Skeleton-type optical cables and



Overview

CN104730667A The skeleton type optical cable has the advantages of flexibility in use, higher optical density, capabilities of power transmission and signa.

Key Takeaways

Skeleton type optical cables are designed with a structured skeleton groove to hold optical fibers, offering high density, durability, and easy installation for FTTH and FTTX networks.

Overview of Skeleton Optical Cables

Skeleton optical cables feature a skeleton framework—typically made of high-density polyethylene (HDPE)—that houses optical fibers or ribbons in grooves. This design provides mechanical protection, lateral pressure resistance, and compact size, making them suitable for pipelines, overhead lines, and direct burial installations. Unlike traditional loose tube cables, skeleton cables often eliminate filling grease, reducing environmental impact and simplifying splicing and branching.

Key Models and TypesGYDGA-48Xn-4F Skeleton Ribbon CableOptical fiber ribbons are placed into skeleton grooves. Central reinforcement with single or stranded steel wires. Wrapped with water-blocking tape and double-coated aluminum tape, then extruded with a polyethylene sheath.

Includes a ripcord for easy sheath removal. Applications: pipelines, overhead, and direct burial.

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Full-

Dry Skeleton Tight-

Buffered Fiber Optic CableUses tight-sleeved loose fibers in skeleton slots instead of ribbons. Reduces resin wrapping, lowers cost, and simplifies construction and splicing. Offers excellent moisture resistance, lateral pressure resistance, and bending performance.

Ideal for FTT

H access networks, allowing easy fiber extraction and connection. Skeleton Optical Fiber Ribbon Cable for FTTH/FTTBHigh fiber density with small outer diameter. Branching windows allow direct fiber extraction to households without cutting the main cable.

Supports environmentally friendly, oil-free construction. Can be used as outdoor, indoor, or dual-purpose cable depending on installation environment.

Advantages of Skeleton Optical Cables

High fiber density in a compact design. Durable and stable structure with good lateral pressure resistance. Simplified installation and splicing, especially for FTTH networks.

Environmentally friendly, with no filling grease required. Flexible branching for direct connections to multiple endpoints.

Applications

Skeleton type optical cables are widely used in FTTH, FTTB, and FTTX networks, as well as in pipeline, overhead, and direct burial installations. They are particularly suitable for scenarios requiring high fiber utilization, easy branching, and robust mechanical protection. These models provide a range of options depending on fiber count, installation environment, and network design, making skeleton optical cables a preferred choice for modern high-density optical networks.

Article Content

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The skeleton type optical cable has the advantages of flexibility in use, higher optical density, capabilities of power transmission and signal transmission, safety and reliability in use,...

Skeleton type optical cable and manufacturing method

The skeleton type optical cable has the advantages of flexibility in use, higher optical density, capabilities of power transmission and signal

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WO/2023/221026 SUPER-SOFT LOW-COST CORRUGATED

The optical cable not only has the excellent characteristics of a conventional skeleton type optical cable of being good in seal tightness, high in strength and easy to branch, but also greatly improves the

Full-dry skeleton tight-buffered fiber optic cable

Miniaturization solutions for optical cables emerge in an endless stream, such as air-blown micro-cable technology, tight-buffered fiber optic cable technology, and FTTX-specific skeleton

Introduction to the characteristics of skeleton optical cables

Skeleton optical fiber ribbon cable has the characteristics of high optical fiber density, small outer diameter saving pipeline resources, good lateral pressure resistance, stable structure, convenient

Novel skeleton type optical cable

A skeleton-type optical cable and skeleton technology, applied in the direction of fiber mechanical structure, etc., to achieve the effect of convenient processing, convenient production,

The structure of fiber optical cable

According to the type of optical fiber, the optical fiber can be divided into single-mode and multi-mode. The outer sheath color of single-mode indoor cable is usually yellow, the outer sheath

Detailed explanation of the application of skeleton optical fiber ...

In view of the large number of optical fiber cores and the need for frequent offline and branch connection, it is advisable to use a skeleton-type optical fiber ribbon cable with a higher optical fiber

Anti-sliding non metal skeleton-type loose fiber optical cable

The utility model discloses an anti-sliding non metal skeleton-type loose fiber optical cable.

Full-dry skeleton tight-buffered fiber optic cable

Longitudinal open cable is set in the full-dry skeleton type tight-sleeve optical fiber cable, which is quick and convenient to open and cut, and eliminates the optical fiber damage caused by

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The invention further discloses a manufacturing method of the skeleton type optical cable. The skeleton type optical cable has the advantages of flexibility in use, higher optical density, capabilities of power

Types and Differences of Optical Cables

Optical fibers are concentrated in the central tube, offering excellent tensile strength. Layer-Stranded Optical Cable Optical fibers are arranged in

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The invention relates to a flexible skeleton type optical fiber ribbon cable and a preparation method thereof, and the flexible skeleton type optical fiber ribbon cable comprises a central reinforcing

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The invention improves the impact resistance of the skeleton type optical fiber ribbon cable, and meanwhile, the reinforcement layer is positioned above the skeleton groove, so that the optical fiber

Skeleton type and loose tube layer stranded mixed optical cable

The invention relates to a framework type and loose tube layer stranded type mixed optical cable which comprises a reinforced core, wherein a protective installation mechanism is arranged on the

WO/2023/221026 SUPER-SOFT LOW-COST CORRUGATED SKELETON GROOVE TYPE ...

A super-soft low-cost corrugated skeleton groove type optical cable, comprising a central reinforcing member (1), a skeleton groove body (2), and grooves (3) in sequence from inside to outside.

Skeleton type cable

Problems solved by technology This kind of skeleton cable in the prior art has significant disadvantages: it is difficult to identify without stripping the sheath of the optical cable, and it is often necessary to

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