

Flame-retardant structure of butterfly-shaped optical cable



Article Overview

A flame-retardant butterfly-shaped optical cable features a multi-layered design with inner and outer sheaths, heat insulation, reinforcing members, and halogen-free protective layers to ensure fire resistance, mechanical strength, and environmental safety.

Core Structure

The butterfly-shaped optical cable is named for its cross-sectional shape resembling a butterfly, which allows it to integrate the characteristics of indoor soft cables and self-supporting cables. Its structure typically includes:

- Inner Sheath: Encases the optical fibers and provides the first layer of protection.
- Wrapping Layer: Surrounds the inner sheath to enhance mechanical stability.
- Second Sheath: Often an embossed aluminum sheath applied via argon arc welding, maintaining bending capability and mechanical integrity while contributing to flame retardancy.
- Heat Insulation Layer: Protects the fibers from high temperatures during fire exposure.
- First Sheath: The outermost layer, providing additional protection and flame resistance.

Reinforcement and Fiber Arrangement...

Article Content

Feb 01, 2026

Self-Supporting Butterfly Drop Cable (GJYXFCH)

Simple structure, light weight and high practicability. Novel flute design, easily strip and splice, simplify the installation and

Mar 27, 2026

Self-Supporting Butterfly Drop Cable (GJYXFCH)

DESCRIPTION (GJYXFCH) Indoor/Outdoor self-supporting butterfly drop cable, the optical fiber unit is positioned in the center. two

Feb 27, 2026

Four -end connection methods of butterfly -shaped optical fiber optic ...

They are called butterfly-shaped because they have two parallel optical fiber ribbons on either side of a central strength

Dec 02, 2025

Production process of high-performance fire-resistant optical cable

The main application of flame retardant and fire-resistant optical cable, generally by selecting excellent flame retardant

Nov 04, 2025

Self-supporting Butterfly-shaped Introduction Indoor Optical Cable for ...

Self-supporting Butterfly-shaped Introduction Indoor Optical Cable for Access Network77 For self-supporting access network, the

Dec 29, 2025

Butterfly Optic Cable Specifications | PDF | Attenuation

This document specifies the construction, materials, performance standards, and testing requirements for butterfly optic cables with 1

Apr 27, 2026

Butterfly Indoor FTTH Drop Cable

Optical fiber cable has a very high pressure and tension, the self-supporting structure can meet the 50 meters span. The use of

Oct 22, 2025

CPR Optical Cables | Fire-Resistant | OPTRAL

CPR fire-resistant optical cables with Euroclass Dca, Cca, and B2ca classifications. Safety and performance for critical applications.

Apr 06, 2026

Butterfly -shaped optical fiber optical cable

Butterfly-shaped optical fiber cables are a popular type of fiber optic cable that is commonly used for data transmission

Jul 14, 2026

1 Core, 2 Core, 3 Core Butterfly Drop Cable

Finally, black or white is extruded., gray polyvinyl chloride (PVC) or low-smoke halogen-free material (LSZH, low smoke, halogen

Mar 22, 2026

Pipeline Butterfly-shaped Introduction Optical Cable□GJYXFHS□

The cable has a simple structure, lightweight, and practical. Easy stripping facilitates splicing, simplifying installation and

May 29, 2026

Fire resistant optic fibre cable_V4

OPTIC FIBRE CABLES In case of fire, the communication networks, emergency systems and other key equipment''s are essential to

Dec 06, 2025

Fiber Optic Cables

Indoor and outdoor, flame retardant, LSZH or PVC, loose tube, Armored SWA (Steel wires Armor), SWB (Steel wires Braid) or CST

Mar 06, 2026

WO2016179925A1

A low-smoke halogen-free flame-retardant low-friction butterfly-shaped access optical cable, consisting of an outer sheath (1), a

May 30, 2026

Development of flame retardant and fire-resistant optical cable based ...

In the paper, we try our best to develop a kind of flame retardant & fire-resistant cable with excellent comprehensive performance,

Apr 28, 2026

Flame-retardant butterfly cable

At the same time, the butterfly cable has a flat structure, which is most likely to be subjected to pressure from the upper and lower

Feb 21, 2026

Butterfly Indoor FTTH Drop Cable

Huihong Technologies has long history providing the FTTH cables for indoor use; the fiber count typically is 1, 2 till 12 optical fiber

May 24, 2026

CN115542492A

The invention has good flame-retardant and fireproof performance, and higher safety than the traditional polyvinyl chloride sheath,

Apr 03, 2026

The transmission distance of the butterfly -shaped optical cable

Introduction:The butterfly-shaped optical cable is a type of fiber optic cable that is widely used in telecommunications

Mar 23, 2026

Investigation of combustion, smoke, and toxicity characteristics of ...

The combustion, smoke emission, and toxic gas emission characteristics of four types of flame-retardant cables and

Dec 31, 2025

CN116679391A

The invention provides a flexible, physically flame-retardant, low-friction, pressure-resistant butterfly optical cable and a production

May 02, 2026

Fiber Optic Cables

Fire resistant optical fibre cable, QFCI - code F101 NEK TS 606:2016 (available also in MUD protected version).

Jul 20, 2026

Flame Retardant Multi Loose Tube Fiber Optic cables

The multi loose tube non metallic cables are designed for outside plant, which is prone to electrical interference. They are mainly

Jan 24, 2026

Outdoor FTTH Drop Fiber Cable, Self-Supporting

Applications of FTTH drop cable FTTH outdoor drop cable is a new type of fiber optic cable. It is a butterfly

Jun 25, 2026

CN120762177B

The invention relates to the technical field of optical fiber communication, in particular to a butterfly-shaped optical cable with an anti

Jun 25, 2026

CN210775933U

The utility model discloses a novel fire-retardant butterfly-shaped optical drop cable of armor, including oversheath (1) and the optical

Jul 20, 2026

GJYXFHS Pipeline Butterfly-shaped Introduction Optical Cable

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

May 05, 2026

High Voltage Flame Retardant Optical Cable-YOFC | Smart Link

Products High Voltage Flame Retardant Optical Cable High voltage cables require transmission control cables to have good

Jul 26, 2026

Butterfly Flat FTTH Drop Cable | FS

GJXFH FTTH Indoor Drop Cable uses butterfly flat structure, whose optical fiber unit is positioned in the centre. Two parallel Fiber

Mar 20, 2026

A kind of fire-retardant butterfly optical cable

The present invention relates to a kind of fire-retardant butterfly optical cables, including sheath, optical fiber, reinforcer□The optical

Aug 09, 2025

Development and testing of a fire-resistant optical cable

A new type of fire-resistant optical cable has been developed. It is based on the loose tube concept employing special mica and

Mar 24, 2026

Indoor Fiber Optic Cables | Flame Retardant Indoor Cable Products

These indoor fiber optic cables are used exclusively within buildings and must have a flame-retardant cable jacket to fit this purpose.

Apr 23, 2026

CN213122388U

Low-smoke halogen-free flame-retardant butterfly-shaped leading-in optical cable
Abstract The utility model discloses a fire-retardant

Contact Us

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