# ZITHA TECH SPECIALTY CABLES (Pty) Ltd

# Butterfly-shaped fiber optic cables in various scenarios



## Overview

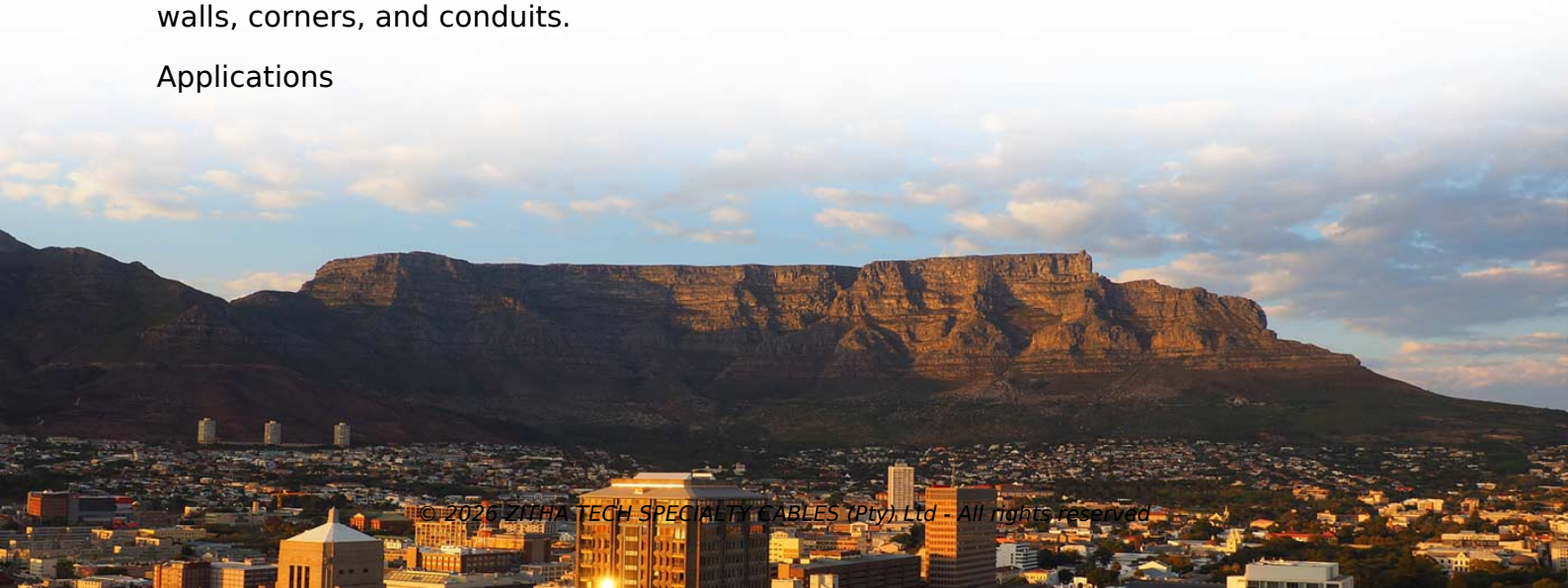
Butterfly FTTH drop cable incorporates the indoor soft cable and the self-supporting cable characteristics.

## Key Takeaways

Butterfly-shaped fiber optic cables are flat, ribbon-style cables designed for high-density, indoor, and FTTH applications, offering flexibility, easy installation, and high data transmission performance.Design and Structure

Butterfly-shaped fiber optic cables are named for their flat, wing-like cross-sectional shape, which resembles a butterfly. The design typically features optical fibers placed at the center, reinforced by parallel strength members made of steel wire or fiberglass-reinforced plastic (FRP) to provide tensile strength and durability during installation and operation . The outer jacket is usually made of LSZH (low-smoke zero-halogen) or PVC for indoor use, with UV-resistant PE options for outdoor routing . This flat geometry reduces bending stress, prevents rolling, and simplifies routing along walls, corners, and conduits.

