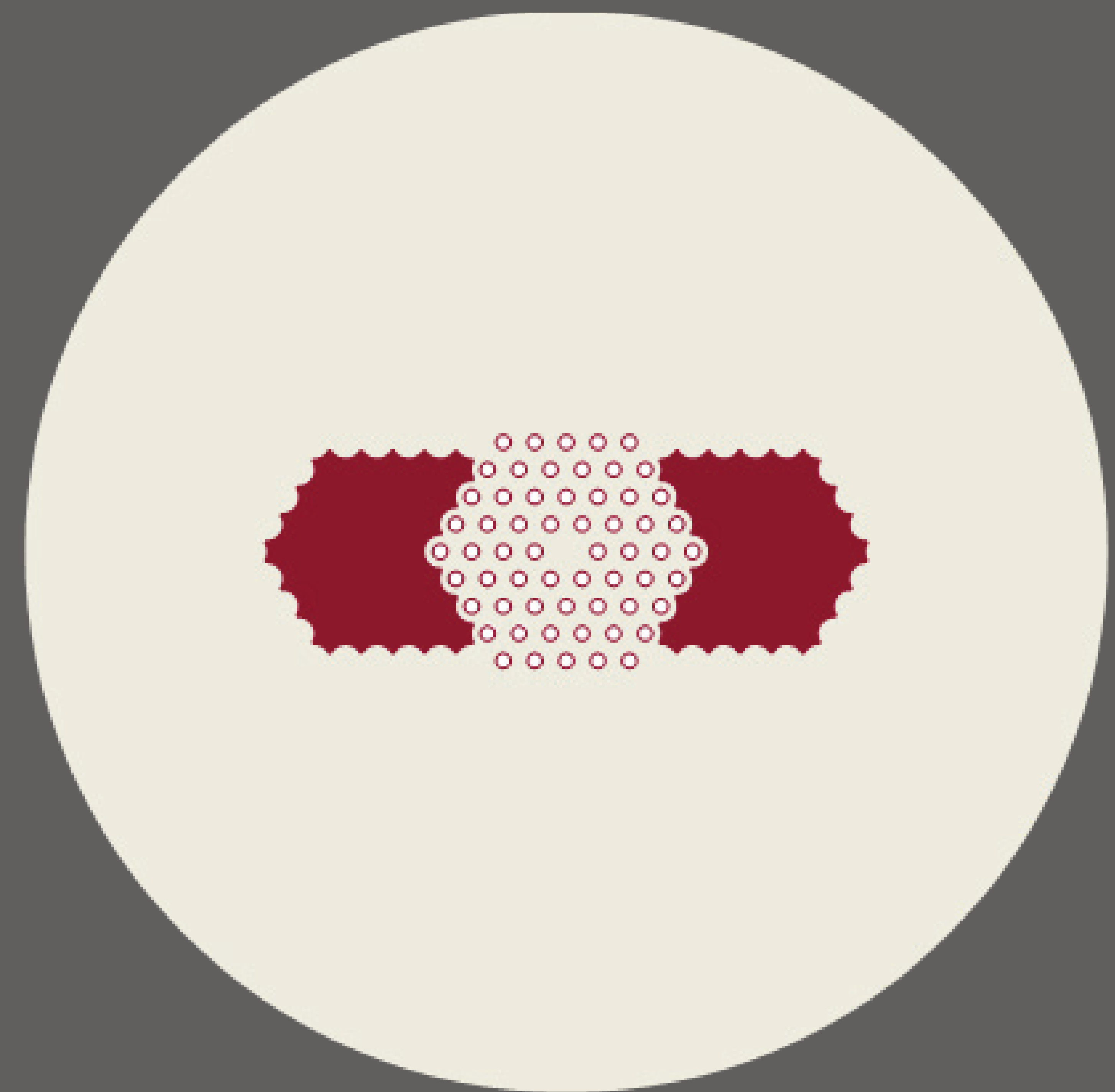


LMA-PM fibers

Single-mode, polarization-maintaining fibers



Low loss polarization-maintaining fibers

Ideal for multi-wavelength transmission

Our polarization-maintaining single-mode fibers, the LMA-PM-5, the LMA-PM-10, and the LMA-PM-15 are optimized to exhibit low loss 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 excellent mode quality at all wavelengths.

Wideband single mode and low loss

Our polarization-maintaining single-mode fibers - the LMA-PM-5, the LMA-PM-10, and the LMA-PM-15 - are all optimized for low loss in a wide wavelength range.

Operating wavelengths:

LMA-PM-5: 400 nm - 1200 nm

LMA-PM-10: 500 nm - 2200 nm

LMA-PM-15: 600 nm - 2200 nm

The LMA-PM-5 has a standard outer diameter

The LMA-PM-5 fiber has a standard 125 µm outer diameter and is compatible with all common fiber tools.

