Specifications of butterfly optical cables



Overview

GJYXFHS Pipeline Butterfly-shaped Introduction Optical CablePipeline Butterfly-shaped Introduction Optical Cable is engineered for efficient conduit entry.

Key Takeaways

Butterfly-shaped optical cables feature a flat, wing-like profile with central optical fibers flanked by parallel strength members, designed for bend resistance, easy installation, and both indoor and outdoor deployment. Cable StructureButterfly-shaped cables have a flat, wing-shaped cross-section with the optical fiber positioned at the center and two parallel Fiber Reinforced Plastic (FRP) strength members on either side, providing compression resistance and fiber protection. Outdoor self-supporting variants may include an additional steel wire messenger for aerial spans.

The flat design allows bending in the natural plane with minimal stress, while edge-on bending requires more force, reducing accidental kinks.

Fiber Type

These cables almost universally use bend-insensitive single-mode fibers, typically compliant with ITU-T G. 657 standards. Subtypes include: G.

657. A1: Suitable for residential and light commercial use, tolerates 10 mm bend radii, and is compatible with legacy G. 652.

D fibers. G. 657.

A2: Recommended for routing through conduits with sharp bends or irregular surfaces.

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Sheath and Environmental Ratings

Indoor cables (GJXH): LSZH (Low Smoke Zero Halogen) sheath, lightweight, flexible, designed for building entry to ONT connections, fiber counts from 1–12 cores. Outdoor self-supporting cables (GJYXFCH/GJXFH): LSZH sheath with steel messenger, sometimes reinforced with steel tape and PE outer sheath for UV and moisture resistance, suitable for aerial or pipeline deployment.

Fiber Counts and Applications

Indoor: 1–4 cores for single-unit residential, up to 12 cores for multi-tenant buildings. Outdoor: Typically 1–2 cores for FTTH aerial drops, spans up to 50 meters without external support. Installation and Connection MethodsButterfly-shaped cables support multiple connection methods: Fusion splicing: Permanent, low-loss connections using heat to weld fibers.

Mechanical splicing: Uses connectors to align fibers without heat, suitable for temporary connections. Direct termination: Attaching connectors directly to the cable end for patch panels or equipment. Pigtail splicing: Splicing a short fiber segment to the cable end, then terminating with a connector, offering easy replacement and low-loss performance.

Key Advantages

Bend resistance and minimal stress during installation.

Non-metallic FR

P strength members provide EMI immunity and lightning safety. Lightweight and flexible for indoor routing, with reinforced outdoor variants for aerial or pipeline use. High bandwidth and low signal loss, suitable for FTTH, CATV, and high-speed telecommunication networks.

These specifications make butterfly-shaped optical cables a versatile choice for both indoor and outdoor fiber deployments, offering durability, ease of installation, and reliable performance.

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Article Content

GJYXFHS Pipeline Butterfly-shaped Introduction Optical Cable

Pipeline Butterfly-shaped Introduction Optical Cable is engineered for efficient conduit entry of optical cables, offering robust performance and durability.

FTTH Butterfly Optic Cable Specification

The document outlines the specifications for FTTH Butterfly Optic Cable, detailing cable construction, performance parameters, and mechanical and environmental testing criteria. It includes various

Butterfly Optic Cable Specifications | PDF | Attenuation

Butterfly Optic Cable Specifications This document specifies the construction, materials, performance standards, and testing requirements for butterfly optic cables with 1-4 fibers. The cable types include

Butterfly cables, Butterfly fiber optic cables

As a manufacturer and supplier of butterfly cables, we specialize in producing cables that are easy to handle, highly flexible and bendable. They are typically designed to support high data rates with low

Mastering the Technical Specifications of Butterfly Fiber Optic Cable ...

The Butterfly Fiber Optic Cable GDX702 represents a significant advancement in fiber optic technology. Its impressive technical specifications, from tensile strength to temperature

Butterfly -shaped optical fiber optical cable

They are called butterfly-shaped due to their unique design, which features a flat shape with two parallel fiber ribbons running down the center of

YD/T 1997.1-2022 (English Version)

This document is applicable to the design, development, production and inspection of butterfly optical cables for communication. Other butterfly optical cables with similar uses can also be used for

Butterfly Drop Cable

It can be used for laying in indoor environments such as vertical shafts, concealed pipes, cable trays, walls, flower boards, etc. It can be matched with connectors

FTTH Butterfly Optic Cable

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The Multi Loose Tube Non-Metallic Fiber Optic Cable is designed for outside plant, which is prone to electrical interference.

30 Types of Production Equipment for Optical.

Optical fiber and cable manufacturing equipment is designed and made for the production Learn more from AIMIFIBER — fiber optic manufacturer since 2008.

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1. What is a Submarine (Subsea) Fiber Optic Cable? Submarine fiber optic cables carry over 99% of international data traffic. Unlike terrestrial cables,

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Source armored fiber optic cable for railway tunnel communication by confirming technical specifications, quality control, application fit, customization, order quantity, packaging, and delivery.

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 to choose the right fiber for your infrastructure.

Mastering the Technical Specifications of Butterfly Fiber Optic Cable ...

Fiber optic technology has revolutionized internet connectivity, and the Butterfly Fiber Optic Cable GDX702 stands at the forefront of this innovation. As fiber optic cable manufacturers

Butterfly Indoor FTTH Drop Cable

Butterfly FTTH drop cable is a popular type of fiber access optical cable, according to the different application environment and laying conditions, it has reasonable design of cable structure and

How do FTTH butterfly optic cables handle mechanical stress and how ...

The FTTH butterfly optic cable is an engineering marvel designed to handle a range of mechanical stresses without compromising signal quality. Through its advanced construction,

Butterfly leather line optical cable

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The Butterfly leather line optical cable, also known as a butterfly ribbon cable, is a type of fiber optic cable that offers several advantages over traditional optical cables. In this response, I will

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

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