

0.22 NA Standard Glass-Clad, Silica Core Multimode Fiber



Description

Thorlabs' 0.22 NA step-index multimode fibers feature a pure silica core with a fluorine-doped silica cladding and are available with either high or low hydroxyl ion (OH) concentrations for UV to visible (250 - 1200 nm) or visible to NIR (400 - 2400 nm) applications, respectively.

Specifications

0.22 NA Hard Cladding, Silica Core, Multimode Fiber	
Wavelength Range	400 - 2400 nm (Low OH) 250 - 1200 nm (High OH) ^a
Core / Cladding	Pure Silica / Fluorine-Doped Silica
Coating	Acrylate
Proof Test	≥ 100 kpsi
Operating Temperature	-40 to 85 °C
Numerical Aperture (NA)	0.22 ± 0.02

a. Solarization may occur at wavelengths below 300 nm.

Visible to IR Transmission (400 - 2400 nm), Low OH

Item #	Core Diameter	Clad Diameter	Coating Diameter	Maximum Attenuation @ 808 nm	Bandwidth @ 820 nm	Bend Radius Short Term ^a / Long Term ^b
FG050LGA	50 ± 1 µm	125 +1/-2 µm	250 ± 10 µm	8 dB/km	15 MHz•km	16 mm / 32 mm
FG105LCA	105 +1/-3 µm	125 +1/-2 µm	250 ± 10 µm	8 dB/km		16 mm / 32 mm
FG200LEA	200 ± 4 µm	220 ± 2 µm	320 ± 16 µm	8 dB/km		23 mm / 46 mm
FG400LEA	400 ± 8 µm	440 ± 4 µm	550 ± 15 µm	8 dB/km	N/A	47 mm / 94 mm
FG600LEA	600 ± 12 µm	660 ± 6 µm	750 ± 20 µm	8 dB/km		53 mm / 106 mm
FG1000LEA	1000 ± 30 µm	1100 ± 15 µm	1350 ± 35 µm	8 dB/km		68 mm / 136 mm

UV to Visible Transmission (250 - 1200 nm), High OH

Item #	Core Diameter	Clad Diameter	Coating Diameter	Maximum Attenuation @ 808 nm	Bandwidth @ 820 nm	Bend Radius Short Term ^a / Long Term ^b
FG050UGA	50 ± 1 µm	125 +1/-2 µm	250 ± 10 µm	10 dB/km	15 MHz•km	16 mm / 32 mm
FG105UCA	105 +1/-3 µm	125 +1/-2 µm	250 ± 10 µm	10 dB/km		16 mm / 32 mm
FG200UEA	200 ± 4 µm	220 ± 2 µm	320 ± 16 µm	10 dB/km		23 mm / 46 mm
FG400UEA	400 ± 8 µm	440 ± 4 µm	550 ± 15 µm	10 dB/km	N/A	47 mm / 94 mm
FG600UEA	600 ± 12 µm	660 ± 6 µm	750 ± 20 µm	10 dB/km		53 mm / 106 mm
FG1000UEA	1000 ± 30 µm	1100 ± 15 µm	1350 ± 35 µm	10 dB/km		68 mm / 136 mm

a. Recommended geometric strain during installation is 100% of proof test level, based upon statistical analysis of fiber failures.

b. Recommended geometric strain is 50% of proof test level, based upon statistical analysis of fiber failures.

Specifications Cont.

Item #s	Stripping Tool
FG050LGA, FB050UGA	T06S13
FG105LCA, FG105UCA	T06S13
FG200LEA, FG200UEA	T10S13
FG400LEA, FG400UEA	T18S25
FG600LEA, FG600UEA	T28S31
FG1000LEA, FG1000UEA	M44S68

Performance Plot

**Multimode Fiber Attenuation
0.22 NA, Glass-Clad Silica**