Also available in a non-polarization-maintaining version

All three fibers are also available in a non polarization-maintaining version.

Features

Low-loss

Polarization-maintaining

Single-mode at all wavelengths

Radiation hard pure silica fiber

Wavelength independent mode-field diameter

LMA-PM fibers

Applications

Mode filtering

Short pulse delivery

Multi-wavelength transmission

Single-mode polarization-maintaining pigtailed

Single-mode polarization-maintaining short wavelength delivery

Specifications

LMA-PM fibers

Optical

Model	LMA-PM-5	LMA-PM-10	LMA-PM-15
Single-mode cut-off wavelength ¹	None	None	None
Attenuation [dB/km]			
@ 532 nm	< 40 ²	< 25 ²	-
@ 632 nm	< 20	< 15	< 30 ³
@ 1064 nm	< 7	< 5	< 10
Mode-field diameter, 1/e ² [μm]			
@ 532 nm	4.2 ± 0.5	8.4 ± 1.0	12.2 ± 1.5
@ 1064 nm	4.4 ± 0.5	8.6 ± 1.0	12.6 ± 1.5
NA (5%)			
@ 532 nm	-	-	0.04 ± 0.02
@ 1064 nm	0.19 ± 0.02	0.11 ± 0.02	0.07 ± 0.02
Birefringence Δn @ 1064 nm	≥ 1.5 x 10 ⁻⁴	≥ 1.4 x 10 ⁻⁴	≥ 1.3 x 10 ⁻⁴

¹ TIA-445-80-C standard.

² 16 cm bend diameter.

³ 32 cm bend diameter.

