



Optical Fiber CABLE

TECHNICAL DATA SHEET

24FO Micro-Cluster Indoor Fiber Optical Cable for Fiber Optic Loop Cabling



24FO Micro-Cluster Indoor Fiber Optical Cable for Fiber Optic Loop Cabling

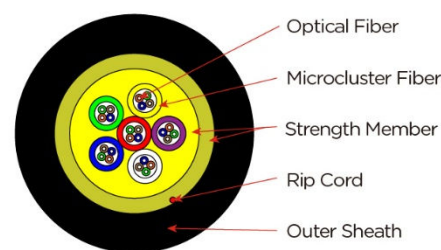
Product Description

The 24FO Micro-Cluster Indoor Fiber Optical Cable is a high-density optical cable designed for indoor access networks, vertical building cabling and fiber optic loop cabling.

The cable contains 24 single-mode optical fibers arranged in micro-clusters to facilitate fiber identification, access and installation. The cable utilizes G.657.A2 bend-insensitive optical fiber, water-blocking material, aramid yarn reinforcement and an LSZH outer sheath.

Its compact construction and small outer diameter make it suitable for high-density indoor installations and access network applications.

The published GJYFJZY-24FO construction specifies 24 fibers, G.657A2 fiber, micro-cluster elements, jelly, aramid yarn and LSZH/anti-UV outer sheath.



Features

- 24 Core Single Mode optical fibers
- 9/125 μm G.657.A2 bend-insensitive fiber
- High-density micro-cluster construction
- Designed for indoor access networks
- Suitable for vertical building cabling



- Suitable for fiber optic loop cabling
- Compact and lightweight design
- Small cable diameter for high-density installation
- Water-blocking jelly protection
- High-strength aramid yarn reinforcement

Applications

- Fiber Optic Loop Cabling
- Vertical Building Cabling
- FTTx Indoor Optical Networks
- Indoor Access Networks
- Building Backbone Cabling
- Optical Distribution Frames
- Indoor Fiber Termination
- Access Network Distribution

Cable Construction

Item	Cable Element	Description
1	Optical Fiber	24 × Single Mode G.657.A2
2	Fiber Count	24FO
3	Fiber Size	9/125 μm
4	Micro-Cluster	2 × Fiber Micro-Cluster
5	Micro-Cluster Fiber Count	12F per Cluster
6	Micro-Cluster Material	LSZH
7	Water Blocking	Jelly
8	Strength Member	Water-Resistant Aramid Yarn & Aramid Yarn
9	Ripcord	1 × Ripcord
10	Outer Sheath	LSZH / Anti-UV
11	Sheath Color	Black
12	Cable Structure	Micro-Cluster

Optical Fiber Characteristics

Parameter	Specification
Fiber Type	Single Mode
Fiber Category	G.657.A2
Fiber Size	9/125 μm
Fiber Count	24
Cladding Diameter	$125 \pm 1.0 \mu\text{m}$
Mode Field Diameter @ 1310 nm	$8.8 \pm 0.4 \mu\text{m}$
Cable Cut-off Wavelength	$\leq 1260 \text{ nm}$
Attenuation @ 1310 nm – Typical	0.35 dB/km
Attenuation @ 1550 nm – Typical	0.21 dB/km
Attenuation @ 1310 nm – Maximum	0.40 dB/km
Attenuation @ 1550 nm – Maximum	0.30 dB/km
Minimum Bend Radius	7.5 mm

Optical Transmission Characteristics

Parameter	Specification
Operating Wavelength	1310 / 1550 nm
Maximum Attenuation @ 1310 nm	$\leq 0.40 \text{ dB/km}$
Maximum Attenuation @ 1550 nm	$\leq 0.30 \text{ dB/km}$
Typical Attenuation @ 1310 nm	0.35 dB/km

Typical Attenuation @ 1550 nm	0.21 dB/km
Zero Dispersion Slope	$\leq 0.092 \text{ ps}/(\text{nm}^2 \cdot \text{km})$
Dispersion @ 1285–1340 nm	-3.5 to +3.5 ps/(nm·km)
Cable Cut-off Wavelength	$\leq 1260 \text{ nm}$

Macrobending Characteristics

Parameter	Specification
Fiber Category	G.657.A2
Minimum Fiber Bend Radius	7.5 mm
Bending Performance	Bend-insensitive
Application	High-density / Tight Routing

Mechanical Characteristics

Parameter	Specification
Strength Member	Water-Resistant Aramid Yarn & Aramid Yarn
Cable Structure	Micro-Cluster
Metallic Components	None
Water Blocking	Jelly
Ripcord	1
Tensile Strength	According to approved cable design

Crush Resistance	According to approved cable design
Impact Resistance	According to approved cable design

Outer Sheath Characteristics

Parameter	Specification
Sheath Material	LSZH
Additional Protection	Anti-UV
Sheath Color	Black
Construction	Round
Application	Indoor
Flame Performance	According to applicable requirement
Smoke Performance	Low Smoke
Halogen Performance	Zero Halogen

Standards and Compliance

The cable shall comply with applicable requirements of:

- ITU-T G.657.A2 – Characteristics of a bending-loss insensitive single-mode optical fiber and cable
- IEC 60793 – Optical Fibers
- IEC 60794 – Optical Fiber Cables
- IEC 60794-2 – Indoor Optical Fiber Cables
- IEC 60332 – Flame propagation, where applicable

- IEC 60754 – Halogen gas / acidity requirements, where applicable
- IEC 61034 – Smoke density, where applicable