50 Micron OM3 Multimode Optical Fiber Spool – Low Attenuation, Laser-Optimized for 10G/40G/100G Networks

Product Overview

Winner OM3 multimode optical fiber is a laser-optimized 50/125 µm graded-index fiber engineered to support high-bandwidth applications in next-generation structured cabling systems. Compliant with ISO/IEC 11801, TIA-492AAAD, and IEC 60793-2-10 standards, it features an Effective Modal Bandwidth (EMB) of ⩾2000 MHz・km at 850 nm—enabling reliable transmission of 10 Gigabit Ethernet up to 300 meters, 40G/100G Ethernet up to 100 meters using parallel optics or MPO connectivity.

Manufactured under strict quality control protocols, Winner OM3 fiber exhibits ultra-low attenuation (⩽2.4 dB/km @850 nm) and excellent geometric consistency, ensuring minimal insertion loss and high coupling efficiency with VCSEL-based transceivers. Its optimized refractive index profile reduces differential mode delay (DMD), making it fully compatible with IEEE 802.3ae and other high-speed Ethernet standards. The fiber is suitable for both indoor and controlled outdoor environments within a wide operating temperature range of -65°C to +85°C.

Technical Specifications

Brand Name	Winner

Model Number	OM3
Core Diameter	50 µm
Cladding Diameter	125 ± 1 µm
Attenuation	⩽2.4 dB/km @850 nm, ⩽0.6 dB/km @1300 nm
Overfilled Modal Bandwidth	⩾1500 MHz・km @850 nm, ⩾500 MHz・km @1300 nm
Effective Modal Bandwidth (EMB)	⩾2000 MHz・km @850 nm
Operating Temperature Range	-65°C to +85°C

Applications

- High-density data center interconnects for 10G/40G/100G Ethernet server-to-switch and switch-to-switch links
- Enterprise backbone cabling in corporate offices, financial institutions, and government facilities
- Campus-wide network infrastructure connecting buildings via riser or plenum-rated cable assemblies
- Storage area networks (SAN) and high-performance computing (HPC) clusters requiring low-latency optical links

- Upgrades of existing OM1/OM2 installations where migration to higher speeds is required without full re-cabling

Compatibility & Standards Support

Winner OM3 fiber is fully compatible with LC, SC, and MPO/MTP connectors and supports industry-standard transceivers including SFP+, QSFP+, and CFP. It meets the requirements of IEEE 802.3 (10GBASE-SR, 40GBASE-SR4, 100GBASE-SR4), ANSI/TIA-568.3-D, and EN 50173-1, ensuring seamless integration into current and future multimode optical networks.