NKT Photonics

A HAMAMATSU COMPANY

LMA fibers

Low-loss single-mode fibers

Low loss single-mode fibers

Ideal for transmitting all wavelengths

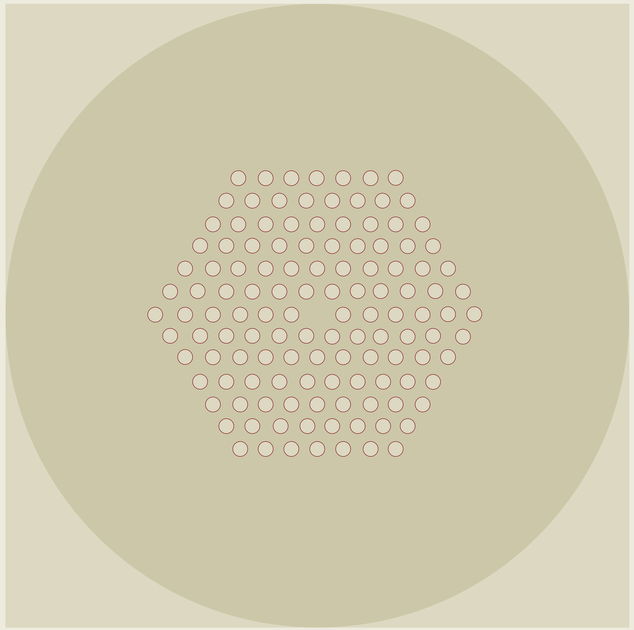
Out single-mode photonic crystal fibers are optimized for low loss across a wide range of wavelengths while maintaining an almost fixed mode field diameter.

The fibers are endlessly single-mode (i.e. no higher order mode cut-off) and deliver excellent mode quality at all wavelengths. Core diameters from 5 to 25 µm.

The LMA-5, LMA-10, and LMA-15 are available in polarization-maintaining versions.

Features

Low transmission loss
Low non-linearities
Single-mode at all wavelengths
Radiation hard pure silica fiber
Wavelength independent mode-field diameter



Applications

Broadband white light transmission

Single-mode high power delivery

Mode filtering

Short pulse delivery

Specifications

Optical

Model	**LMA-5**	**LMA-8**	**LMA-10**	**LMA-12**	**LMA-15**	**LMA-20**	**LMA-25**
Single-mode cut-off wavelength [1]	None	None	None	None	None	None	None
Low loss range [nm]	400 - 1700	400 - 1700	500 - 1700	700 - 1700	500 - 1700	600 - 1700	800 - 1700
Attenuation [dB/km]							
@ 532 nm	< 20 [2]	< 20 [2]	< 40 [2]	-	< 30	-	-
@ 632 nm	< 10	< 10	< 20 [2]	-	< 20	< 30	-
@ 780 nm	-	-	-	< 20	-	< 10	-
@ 1064 nm	< 5	< 5 [2]	< 8	< 8	< 8	< 8	< 8
@ 1550 nm	-	-	-	< 3	-	-	< 5
Mode-field diameter, 1/e² [µm]							
@ 532 nm	4.2 ± 0.5	7.2 ± 1.0	8.4 ± 1.0	-	12.5 ± 1.5	-	-
@ 780 nm	-	-	-	-	-	16.4 ± 1.5	20.6 ± 2.0
@ 1064 nm	4.7 ± 0.5	7.5 ± 1.0	8.8 ± 1.5	10.3 ± 1.0	12.8 ± 1.5	16.5 ± 1.5	20.9 ± 2.0
@ 1550 nm	-	-	-	10.5 ± 1.0	-	-	-
NA (5%) @ 1064 nm	0.20 ± 0.02	0.14 ± 0.02	0.11 ± 0.02	0.09 ± 0.02	0.07 ± 0.02	0.06 ± 0.02	0.05 ± 0.02

[1] TIA-445-80-C standard.
[2] 16 cm bend diameter

Specifications

Mechanical

Model	LMA-5	LMA-8	LMA-10	LMA-12	LMA-15	LMA-20	LMA-25
Core diameter [µm]	5.0 ± 0.5	8.6 ± 0.5	10.1 ± 0.5	12.2 ± 0.5	15.1 ± 0.8	19.9 ± 1	25 ± 1
Outer cladding diameter, OD [µm]	125 ± 2	125 ± 2	125 ± 2	125 ± 5	230 ± 5	230 ± 5	258 ± 5
Coating diameter [µm]	245 ± 10	245 ± 10	245 ± 10	245 ± 10	350 ± 10	350 ± 10	342 ± 10
Core and cladding material	Pure silica	Pure silica	Pure silica	Pure silica	Pure silica	Pure silica	Pure silica
Coating material. single-layer	Acrylate	Acrylate	Acrylate	Acrylate	Acrylate	Acrylate	Acrylate
Coating concentricity [µm]	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Proof test level [%]	0.5	0.5	0.5	0.5	0.33	0.33	0.33

LMA fibers

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

FORCE Certification
Systemcertificering
DS/EN ISO 9001 - Kvalitet

SOLUTIONS FOR INNOVATORS

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