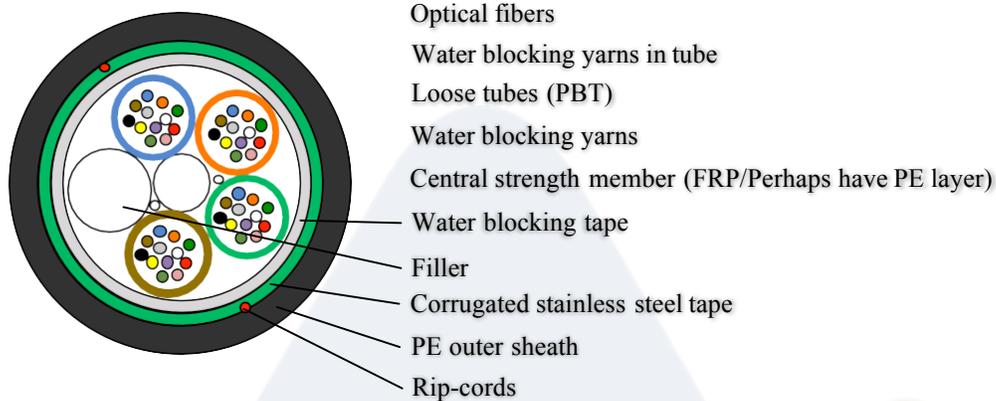


GYFS 12~288 G.657A1

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 | 12F | / | / |
| | Outer core | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | | 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

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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 from 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.