

RIVO MULTITRADE OPTICAL SYSTEMS

Extended Six-Core Single-Mode Fiber Cable



Overview

This is a plenum rated distribution type fiber with a durable jacket which provides added protection during installation.

Key Takeaways

A six-core single-mode fiber cable integrates six individual single-mode fibers into a single assembly, optimized for long-distance, high-bandwidth, and low-loss data transmission.

An Extended Six-Core Single-Mode Fiber Cable consists of six individual single-mode fibers bundled within a single cable sheath. Each fiber typically has a core diameter of 8-10 microns and a cladding diameter of 125 microns, supporting single-mode propagation at 1310 nm and 1550 nm wavelengths with low attenuation (~0.2-0.5 dB/km) and high bandwidth over long distances. These cables are widely used in telecommunications backbones, metro networks, FTTH (Fiber to the Home), data centers, and industrial systems.

Construction and Durability

The cable design often includes:

- Outer jacket: Flame-retardant PVC or LSZH for indoor/outdoor use.
- Strength members: Aramid yarn or Fiber Reinforced Plastic (FRP) for tensile strength and durability.

- Optional armor: Corrugated steel tape for metallic armored versions, suitable for underground or harsh environments .
- Small form factor: Compact design allows easy routing in tight spaces and high-density installations . Some cables are engineered with bend-insensitive fibers (BIF) to minimize signal loss in tight bends, making them ideal for retrofit installations or complex indoor cabling .

Performance Features

- Low attenuation: Ensures minimal signal loss over long distances.
- High bandwidth: Supports high-speed data transmission for modern networks.
- EMI/RFI immunity: Fiber optics are inherently immune to electromagnetic and radio frequency interference, making them suitable for industrial, defense, and aerospace applications .
- Multi-functional cores: Individual cores can be used for sensing applications such as Distributed Temperature Sensing (DTS), Distributed Acoustic Sensing (DAS), and Distributed Strain Sensing (DSS), .

Applications

- Telecommunications: Long-haul and metro networks, FTTH deployments.
- Data centers: High-density cabling and backbone connectivity.
- Industrial and utility monitoring: Real-time sensing along pipelines, power lines, or critical infrastructure .
- Defense and aerospace: Secure, high-bandwidth communication in mobile or tactical environments .

Summary

Extended six-core single-mode fiber cables provide high-performance, reliable, and versatile connectivity. Their combination of low-loss single-mode fibers, durable construction, and multi-functional capabilities makes them suitable for telecom, industrial, sensing, and defense applications, ensuring efficient data transmission and operational resilience .

Article Content

6-Strand Singlemode Fiber Optic Cable

This yellow 1000-foot spool of fiber optic distribution cable is intended to use for long-distance indoor runs

Amazon : 6 Strand Fiber Optic Cable

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6 Strand Singlemode Indoor Fiber Optic Cable | Fiber By the Foot

This is a plenum rated distribution type fiber with a durable jacket which provides added protection during installation. This cable is

Fiber Optic Cable Types: Comprehensive Guide

Single-mode fiber features a thin 8-9µm core that carries a single optical signal. This design significantly reduces signal

6 Strand Singlemode Riser Fiber Optic Cable

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Multimode Optical Fiber Selection & Specification

In addition, it is at this time that many network planners make the decision to plan for potential single-mode fiber requirements.

06 FIBER SINGLE MODE OUTDOOR OFC CABLE

06 FIBER SINGLE MODE OUTDOOR OFC CABLE Single Mode G.652.D and G.657 (OS2 & OS1) This UV Stabilized outdoor cable

Fiber Optic Cable Types Explained

Our comprehensive guide to types of fiber optic cables. Learn all about the differences between single mode and multimode cables,

Indoor/Outdoor Fiber

Our Indoor/Outdoor Fiber Cable can be found with 2, 4, 6, 8, 12, and 24 strands. The strands are color coded for easy identification

The Ultimate Fiber Optic Cable Size Reference Chart

Choosing the Right Fiber Size for Your Application Selecting the correct fiber optic size for your specific application is

Fiber Optic Single mode Cable 6 Cores ADSS

The Broadstick fiber cable provides a high quality connection; it is ADSS All Dielectric Self - Supporting The mechanical

Multi-mode optical fiber

A stripped multi-mode fiber Multi-mode optical fiber is a type of optical fiber mostly used for communication over short distances,

6 Strand Hybrid Fiber Optic Cable, Single Mode 9/125, Indoor/Outdoor ...

This 6-Strand Hybrid Fiber Optic Cable features single-mode 9/125 fibers and two 14 AWG stranded copper conductors, making it

Singlemode 9/125 6-Strand Fiber Cable

This 6-strand singlemode 9/125 fiber distribution cable has a standard two foot breakout on each end. Two feet of the outer jacket is

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