

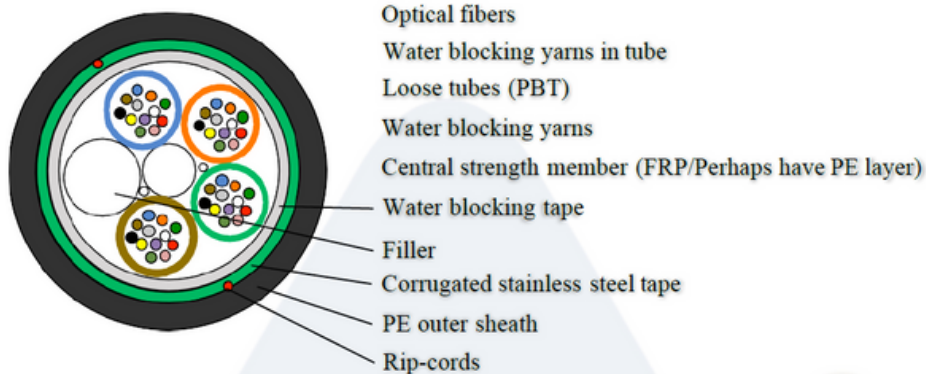
Technical Specification

GYFS 12~288 G.657A1

This specification covers the general requirements of duct and burial optical cable. The technical requirement in this specification requirement of ITU -T and IEC.

1. CABLE CONSTRUCTION

1.1. Cross-sectional Drawing of GYFS 12~288 G.657A1



1.2. Identification of fibers and loose tubes

The color code of the loose tubes and the individual fibers within each loose tube shall be in accordance with below:

Single Layer Twisted core													
No.	1	2	3	4	5	6	7	8	9	10	11	12	
Tube color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua	
12F	12F	Filler	Filler	Filler	Filler	Filler	/	/	/	/	/	/	
48F	12F	12F	12F	12F	Filler	Filler	/	/	/	/	/	/	
72F	12F	12F	12F	12F	12F	12F	/	/	/	/	/	/	
96F	12F	12F	12F	12F	12F	12F	12F	12F	/	/	/	/	
144F	12F	12F	12F	12F	12F	12F	12F	12F	12F	12F	12F	12F	
Color code of fibers: blue, orange, green brown, gray, white, red, black, yellow, violet, pink, and aqua													
Double Layer Twisted core													
288FO	Inner core	1	2	3	4	5	6	7	8	9	/	/	/
		Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	/	/	/
		12F	12F	12F	12F	12F	12F	12F	12F	12F	/	/	/
		10	11	12	13	14	15	16	17	18	19	20	21
	Outer core	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua
		12F	12F	12F	12F	12F	12F	12F	12F	12F	12F	12F	12F
		22	23	24	/								
		Blue	orange	Green	/								
12F	12F	12F	/										
Color code of fibers: blue, orange, green brown, gray, white, red, black, yellow, violet, pink, and aqua													
22~24# loose casing need to squeeze longitudinal stripes to show distinction: Blue+black longitudinal stripe, orange+black longitudinal stripe, green+black longitudinal stripe.													



Technical Specification

1.3. Main Mechanical performance of the cable

Cable type	Tension (N)	Crush (N/100mm)
GYFS 12~288 G.657A1	2700	3000

1.4. Diameter and weight of the cable

Cable type	Outer diameter (mm)	Approx. Weight kg/km
GYFS 12/48/72 G.657A1	11.8	125
GYFS 96 G.657A1	13.1	150
GYFS 144 G.657A1	16.1	220
GYFS 288 G.657A1	19.2	275

1.5. Physical, mechanical and environmental performance and tests

TEST	STANDARD	SPECIFIED VALUE	ACCEPTANCE CRITERIA
Tension	IEC 60794-1-21-E1	Load: see clause 3.2. Duration: 1 min	Fiber strain \leq 0.6% After test, $\Delta\alpha\leq$ 0.05 dB No fiber break and no sheath damage
Crush	IEC 60794-1-21-E3	Load: see clause 3.2. Duration: 1 min	After test, $\Delta\alpha\leq$ 0.05 dB No fiber break and no sheath damage
Impact	IEC 60794-1-21-E4	Energy of impact: 25N•m	After test, $\Delta\alpha\leq$ 0.05 dB No fiber break and no sheath damage
Torsion	IEC 60794-1-21-E7	Angle of rotation: \pm 180° Length:2m	After test, $\Delta\alpha\leq$ 0.05 dB No fiber break and no sheath damage
Temperature cycling	IEC 60794-1-22-F1	-30°C~+70°C, 2 cycles, 8h	$\Delta\alpha<$ 0.05dB/km No fiber break and no sheath damage
Water penetration	IEC 60794-1-22-F5	Sample 3m, water 1m, 24h	No water leakage
Bend radius		Dynamic: 20D Static: 15D	



Technical Specification

2. PACKING AND MARKING

2.1. Cable and length marking

The sheath shall be marked every two feet with the following information. Other marking is also available If requested by customer.

- 1) Cable type & counts
- 2) Name of the manufacturer
- 3) Year of manufacture
- 4) Length marking
- 5) Requested by customer

10000 FT

GYFS12~ 288 G.657A1

2022

2.2. Cable packing

2.2.1. Each length of the cable shall be wound on a separate reel. Standard length of cable shall be 5,000 ft, other cable length is also available if requested by customer.

2.2.2. Both ends of the cable shall be sealed with suitable plastic caps to prevent the entry of moisture during shipping, handling and storage, and the A-end shall be indicated with red cap, the B-end shall be indicated with green cap. The cable ends shall be securely fastened to the reel. At least 5.0 ft of the cable inner end shall be remained for test purpose.

2.2.3. The cable reel shall be wooden materials. It is not exceeding 7.8 ft in diameter and 5.25 ft in width. The diameter of the center hole is less than 0.36 ft, and the reel shall be protected the cable form the damage during shipping, storage and installation.

2.2.4. Details given below shall be distinctly marked with a weather proof materials on the reel flange, at the same time, a Quality Certification and a Test Record shall be provided with the reel when it is delivered.

- 1) Purchaser's Name
- 2) Cable type and fiber counts
- 3) Length of cable in meters
- 4) Gross weight and in kilograms
- 5) Name of the manufacturer
- 6) Year of manufacture
- 7) Arrow showing the direction the reel shall be rolled
- 8) Other shipping mark is also available if requested by customer.

