

Single-mode outdoor four-core fiber optic cable

Article Overview

A single-mode four-core outdoor fiber optic cable is designed for long-distance, high-speed data transmission with robust protection for outdoor environments.

Overview

Single-mode four-core outdoor fiber optic cables are primarily used for telecommunications, FTTH, and GPON networks, connecting end-users to service providers with high-speed, low-loss data transmission . Each cable contains four optical fibers, allowing multiple independent connections or redundancy for network reliability .

Construction and Materials

Typical construction includes:

- o Optical fibers: Made of high-purity silica with germanium doping, coated with UV-curable acrylate for primary protection .
- o Loose tube or PBT tube: Encases the fibers with jelly compound to protect against moisture and mechanical stress .
- o Strength members: Multi-strand aramid yarn or FRP rods provide tensile strength and prevent fiber breakage during installation .
- o Outer sheath: PE, PVC, or LSZH materials protect against UV, water, and environmental hazards. Armored options with steel layers are available for rodent protection and enhanced durability . Some designs, like the Siamese model, allow two independent telecom operators to share a single cable, reducing installation costs .

Performance

- o Single-mode fibers follow ITU-T G.657.A standards, ensuring low attenuation and high signal integrity over long distances .
- o Bend-insensitive fibers reduce signal loss in tight bends or complex routing .
- o Testing: Cables are typically tested with OTDR to verify splice loss, length, and fault detection, ensuring compliance with quality standards .

Applications

- o Outdoor deployment: Suitable for aerial, duct, or direct burial installations .
- o Telecom and broadband networks: Ideal for FTTH, GPON, and long-distance backbone connections .

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o Industrial and critical infrastructure: Can be customized for defense, energy, or healthcare sectors requiring reliable, high-speed connectivity .

Advantages

- o Supports multiple operators or services with a single cable .
- o High durability against environmental stress, UV, and rodents .
- o Flexible design options for armored or non-armored, loose tube, or tight-buffered configurations .
- o Long-distance, low-loss transmission with high data integrity . Single-mode four-core outdoor fiber optic cables provide a cost-effective, reliable, and high-performance solution for modern fiber optic networks, ensuring long-term durability and efficient data transmission in challenging outdoor environments.

4 core single mode armored fiber optic cable *CE,Rohs,ISO9001 *internationally standardized quality

1km Roll | 4 Core Single Mode Flat 100Gbps OS2 Fiber Drop Cable | G.657A2 Outdoor Fiber Optic Cable
Singlemode fiber optic

These are the outdoor fiber optic cables you see strung along telephone poles (aerial), installed inside an underground duct, or even

Astel 4 Core Siamese model has 2 x 2 Fiber cables joined in the center by steel messenger. The cables has 2 x2 FRP Protection

4 Core Optical Fiber Cable 4 Core FTTH Single Mode Optical Fiber Cable - Round OD 5.8 mm + FRP + Yarn Our 4 Core FTTH

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

Fiber optic 4-core round drop cable consists of four parts, PE plastic cover, multi

This indoor/outdoor armored cable has a water blocking aramid yarn strength member surrounding the fiber optic strands and a UV

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Single-mode outdoor four-core fiber optic cable

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