ZUOYEAL

SINGLE-MODE OPTICAL FIBRE CABLE · FIG-8 AERIAL APPLICATION

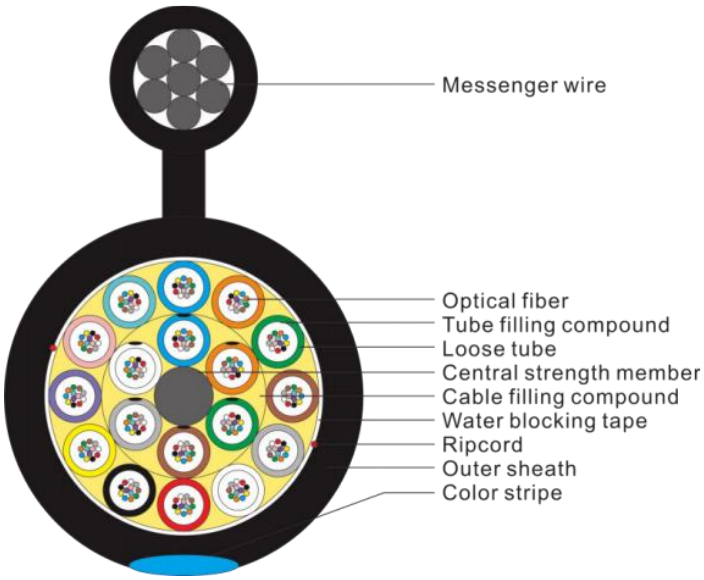
24-216C

FIG-8 AERIAL

MODEL **GYFTC8Y**

Single-mode optical fibre cable for fig-8 aerial application, from 24 to 216 fibres on one stranded loose-tube construction.

FIBRE COUNT	FIBRE TYPE
24-216	**G.652D**
TUBES	OD
4-24	**11.8-16.1 mm**



01 OVERVIEW

Product overview

The GYFTC8Y is a single-mode optical fibre cable for fig-8 aerial installation, built on one stranded loose-tube core from 24 to 216 fibres. PBT loose tubes are stranded around a central FRP strength member, water-blocked with filling compound and a water-blocking tape, and finished with a black PE sheath.

The cable carries a blue stripe, two ripcords and a nominal 2.0 mm sheath; standard drum lengths are given in section 08. Dimensions and weights change with the fibre count — see the series table on page 3.

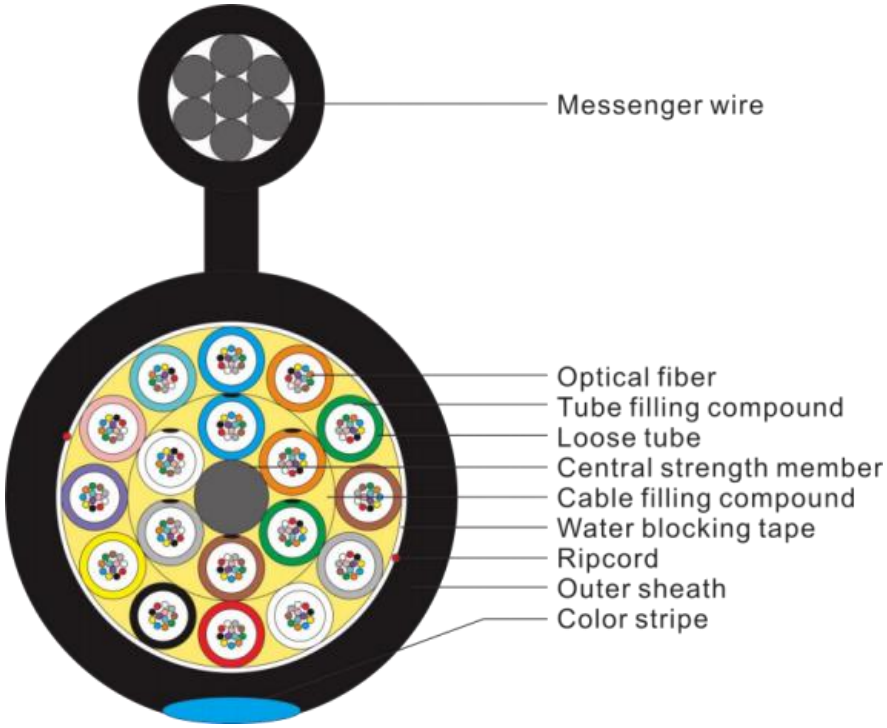


FIG. 1 Cable cross-section (not to scale)

