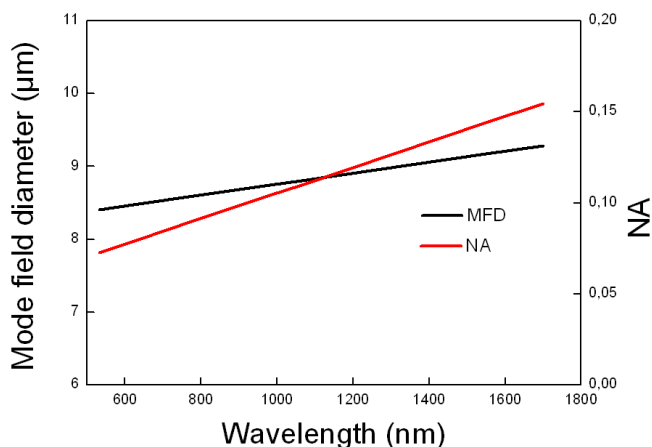
Applications

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

Typical spectral attenuation and dispersion



Typical measured NA and MFD



LMA-PM-10-111222