

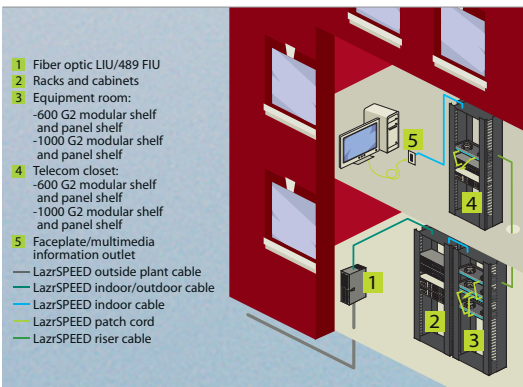
SYSTIMAX® LazrSPEED® Solutions

Laser Optimized 50 μ m Multimode

LazrSPEED fiber is the perfect choice for new installations because it has been designed to support 10 Gbps up to 550 meter distances. This fully supports the vast majority of in-building distance requirements. LazrSPEED Solution is flexible and supports all the current LANs from 10 Mbps to 10 Gbps. Gigabit ethernet is supported up to over 1 kilometer for 1000BASE-SX. A future upgrade to 10 Gbps can be easily accomplished by simply plugging in short wavelength (850 nm) 10 Gbps electronics in to the existing LazrSPEED channels up to 550 meters depending on LazrSPEED fiber type.

LazrSPEED Solution also enables dual speed 1 Gbps/10 Gbps ports, which allow less disruptive incremental upgrades of switches and servers. LazrSPEED Solution supports very high speed data transmission by controlling differential mode delay (DMD) that results when light rays travelling along the various pathways (modes) arrive at the detector at different times. DMD can cause an optical signal to be detected as several different signals.

With the lowest multimode optical channel loss available and the breakthrough bandwidth performance, a LazrSPEED LC solution easily meets the gigabit ethernet standard and sets the pace for 10 Gbps support. This channel loss performance (0.17 dB average loss for LC connections, 3.0 dB/km loss for cables at 850 nm) and bandwidth performance enables cost-effective 10 Gbps networks as well as increased network reliability for gigabit applications. It is available in three versions:



Features and Benefits

- Standards:
 - LazrSPEED 550/ LazrSPEED 300: meets and exceeds the next generation multimode fiber (OM3) specifications in standards
 - LazrSPEED 150: meets and exceeds the next generation multimode fiber (OM2) specifications in standards
- Bandwidth, Laser:
 - LazrSPEED 550: over 4,700 MHz-km laser bandwidth at 850 nm
 - LazrSPEED 300: over 2,000 MHz-km laser bandwidth at 850 nm
 - LazrSPEED 150: over 950 MHz-km laser bandwidth at 850 nm
- Supports all serial and CWDM options for 10 Gbps ethernet
- Designed to support low complexity 10 Gbps serial transmission to:
 - LazrSPEED 550: 550 meters
 - LazrSPEED 300: 300 meters
 - LazrSPEED 150: 150 meters
- Support 1 Gbps ethernet up to:
 - LazrSPEED 550: 1.1 km
 - LazrSPEED 300: 1 km
 - LazrSPEED 150: 800 meters
- Laser optimized
- Suitable for LANs from 10 Mbps to 10 Gbps

Physical Characteristics

LazrSPEED 550/300/150

Laser Optimized 50 Micron Multimode Fiber

Core Diameter	50.0 ± 2.5 µm
Cladding Diameter	125.0 ± 1.0 µm
Core/Clad Offset	≤ 1.5 µm
Coating Diameter (Uncolored)	245 ± 10 µm
Coating Diameter (Colored)	254 ± 7 µm
Coating/Cladding Concentricity Error, max.	6 µm
Clad Non-Circularity	≤ 1%

Mechanical Characteristics

Proof Test	100 kpsi (0.69 Gpa)
Coating Strip Force	0.3 - 2.0 lbf (1.3 - 8.9 N)
Dynamic Fatigue Parameter (nd)	≥ 18
Macrobending, max. (100 turns @75 mm mandrel)	0.50 dB max. @ 850 nm and 1300 nm

Optical Characteristics, Wavelength Specific

	850 nm	1300 nm
Max. Attenuation, Loose Tube Cable	3.0 dB/km	1.0 dB/km
Max. Attenuation, Tight Buffer Cable	3.0 dB/km	1.0 dB/km
Min. Bandwidth, Overfilled	550: 3,500 MHz-km	500 MHz-km
	300: 1,500 MHz-km	500 MHz-km
	150: 700 MHz-km	500 MHz-km
Min. Bandwidth, Laser	550: 4,700 MHz-km	500 MHz-km
	300: 2,000 MHz-km	500 MHz-km
	150: 950 MHz-km	500 MHz-km
Max. Differential Mode Delay	E550: Exceeds TIA-492AAAC-A (IEC-60793-2-10ed2)	0.88 ps/m
	300: Exceeds TIA-492AAAC-A (IEC-60793-2-10ed2)	0.88 ps/m
	150: 0.70 ps/m	0.88 ps/m
1 Gbps Ethernet Distance	550: 1,100 m (1000BASE-SX)	600 m
	300: 1,000 m (1000BASE-SX)	600 m
	150: 800 m (1000BASE-SX)	600 m
10 Gbps Ethernet Distance	550: 550 m (10GBASE-S)	300 m (10GBASE-LX4)
	300: 300 m (10GBASE-S)	300 m (10GBASE-LX4)
	150: 150 m (10GBASE-S)	300 m (10GBASE-LX4)

Optical Characteristics, General

Numerical Aperature	0.200 ± 0.015
Point Defects, Max.	0.15 dB
Zero Dispersion Wavelength Range	1295 - 1340 nm
Zero Dispersion Slope	< 0.105 ps/nm ² -km for 1295 nm < ZDW < 1310 nm, and < 0.000375 (1590 - ZDW) ps/nm ² -km for 1310 nm < ZDW < 1340 nm

Environmental Characteristics

Temperature Dependence -76°F to 185°F (-60°C to 85°C)	≤ 0.10 dB
Temperature Humidity Cycling 14°F to 185°F (-10°C to 85°C) up to 95% RH	≤ 0.10 dB
Water Immersion, 73.4°F (23°C)	≤ 0.20 dB
Heat Aging, 185°F (85°C)	≤ 0.20 dB

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