

Ranking of Non-Self-Supporting Indoor Optical Cables



Overview

Steel wire armoured central loose tube cable with good mechanical protection and thus rodent protected.

Key Takeaways

Non-self-supporting indoor optical cables are typically ranked by fiber type, core count, jacket material, bend resistance, and compliance with ITU-T and IEC standards.

Key Types and Characteristics

- GJXH Indoor Bow-Type Drop Cables
- Fiber Type: Single-mode (G.652D, G.657.A1/A2) and multi-mode (OM4)
- Core Count: 1-8 cores
- Strength Members: Metal
- Jacket: LSZH (Low Smoke Zero Halogen)
- Features: Non-self-supporting, suitable for indoor installations in offices or data centers, resistant to tight bends and fire hazards ().
- GJXFH Bow-Type Drop Cables
- Fiber Type: Single-mode (G.652D, G.657.A1/A2) and multi-mode (OM3)
- Core Count: 1-4 cores

- Strength Members: Non-metallic (GFRP/KFRP)
- Jacket: LSZH
- Features: Flexible, lightweight, ideal for indoor/outdoor transitions, non-self-supporting, good for areas with space constraints ().
- Simplex Indoor Cables
- Fiber Type: Single fiber for one-way transmission
- Core Count: 1 fiber
- Jacket: LSZH or PVC
- Features: Cost-effective, easy to install in tight spaces, suitable for point-to-point connections in rooms or small office setups ().
- Ribbon and Multi-Fiber Indoor Cables
- Fiber Type: Single-mode or multi-mode
- Core Count: 12–24 fibers or more
- Jacket: LSZH, flame-retardant
- Features: High-density applications, data centers, and backbone indoor networks; non-self-supporting, requires proper routing and support ().

Ranking Criteria

- Mechanical Performance: Tensile strength, crush resistance, and bend radius are critical for indoor deployment ().
- Fire Safety: LSZH jackets are preferred for compliance with building codes and fire regulations ().
- Flexibility and Installation Ease: Non-metallic strength members improve flexibility and reduce weight, making installation in ceilings or conduits easier ().
- Fiber Type and Bandwidth: Single-mode fibers (G.652D/G.657) are ideal for long-distance indoor links, while multi-mode fibers (OM3/OM4) support high-speed LAN and data center applications ().

Practical Recommendations

- For small office or residential setups, simplex or 1–4 core GJXFH cables are sufficient.
- For medium to large commercial buildings, 4–8 core GJXH cables provide a balance of flexibility and performance.

- For data centers or high-density networks, ribbon or multi-fiber cables with 12–24 cores are recommended, ensuring compliance with fire safety and bend radius standards. By evaluating fiber type, core count, jacket material, and mechanical properties, network designers can effectively rank non-self-supporting indoor optical cables for their specific indoor applications ().

Article Content

Indoor Optical Fiber Cable Selection Guide

Abalone offers a comprehensive range of indoor fiber optic cable solutions tailored to various deployment scenarios, including data

Indoor Fiber Optic Cable Types: Top 12 List

This guide explores common indoor cable varieties and their distinct attributes when wiring rooms or structures for high-speed fiber

The Ultimate Guide to Indoor Fiber Cable in 2025

Explore Indoor Fiber Cable in 2025: types, uses, and installation tips. Find top indoor fiber optic solutions for reliable,

10 Types of Fiber Optic Cable Explained: Selection Guide (2026)

Explore the top 10 fiber optic cable types for 400G/800G networks. From ADSS to MPO, learn technical specs, applications, and how

Indoor Fiber Optic Cables | Flame Retardant Indoor Cable Products

Indoor riser-rated cable jackets are held to a lower standard than plenum cables. The specially formulated, flame-retardant outer

Recommendation ITU-T L.103 (08/2024)

This document outlines the recommendations for single-mode optical fiber cables used in telecommunication networks within

Fiber Optic Cable Selection Guide

A comprehensive guide to selecting fiber optic cables for different environments, covering outdoor cables (armored,

Indoor Fiber Optic Cable

All types of indoor fiber optic cables and constructions for vertical and horizontal network within buildings at

Fiber Optic Cables

Steel wire armoured central loose tube cable with good mechanical protection and thus rodent protected. The cable features a two

Optical Fiber Cables for Indoor/Outdoor Applications

AEN097, Revision 4 Optical fiber cables are designed to provide optimum performance over their service life when

Indoor Fiber Optic Cable Types: Top 12 List

Indoor cables connect devices within homes, office buildings, data centers, and other interior spaces. Selecting the right indoor

Outdoor Fiber Cable Types, Classification & Uses

Outdoor fiber optic cables are designed to withstand harsh environmental conditions such as moisture, UV exposure,

The FOA Reference For Fiber Optics

That means the jacket must be rated for fire resistance, with ratings for general use, riser (a vertical cable

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Outdoor Optical Cables for Duct, Aerial, Direct Burial, and Power Line ...

Choose the best outdoor fiber cable for each installation environment. From aerial self-supporting ADSS cables to

FOA Standard For Installing Fiber Optic Cable Plants

Support structures for fiber optic cable installations should be completed before the installation of the fiber optic cable itself. Outside

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