AT A GLANCE

ITEM	VALUE	ITEM	VALUE
Fibre counts	24 · 72 · 144 · 204 · 216	Cable diameter	11.8 - 16.1 mm
Cable weight	196 - 365 kg/km	Operating range	−40 to +70 °C

02 STANDARDS

Reference standards

STANDARD	SCOPE
ITU-T G.652	Characteristics of a single-mode optical fibre
IEC 60794-1-1	Optical fibre cables — generic specification
IEC 60794-1-2	Optical fibre cables — basic optical cable test procedures
IEC 60794-3	Optical fibre cables — sectional specification: outdoor cables

03 CABLE ASSEMBLY & DIMENSIONS

FIBRE COUNT	24	72	144	204	216
Loose tubes	4	6	12	6+11	6+12
Tube diameter (mm)	2.4	2.4	2.3	2.3	2.3
Max. fibres per tube	6	12	12	12	12
Fillers	2	0	0	1	0
CSM diameter (mm)	2.6	2.6	2.5	2.5	2.5
CSM PE layer OD (mm)	–	–	6.9	–	–
Messenger wire	7×1.2	7×1.2	7×1.6	7×1.6	7×1.6
Cable diameter (mm)	11.8	11.8	15.9	16.1	16.1
Cable height (mm)	19.3	19.3	24.9	26.0	26.0
Cable weight (kg/km)	196	197	354	370	365

Common to all counts: PBT loose tube, wall 0.3 ± 0.05 mm, filled with thixotropic compound; PP filler rods where a slot is empty; FRP central strength member; cable filling compound and water-blocking tape; 2 ripcords; blue stripe; black PE sheath, nominal 2.0 mm (minimum 1.8 mm).

04 IDENTIFICATION

Fibre & tube identification

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Fibre colour code — fibres are counted 1 to 12 in each tube using the colours above. Illustration colours are for reference only and do not indicate exact colour codes.

LOOSE TUBE (LT) & FILLER ROD (FR) COLOUR CODE

FIBRE COUNT	ELEMENT NO.											
	1	2	3	4	5	6	7	8	9	10	11	12
24	LT	LT	LT	LT	FR	FR						
72	LT	LT	LT	LT	LT	LT						
144	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT
204	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	FR
	LT+BS	LT+BS	LT+BS	LT+BS	LT+BS	LT+BS						
216	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT
	LT+BS	LT+BS	LT+BS	LT+BS	LT+BS	LT+BS						

LT = loose tube, FR = filler rod, BS = black stripe. Element 1 starts blue, element 2 orange, and so on with the colour code above.

05 OPTICAL

Performance of cabled optical fibre

ITEM	CONDITION	SPECIFICATION
Fiber type		Single mode, ITU-T G.652D
Fiber material		Doped silica
Attenuation coefficient	1310 nm	≤ 0.36 dB/km
Attenuation coefficient	1550 nm	≤ 0.22 dB/km
Cable cut-off wavelength		≤ 1260 nm
Zero-dispersion wavelength		1300 - 1324 nm
Zero-dispersion slope		≤ 0.092 ps/(nm²·km)
Chromatic dispersion	1288 - 1339 nm	≤ 3.5 ps/(nm·km)
Chromatic dispersion	1550 nm	≤ 18 ps/(nm·km)
Chromatic dispersion	1625 nm	≤ 22 ps/(nm·km)
PMD		≤ 0.2 ps/√km
Mode field diameter	1310 nm	9.2 ± 0.4 μm
Core / cladding concentricity error		≤ 0.6 μm
Cladding diameter		125.0 ± 1.0 μm
Cladding non-circularity		≤ 1.0 %
Primary coating diameter		245 ± 10 μm

