FIBER OPTIC CABLE · GYFTY53

GYFTY53

Stranded Loose Tube Non-Metallic Double Jacket Armored Cable

G.652D / G.655 · all-dielectric · 2–144 cores

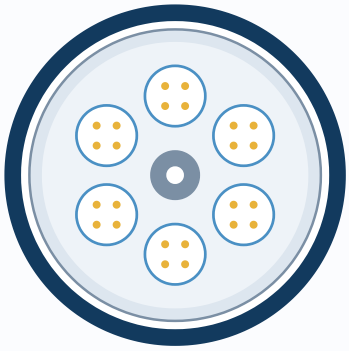
PRODUCT DESCRIPTION

GYFTY53 keeps the all-dielectric core of GYFTY and adds mechanical protection without adding metal: the stranded loose tube core is wrapped in water-blocking tape, sheathed in PE, reinforced with aramid yarn and finally over-sheathed in PE. The double jacket gives direct-burial grade crush and tensile performance in a cable that still carries no earth path and no induced current.

KEY FEATURES

- Direct-burial mechanical strength with zero metal content
- Double PE jacket — 1000/3000 N tensile and crush rating
- Aramid yarn layer absorbs shock loads from rock, tree roots and settlement
- No earthing required on towers, no lightning or EMI path
- Suitable for substations, railway corridors and HV transmission routes

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

- Outer sheath
- Armour / moisture barrier
- Gel-filled loose tube
- Central strength member
- 250 µm fibre

GENERAL SPECIFICATIONS

CABLE TYPE	**GYFTY53**
APPLICATION	**Direct buried · High-voltage routes · Wet ground**
STANDARDS	**YD/T 901 · IEC 60794-1**
TEMPERATURE	**-40 °C to +70 °C**
SHEATH OPTIONS	**PE · LSZH**

CABLE CONSTRUCTION

Central strength member	FRP rod, non-metallic
Loose tube	PBT, gel-filled, max. 12 fibres per tube
Water blocking	Water-blocking tape, fully dielectric
Inner sheath	MDPE
Reinforcement	Aramid yarn between the two jackets
Outer sheath	UV-stabilised MDPE, black

Options: LSZH or flame-retardant sheath · anti-termite and anti-rodent additives · non-metallic strength member · ripcord · customer sheath printing · dry core on request.

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STRUCTURE AND DIMENSIONS

Cable model	Fibre count	Loose tubes	Fillers	Nominal weight (kg/km)
GYFTY53-2~6Xn	2~6	1	7	201
GYFTY53-8~12Xn	8~12	2	6	201
GYFTY53-14~18Xn	14~18	3	5	201
GYFTY53-20~24Xn	20~24	4	4	201
GYFTY53-26~30Xn	26~30	5	3	201
GYFTY53-32~36Xn	32~36	6	2	201
GYFTY53-38~42Xn	38~42	7	1	201
GYFTY53-44~48Xn	44~48	8	0	201
GYFTY53-50~60Xn	50~60	5	3	213
GYFTY53-62~72Xn	62~72	6	2	213
GYFTY53-74~84Xn	74~84	7	1	213
GYFTY53-86~96Xn	86~96	8	0	213
GYFTY53-98~108Xn	98~108	9	1	244
GYFTY53-110~120Xn	110~120	10	0	244
GYFTY53-122~132Xn	122~132	11	1	288
GYFTY53-134~144Xn	134~144	12	0	288

TENSILE LOAD L / S	CRUSH RESISTANCE L / S	BEND RADIUS S / D
1000 / 3000	**1000 / 3000**	**12.5D / 25D**
N	N/100 mm	× cable OD

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.

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: **GYFTY53-[cores]Xn-[fibre type]-[sheath].** Example: GYFTY53-48Xn-G652D-PE. State the fibre type, sheath compound, drum length and any sheath marking. Standard drum length 2 km or 4 km; other lengths on request.

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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