Applications



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Butterfly cables are primarily used in indoor environments, such as data centers, buildings, and FTTH (fiber-to-the-home) networks . Their compact, flexible design allows installation in tight spaces and supports high-bandwidth applications with low attenuation. They are ideal for last-mile network construction, drop cable installations, and building entry solutions, where space efficiency and mechanical reliability are critical .

Fiber Types

The fiber core can be single-mode or multi-mode. Single-mode fibers are suitable for long-distance, high-bandwidth applications, while multi-mode fibers are better for shorter distances within buildings or campuses, allowing multiple light signals simultaneously . FTTH butterfly cables often use G.657A1 or G.657A2 single-mode fibers, which provide superior bend resistance for tight indoor routing .

Connection Methods

Butterfly-shaped cables, also known as ribbon fiber optic cables, can be connected using several methods:

• Fusion Splicing: Aligns and fuses individual fibers or entire ribbons using an electric arc or laser, creating a permanent, low-loss connection .

• Ribbon Splicing: A variation of fusion splicing that fuses the entire fiber ribbon at once, ideal for high-density applications like data centers .

• Mechanical Splicing: Uses a connector to hold fibers in place without heat, suitable for temporary connections .

• Connectorization: Attaches connectors to individual fibers for plug-and-play connections, though it may introduce slightly higher attenuation .

Advantages

• High flexibility and bend resistance, making them suitable for indoor and tight-space installations .

• Efficient high-density deployment, allowing multiple fibers to be installed and connected simultaneously .

• Reduced installation time and labor costs due to flat geometry and simplified routing .

• Durable and reliable, with strength members and protective jackets ensuring mechanical and environmental protection . Butterfly-shaped fiber optic cables provide a balance of durability, flexibility, and high-performance data transmission, making them a preferred choice for modern indoor and FTTH network deployments.

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## Article Content

Butterfly -shaped optical fiber optical cable

They are called butterfly-shaped due to their unique design, which features a flat shape with

FTTH Butterfly Optic Cables: Types, Specs & Installation Guide 2026

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FTTH Butterfly Optic Cables: Practical Design, Installation, and ...

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

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Self-Supporting Butterfly Drop Cable (GJYXFCH)

Novel flute design, easily strip and splice, simplify the installation and maintenance. Adopted to outdoor level and vertical distribution.

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FTTH butterfly optic cables are designed to minimize both of these issues. By using high-quality, low-loss materials

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

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What Is an FTTH Butterfly Optical Cable? An FTTH butterfly optical cable — also referred to as a flat drop fiber cable

FTTH – Round Drop Armoured Butterfly-Shaped Cable – 1-2 Fibres

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Briticom ® offers Armoured Butterfly-Shaped Cable as well as a wide range of indoor and outdoor fibre optic distribution, patching

Outdoor Single Mode Butterfly Fiber Optic Cable

Although it is said that outdoor single-mode butterfly fiber optic cable is widely used for long-distance transmission in

FTTH Butterfly Optic Cable Manufacturers, Custom Factory

FTTH butterfly cable means Fiber to the Home Butterfly Optical Cable.These cables feature a flat and wide configuration that differs

GJYXFHS Pipeline Butterfly-shaped Introduction Optical Cable

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

Butterfly leather line optical cable

The Butterfly leather line optical cable, also known as a butterfly ribbon cable, is a type of fiber optic cable that offers

FTTH Butterfly Optic Cable

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

Attachment 6 – Drawings

Attachment 6 – Drawings Figure D1.1 shows the location and route of the fiber optic cable through several manholes. D2.0 BLANK

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

Indoor butterfly -shaped optical cable advantage disadvantage

An indoor butterfly-shaped optical cable is a type of fiber optic cable designed for indoor use. It is named after its

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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

FTTH Butterfly Optic Cables: Practical Design, Installation, and ...

FTTH Butterfly Optic Cables are specifically designed to meet the growing demand for high-speed fiber-to-the-home

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

FTTH Butterfly Optic Cables: Revolutionizing Fiber-to-the-Home ...

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