

Article Overview

A two-core dish-shaped optical cable is a dual-core fiber optic cable, often used in FTTH networks, with two parallel optical fibers embedded in a flat or figure-8 design for indoor and outdoor deployment.

Structure and Design

Two-core optical cables, also called dual-core fibers, contain two separate optical cores that can independently transmit light, allowing simultaneous data transmission over each core . In a dish-shaped or butterfly/figure-8 design, the two cores are embedded in a flat cable with parallel strength members (often FRP or metal rods) to provide mechanical support and prevent fiber damage during installation . The LSZH (Low Smoke Zero Halogen) sheath ensures safety in indoor environments, while outdoor-rated versions include UV-resistant jackets for environmental protection .

Applications

These cables are primarily used in FTTH (Fiber to the Home) networks, connecting the main feeder line to individual subscribers. They are suitable for both indoor cable trays and outdoor duct installations, providing a lightweight, compact solution for short-distance distribution . The dual-core design allows for redundancy or bidirectional communication in a single cable, improving network reliability.

Technical Features

- o Fiber Type: Typically single-mode (OS2) with 9/125 um core/cladding diameter .
- o Standards: Compliant with G.657.A2 for bend-insensitive performance, suitable for tight bends in indoor installations .
- o Strength Members: FRP or metal rods provide tensile strength and prevent fiber breakage during pulling .
- o Testing: Optical Time Domain Reflectometer (OTDR) is used to verify fiber integrity, measure length, and detect faults .

Advantages

- o Compact and lightweight, ideal for residential and small business deployments.
- o Bend-insensitive fibers reduce signal loss in tight spaces.
- o Dual-core design allows simultaneous or redundant connections.
- o Suitable for both indoor and outdoor environments with proper jacket materials. In summary, a two-core dish-shaped optical cable is a versatile, dual-core fiber optic solution designed for efficient FTTH deployment, combining mechanical strength, environmental protection, and high-performance optical transmission.

Two-core dish-shaped optical cable

In today's world, fiber optic cables are commonly used in almost every sector as they help transmit data quickly over

Thorlabs' Bifurcated Fiber Bundles, also known as fanout or Y-cables, are constructed from two high-grade

The color-coded, tightly buffered fibers are reinforced with aramid yarn for greater

Such fibers are called multi-core fibers (or multicore fibers). In the case with two cores only, one may also

Optical fiber cables can be divided into different types according to different structures, materials, applications, and

2 Core FTTH Single Mode Optical Fiber Cable - Round OD 5.5 mm + FRP + Yarn Our 2 Core FTTH

.Two parallel FRP strength members ensure good performance of crush resistance to protect the fiber;

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Lower Interference: Single-core fibers are less prone to signal interference and crosstalk compared to their dual-core

Single Mode cable has a much smaller core (8-9um) than multimode cable and uses a single path (mode) to carry the light. The main

This Outdoor Single mode FTTH Drop Fiber Optic Cable provides a proper connection for FTTH networks, the operation is simple;

Common everyday networking fibre optic cable configurations include two-core options,

2 core optical fiber cable either called optical drop wire, it plays an important part of FTTH network, built the

Our 2 Core FTTH Single Mode Optical Fiber Cables are designed to meet the specific needs of telecom operators and ISPs. They

Two Types of Fiber Optic Cable Fiber optic cables fall into two main categories: single-mode fiber (SMF) and multimode

An optical fiber cable is a complex structure designed to protect fragile glass fibers that transmit digital data



Two-core dish-shaped optical cable

using light signals. This

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