

# LMA-10-UV

## UV/VIS Optimized Single-Mode Large Mode Area Fiber



- Handles high power levels without nonlinearities
- Endlessly single-mode
- Pure silica fiber

This large core photonic crystal fiber combines a large effective mode field area ( $\sim 40 \mu\text{m}^2$ ) and low loss to allow high power delivery without nonlinear effects or material damage at short wavelengths.

With standard technology you have to trade large mode areas for single-mode operation, but our large mode area fibers provide single-mode operation in a large wavelength range.

The LMA-10-UV is optimized for UV/VIS operation. For use at longer wavelengths, we recommend our standard LMA-10 fiber featuring lower loss and  $125 \mu\text{m}$  cladding.

The fiber is available with hermetically sealed ends and connectors of your choice.

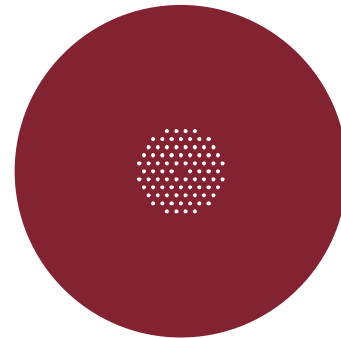
### Applications

- Single-mode high power delivery
- Mode filtering
- Single-mode pigtailling

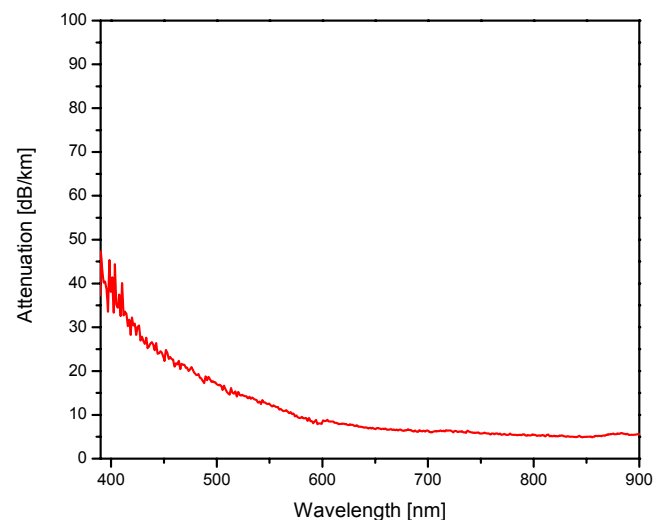
Physical properties	
Material	Pure Silica
Cladding diameter	$230 \pm 2 \mu\text{m}$
Coating diameter	$400 \pm 5 \mu\text{m}$
Coating material	Acrylate
Core size diameter	$10 \pm 1 \mu\text{m}$
Coating concentricity	$< 3 \mu\text{m}$

Optical properties	
Zero dispersion wavelength	$1195 \pm 15 \text{ nm}$
Attenuation @ 532 nm	$< 25 \text{ dB/km}$
Attenuation @ 700-1000 nm	$< 10 \text{ dB/km}$
Cut-off wavelength	None
Mode field diam. @ 635-980 nm	$7.5 \pm 1.0 \mu\text{m}$
Numerical aperture @ 635 nm	$0.08 \pm 0.01$
Numerical aperture @ 780 nm	$0.09 \pm 0.01$
Numerical aperture @ 980 nm	$0.10 \pm 0.01$
Splice loss @ 1550 nm*	$< 0.8 \text{ dB}$

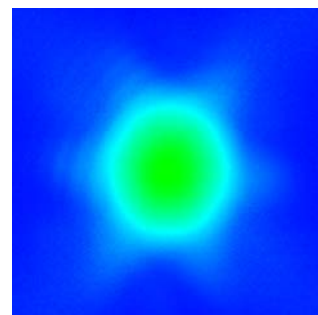
\* Spliced to standard single-mode fiber



### Typical measured spectral attenuation



### Near field



LMA-10-UV-070627