06 PERFORMANCE

Performance of optical fibre cable

ITEM	SPECIFICATION
Cable bending radius	10 × cable diameter (static) · 20 × cable diameter (dynamic)
Operating temperature	−40 °C to +70 °C
Storage / transport temperature	−40 °C to +70 °C
Installation temperature	-20 °C to +60 °C

07 TESTING

Mechanical & environmental performance

S/N	ITEM	TEST METHOD	ACCEPTANCE
1	Tensile strength IEC 60794-1-21-E1	8,000 N short term / 5,000 N long term 50 m · ≥ 1 min	Δ loss ≤ 0.1 dB @1550 nm Strain ≤ 0.15 % short / ≤ 0.01 % long
2	Crush IEC 60794-1-21-E3	1,000 N/100 mm · ≥ 1 min	Δ loss ≤ 0.1 dB @1550 nm No fibre break, no sheath damage
3	Impact IEC 60794-1-21-E4	5 points · 1 impact each · 4.5 N·m	Δ loss ≤ 0.1 dB @1550 nm No fibre break, no sheath damage
4	Repeated bending IEC 60794-1-21-E6	20 × OD · 30 cycles	Δ loss ≤ 0.1 dB @1550 nm No fibre break, no sheath damage
5	Torsion IEC 60794-1-21-E7	1 m · ±180° · 10 cycles	Δ loss ≤ 0.1 dB @1550 nm No fibre break, no sheath damage
6	Water penetration IEC 60794-1-22-F5B	1 m head · 3 m · 24 h	No water at the opposite end
7	Temperature cycling IEC 60794-1-22-F1	−40 / +70 °C · 12 h per step · 2 cycles	Δ loss ≤ 0.1 dB/km @1550 nm No fibre break, no sheath damage
8	Compound flow IEC 60794-1-21-E14	30 cm · 70 ± 2 °C · 24 h	No compound flow

08 PACKING

Packing & drum

DRUM	Each single length is wound on an iron stand-wooden composite or pure wooden drum.
STANDARD LENGTH	2,000 / 3,000 / 4,000 / 5,000 m per drum, ±2%.
PROTECTION	Covered by a plastic buffer sheet and sealed with strong wooden battens.
TEST ALLOWANCE	At least 3 m of the cable inner end is reserved for testing.

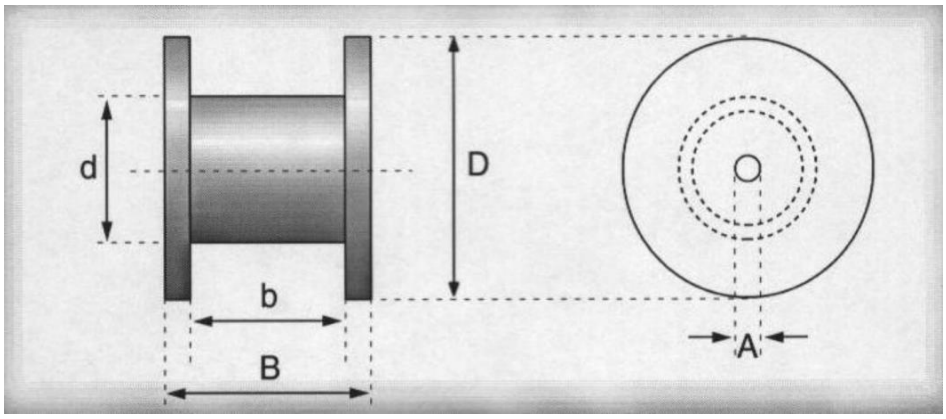


FIG. 2 Drum dimensions — D contains the seal dimension

CABLE TYPE	DRUM LENGTH (m)	D (mm)	d (mm)	B (mm)	b (mm)
GYFTC8Y 24/72C	4,000	1,438	700	1,100	1,000
GYFTC8Y 144/204/216C	4,000	2,038	1,100	1,100	970

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ZUOYEAL TECHNOLOGY

Connecting More, With Fiber

This datasheet describes the GYFTC8Y fig-8 aerial cable series at the time of publication. Dimensions, weights and configurations may change without notice; confirm current values with ZUOYEAL before ordering.

24–216C · G.652D · FIG-8 AERIAL

Connecting More, With Fiber