FIBER OPTIC CABLE · GJYXFCH

GJYXFCH

Self-Supporting Bow-Type FTTH Drop Cable — FRP Strength Members

G.652D / G.657A · 1–4 cores · all-dielectric aerial drop

PRODUCT DESCRIPTION

GJYXFCH is the all-dielectric version of the self-supporting drop cable. The optical unit sits in one lobe of a figure-eight section with two parallel FRP rods either side of the fibre; the second lobe carries the steel messenger that takes the span load. Because the strength members beside the fibre are non-metallic, the cable can be run on poles shared with power distribution without a metallic path to earth — the reason it is specified on rural electrified routes.

KEY FEATURES

- Non-metallic FRP strength members — no earthing, no induced current on shared poles
- Integral steel messenger takes the span; no separate lashing wire or support strand
- G.657A bend-insensitive fibre for the tight radius at the building entry
- Figure-eight section strips cleanly: messenger lobe separates from the optical unit by hand
- Rated 300/600 N tensile, 1000/2200 N per 100 mm crush

Other fibre types, core counts and sheath compounds are available on request — see the ordering information on page 2.



Cross-section — schematic, not to scale

- Figure-8 sheath
- Steel messenger
- Fibre unit
- 250 µm fibre

GENERAL SPECIFICATIONS

CABLE TYPE	**GJYXFCH**
APPLICATION	**Aerial FTTH drop · Pole to building · Along power lines**
STANDARDS	**YD/T 1258.4 · IEC 60794-1**
TEMPERATURE	**-20 °C to +60 °C**
SHEATH OPTIONS	**PVC · LSZH**

CABLE CONSTRUCTION

Fibre	1–4 × 250 µm, G.652D or G.657A, in a loose tube
Strength members	Two parallel FRP rods in the sheath wings — non-metallic
Messenger	Steel wire in the second lobe of the figure-eight
Outer sheath	LSZH, flame retardant, UV stabilised

Options: PVC or LSZH jacket · 1, 2 or 4 fibres · pre-terminated with SC/LC connectors · custom messenger size.

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STRUCTURE AND DIMENSIONS

Cable model	Fibre count	Cable size (mm)	Nominal weight (kg/km)	Tensile load L / S (N)	Crush resistance L / S (N/100 mm)	Bend radius dynamic / static (mm)
GJYXFCH-1Xn	1	2.0 ± 0.1 × 5.0 ± 0.1	20	300 / 600	1000 / 2200	40 / 20
GJYXFCH-2Xn	2	2.0 ± 0.1 × 5.0 ± 0.1	20	300 / 600	1000 / 2200	40 / 20
GJYXFCH-1Xn (5.6 mm)	1	2.0 ± 0.1 × 5.6 ± 0.1	21	300 / 600	1000 / 2200	40 / 20
GJYXFCH-4Xn	4	2.0 ± 0.2 × 6.0 ± 0.2	22	300 / 600	1000 / 2200	40 / 20

FIBRE COUNT RANGE	CABLE SIZE	BEND RADIUS
1–2 / 1–4	**2.0 × 3.0 / 2.0 × 5.0**	**40 / 20**
cores	mm	mm, dynamic / static

OPTICAL CHARACTERISTICS

Fibre type	Attenuation 1310 nm (dB/km) typ. / max	Attenuation 1550 nm (dB/km) typ. / max	Cut-off λcc (nm)	Remark
G.652D	0.36 / 0.50	0.22 / 0.40	≤ 1260	Low water peak, full band 1260–1625 nm
G.655	0.40 / 0.50	0.23 / 0.40	≤ 1450	Non-zero dispersion shifted, for DWDM backbone
G.657A1/A2	0.36 / 0.50	0.22 / 0.40	≤ 1260	Bend insensitive, min. bend radius 10 mm

Attenuation measured at +20 °C on cabled fibre, before splicing. Multimode fibre (OM1–OM4) available on request.

QUALITY ASSURANCE

- 100 % attenuation and length test on every fibre before packing
- Inspection certificate and test report issued with every drum
- Third-party inspection (SGS, TÜV, BV) can be arranged on request
- Pre-shipment sample and drum marking approved by the customer

TYPE TESTS

Test	Method	Acceptance
Tensile strength	IEC 60794-1-21 E1	Rated load applied, no fibre strain, Δα ≤ 0.05 dB
Crush	IEC 60794-1-21 E3	Rated load applied, Δα ≤ 0.05 dB after recovery
Impact	IEC 60794-1-21 E4	10 impacts, 4.5 J, R300 mm, Δα ≤ 0.05 dB
Temperature cycling	IEC 60794-1-22 F1	−40 °C to +70 °C, 2 cycles, Δα ≤ 0.05 dB/km
Water penetration	IEC 60794-1-22 F5B	1 m head, 24 h, no water at the far end

ORDERING INFORMATION

Order code: **GJYXFCH-[fibre count]Xn-[fibre type]-[jacket].** Example: GJXH-2Xn-G652D-LSZH. State the fibre type, jacket compound and drum length. Standard drum length 1 km or 2 km.

Nominal values, subject to normal manufacturing tolerances.

Core counts and fibre types outside the table are built to order — weight, tensile and bending data confirmed on the order drawing.

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