

RIVO MULTITRADE OPTICAL SYSTEMS

Metal loose tube optical cable



Overview

Stainless Steel Loose Tube Optical Fiber Unit With marvelous performance of longitudinal water resistance, the tube is perfect to maintain good Loose Tube.

Key Takeaways

Metal loose tube optical cables are fiber optic cables with steel wire armoring and loose tube construction, designed for high-speed, long-distance communication with robust mechanical and environmental protection. Construction and Features

Metal loose tube optical cables typically consist of multiple loose tubes containing optical fibers, surrounded by water-blocking jelly to prevent moisture ingress. FRP (Fiber Reinforced Plastic) strength members enhance tensile strength, while steel wire armoring provides mechanical durability, rodent protection, and resistance to external impacts. The cables are usually sheathed with PE (polyethylene) inner and outer layers, offering UV resistance and suitability for direct burial or outdoor duct installation .

Advantages

- High mechanical strength: Steel wire armoring protects fibers from crushing and external forces.
- Moisture resistance: Water-blocking jelly and tape prevent water penetration, ensuring long-term reliability.
- Rodent protection: Armoring and sheaths reduce the risk of damage from animals.



- Long-distance transmission: Loose tube design allows for thermal expansion and contraction without stressing fibers, ideal for trunk lines, LANs, and distribution networks .

- Versatility: Suitable for both direct burial and duct installation, and can withstand harsh outdoor environments .

Applications

Metal loose tube optical cables are widely used in:

- Telecommunication backbones and trunk lines
- Local area networks (LANs) and distribution networks
- Industrial and outdoor installations where mechanical protection and environmental resistance are critical

Variants

Some cables may feature single-mode or multi-mode fibers, stranded or central tube designs, and varying fiber counts (e.g., 24 to 144 fibers). They are engineered to maintain performance across a wide temperature range and can include additional features like dielectric armoring for areas with high rodent risk . In summary, metal loose tube optical cables combine loose tube fiber protection with steel wire armoring, making them ideal for long-distance, high-speed data transmission in challenging environments while ensuring durability, moisture resistance, and ease of installation.

Article Content

GYTA53 Loose Tube Layer Stranded Single Steel Wire Armored

This cable is made up of loose tubes of high-strength plastic with each one filled with a water-blocking compound to protect the

Loose Tube Fiber Optic Cable

Reliable and efficient, our loose tube fiber optic cables feature innovative loose tube construction for maximum protection, making

In-Depth Knowledge Of Loose Tube Fiber Optic Cables

Introduction Loose tube fiber optic cables (hereinafter referred to as loose tube cables) are the most widely used cables for outside

Cabling System Design: Technical report 01

This document provides specific information related to Loose Tube fibre cables. The General "Installation Guide For Optical Fibre

Loose-tube Vs Tight-buffered Fiber Optic Cable

There are two styles of fiber optic cable construction: loose tube and tight buffered. Both contain some type of strengthening

Single Loose Tube Steel Tape Armored Cable With Steel Wire

METACOM Fiber optic cables are constructed with a single loose tube filled with water blocking jelly, water blocking tape over the

SSLT Stainless Steel Loose Tube

With marvelous performance of longitudinal water resistance, the tube is perfect to maintain good protection of optical fiber. It is

Loose Tube Fiber Optic Cable On American Wire Group

*Cables with fiber counts greater than 288 contain 24 fibers in a larger PBT buffer tube with 12 fiber binder groups. Rated buffer

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