Specifications

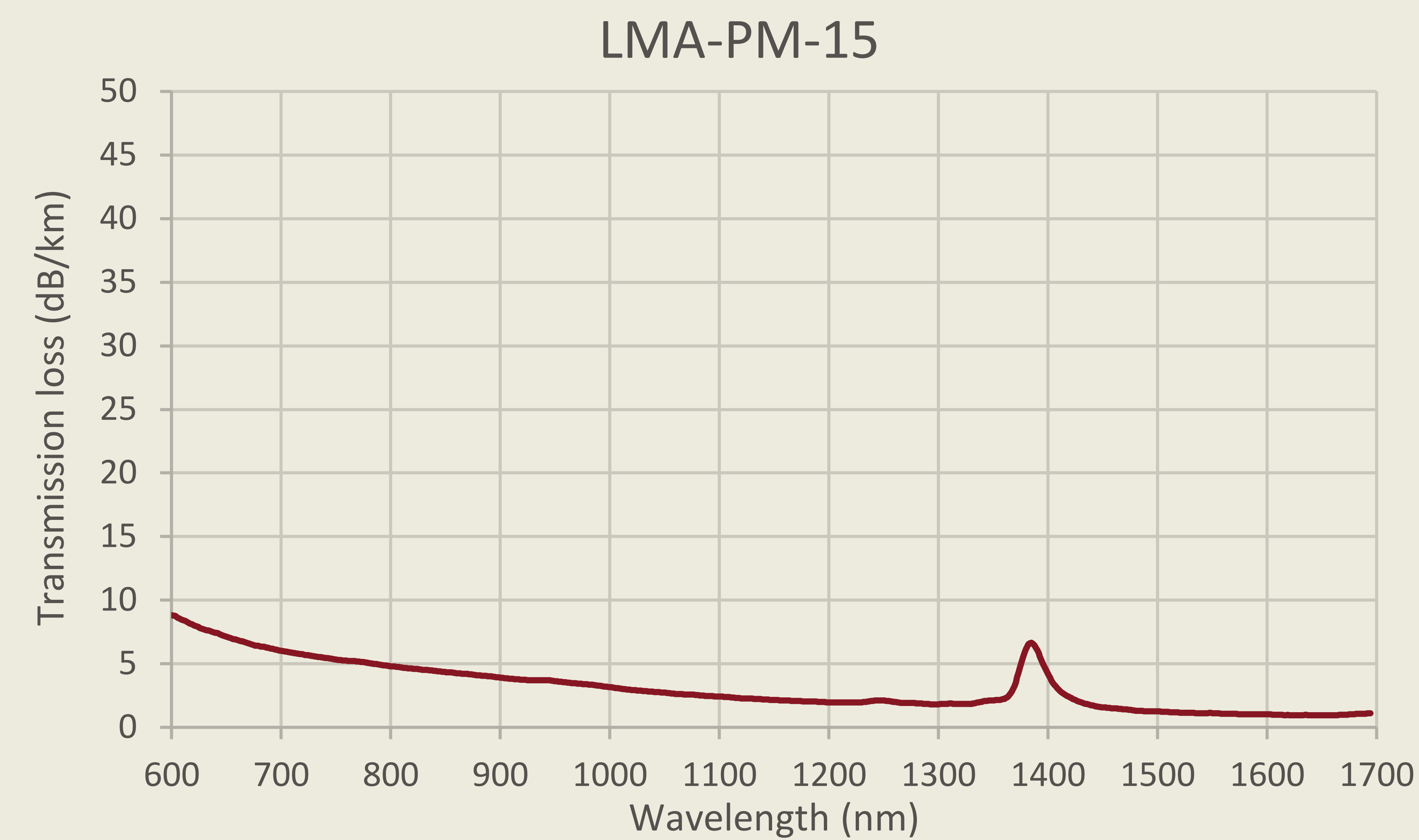
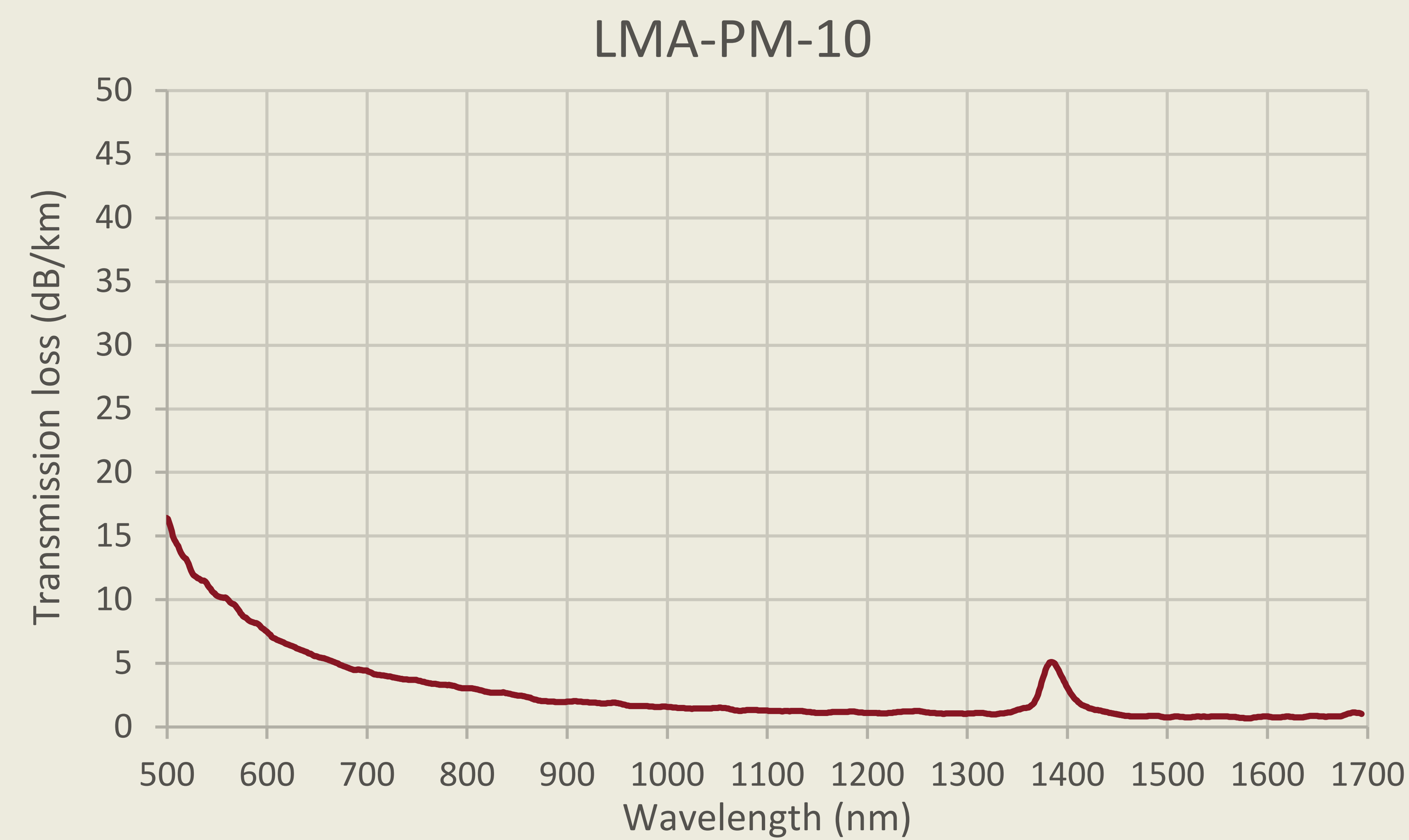
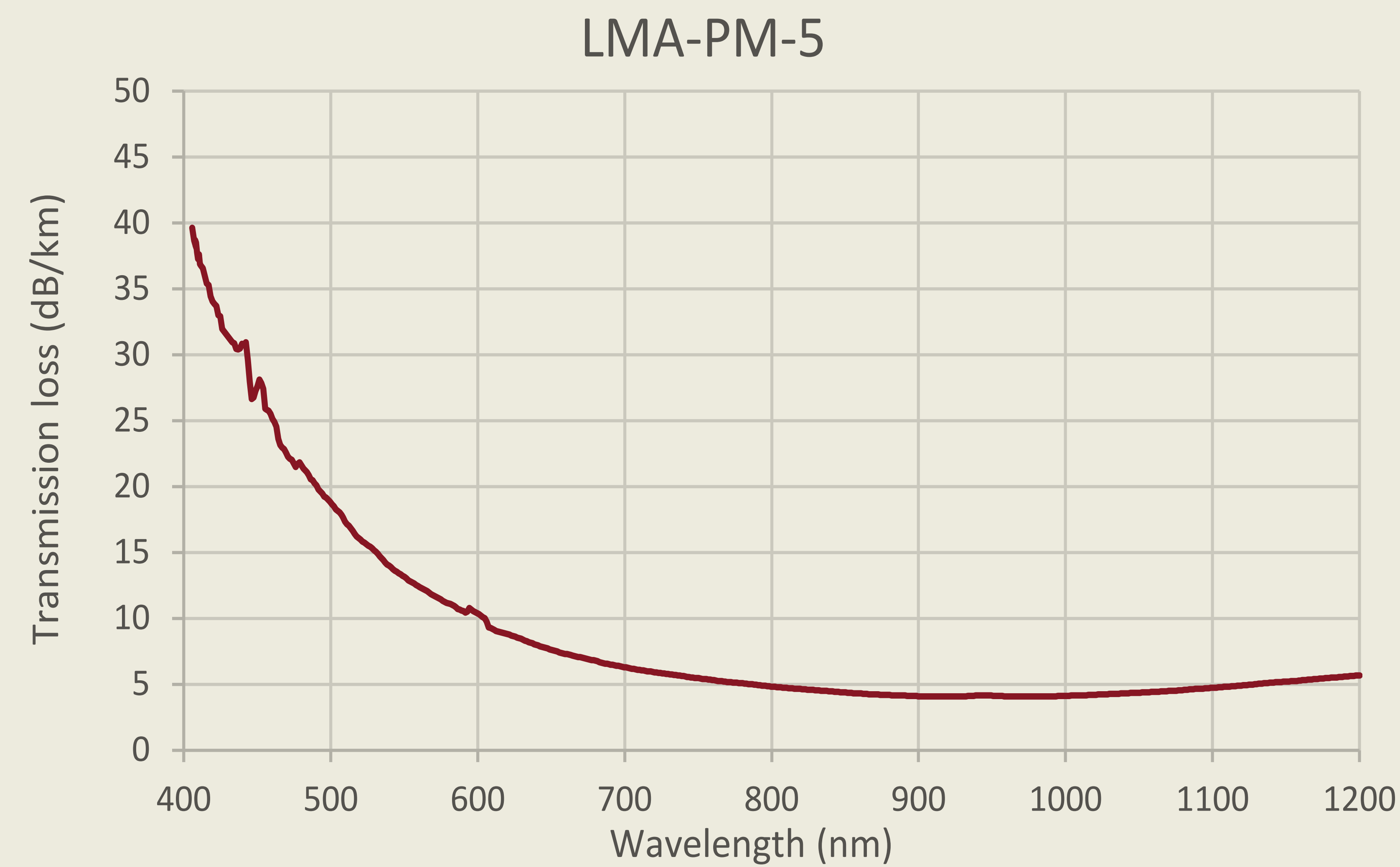
LMA-PM fibers

Mechanical

Model	LMA-PM-5	LMA-PM-10	LMA-PM-15
Core diameter [μm]	5.0 ± 0.5	10.0 ± 0.5	14.8 ± 0.8
Outer cladding diameter [μm]	125 ± 2	230 ± 5	230 ± 5
Coating diameter [μm]	245 ± 10	350 ± 10	350 ± 10
Core and cladding material	Pure silica	Pure silica	Pure silica
Coating material, single-layer	Acrylate	Acrylate	Acrylate
Coating concentricity [μm]	< 10	< 10	< 10
Proof test level [%]	0.5	0.3	0.3
Cladding non-circularity [%] ¹	< 0.7	< 0.7	< 0.7

¹ Difference in % between the largest and smallest cladding diameter.

Typical loss spectrum



LMA-PM fibers

All NKT Photonics products are produced under our quality management system certified in accordance with the ISO 9001:2015 standard.



SOLUTIONS FOR INNOVATORS