



Verrillon® VMM1000 Series Multimode Fibers

Verrillon Fibers from AFL are available in a number of designs. Starting with fiber design, we offer multimode optical fibers having coatings and coating combinations, including Polyimide, Silicone-PFA and Carbon, which can be applied in conjunction with any of these outer coatings.

Features

- Low and High OH concentration optimizes fibers for power transmission from UV through near-IR wavelengths
- Laser delivery and imaging applications
- All-silica based construction creates a high damage threshold and high-performance optical properties for pumping systems

Specifications

PART NO.	MMF-100-1-P-105-125-1	MMF-100-2-P-140-2	MMF-105-1-P-125-150-3
Description	100/105/125 High OH, Silica Core, Polyimide coated, Multimode Fiber, 0.22 NA, 100 kpsi Proof Test	100/140/172 Polyimide Coated, Graded Index, Multimode Fiber, 0.29 NA, 200 kpsi	105/125/150 Low OH Silica Core, Polyimide coated, Step Index Multimode Fiber, 0.22 NA, 100 kpsi Proof Test
PARAMETER	VALUE		
Material			
Coating	Polyimide	Polyimide	Polyimide
Geometry			
Core Diameter (µm)	100 ± 4	100 ± 3	105 ± 5
Clad Diameter (µm)	105 ± 3	140 ± 3	125 ± 3
Core/Clad Offset (µm)	—	≤ 6.0	≤ 3.0
Coat Diameter (µm)	125 ± 3	172 ± 2	150 ± 5
Optical			
NA (nominal)	0.22 ± 0.02	0.29	0.22
Attenuation @ 308 nm (dB/m) ¹	≤ 200	—	—
Attenuation @ 808 nm (dB/m) ²	—	—	≤ 15
Attenuation @ 850 nm (dB/m) ²	—	≤ 5.0	—
Bandwidth @ 850 nm (MHz/km)	—	≤ 100	—
Mechanical			
Proof Test (kpsi)	≥ 100	≥ 200	≥ 100
Operating Temperature (°C)	-65 to +300	-65 to +300	-65 to +300

¹ Nominal value taken from preform specifications ² Measured on Zero Tension Spool

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Specifications

PART NO.	MMF-200-1-P-220-240-1	MMF-200-1-P-220-245-1
Description	200/220/240 High OH, Pure Silica Core, Polyimide coated, Step Index Multimode Fiber, 0.22 NA, 100 kpsi Proof Test	200/220/245 Low OH Silica Core, Polyimide coated, Step Index Multimode Fiber, 0.22 NA, 100 kpsi Proof Test
PARAMETER	VALUE	
Material		
Buffer	Polyimide	Polyimide
Geometry		
Core Diameter (µm)	200 ± 5	200 ± 8
Clad Diameter (µm)	220 ± 5	220 ± 6
Core Non-Circularity (%)	≤ 5	≤ 5
Clad Non-Circularity (%)	≤ 1	≤ 1
Coat Diameter (µm)	240 ± 5	245 ± 10
Polyimide Coating Concentricity ¹ (%)	≥ 75	≥ 80
Optical		
NA (nominal)	0.22	0.22
Attenuation @ 808 nm (dB/m)	≤ 10	≤ 15
Mechanical		
Proof Test (kpsi)	≥ 100	≥ 100
Operating Temperature (°C)	-65 to +300	-65 to +300

¹ Measured as (Min Wall / Max Wal) x 100

Specifications

PART NO.	MMF-200-1-A-220-400-1
Description	200/220/400 Acrylate coated, Low OH, Silica Core, Step Index Multimode Fiber, 0.22 NA, 100 kpsi Proof Test
PARAMETER	VALUE
Material	
Primary Coating	UV Acrylate
Secondary Coating	UV Acrylate
Geometry	
Core Diameter (µm)	200 ± 8
Clad Diameter (µm)	220 ± 6
Core/Clad Offset (µm)	≤ 3.0
Combined Coat Diameter (%)	400 ± 25
Optical	
NA (nominal)	0.22
Attenuation ¹ @ 808 nm (dB/m)	≤ 20
Mechanical	
Proof Test (kpsi)	≥ 100
Operating Temperature (°C)	-40 to +85

¹ Measured on Zero Tension Spool