


TECHNICAL SPECIFICATION

Duct installation Cable



| | | | | |
|----------------|-------------|-----------------|-----------------|-----------------|
| A | Feb 22,2025 | Samson | Tim | Erica |
| Version | Date | Prepared | Reviewed | Approved |

1. Application / Construction

| | | | |
|---------------------------------|---|------------------------------|---------------------------|
| Identification | GYXT6H-6/12OM3/OM4 | | |
| Application | Duct and indoor installation cable | | |
| Cross Section (not to scale) | 6/12 fibers  | | |
| Configuration | <ul style="list-style-type: none"> - Loose tubes with 6/12 optical fibers, filled with thixotropic compound - Glass yarns - Outer sheath: LSZH, UV proof, black, 2 ripcords under outer sheath | | |
| Temperature Range | Storage and transport -40 to +70°C | Installation -10 to +50°C | Operation -40 to +70°C |
| Standards | IEC 60793-1, IEC 60793-2, IEC 60794-4-20 | | |
| Customer Reference | Common standard | | |

2. Dimensions

| | | | |
|----------------------|----|--------------------|--------------------|
| Number of fibres | | 6 | 12 |
| Material NO. | | GL081974/ GL081979 | GL081976/ GL081981 |
| Loose tubes x fibres | | 1x6 | 1x12 |
| Outer diameter | mm | 9.1± 0.5 | |
| Weight/km(± 15%) | kg | 99 | |

Sizes and values without tolerances are nominal values, sheath thickness not consider ripcord portion

3. Mechanical Properties

| | |
|--------------------------|---|
| Max. tensile load | 1200N |
| Crush resistance / 10 cm | 500N |
| Min. Bending radius | 20x cable-Ø(installation), 10x cable-Ø(operation) |

See Point 6: Test Method

4. Marking

| | | | | | | | | | | | | |
|--------------|------|--------|-------|-------|------|-------|-----|-------|--------|--------|------|------|
| Fiber Colors | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | blue | orange | green | brown | grey | white | red | black | yellow | violet | pink | aqua |

| | |
|-------------|---------|
| Tube Colors | 1 |
| | Natural |

5. Optical Fiber

| Standard | OM3 Fiber in Cable | | |
|------------|------------------------------------|---------------------------|-------------------------|
| Optical | Fibre attenuation .. Before cabled | @ 850 nm ≤2.5 dB/km | @ 1300 nm ≤0.7 dB/km |
| | Fibre attenuation .. cabled | @ 850 nm ≤3.5 dB/km | @ 1300 nm ≤1.5 dB/km |
| | Standard bandwidth | @ 850 nm ≥1500MHz.km | @ 1300 nm ≥500MHz.km |
| | Numerical Aperture (NA) | 0.200 ± 0.015μm | |
| Geometric | Core Diameter | 50±2.5μm | |
| | Cladding Diameter | 125 ±2.0μm | |
| | Core / Clad Concentricity | ≤ 1.5μm | |
| | Cladding Non-Circularity | ≤2.0% | |
| Mechanical | Proof stress | ≥ 8.4N (100Kpsi, ≥ 1.0 %) | |

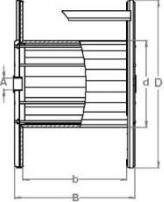
| Standard | OM4 Fiber in Cable | | |
|------------|------------------------------------|---------------------------|-------------------------|
| Optical | Fibre attenuation .. Before cabled | @ 850 nm ≤2.5 dB/km | @ 1300 nm ≤0.7 dB/km |
| | Fibre attenuation .. cabled | @ 850 nm ≤3.5 dB/km | @ 1300 nm ≤1.5 dB/km |
| | Standard bandwidth | @ 850 nm ≥3500MHz.km | @ 1300 nm ≥500MHz.km |
| | Numerical Aperture (NA) | 0.200 ± 0.015μm | |
| Geometric | Core Diameter | 50±2.5μm | |
| | Cladding Diameter | 125 ±2.0μm | |
| | Core / Clad Concentricity | ≤ 1.5μm | |
| | Cladding Non-Circularity | ≤2.0% | |
| Mechanical | Proof stress | ≥ 8.4N (100Kpsi, ≥ 1.0 %) | |

6. Test Methods

| Test | Conditions | Acceptance criteria |
|---|--|---|
| Tensile strength IEC 60794-1-2 E1 | Tensile load: See point 3 Sample length: ≥ 50 m, 1 min | - $\Delta\alpha \leq 0.4$ dB/km after test - No damage |
| Crush resistance IEC 60794-1-2 E3 | Crush: see Point 3 Test duration: 1 min, number of tests: 3 | - $\Delta\alpha \leq 0.4$ dB/km after test - No damage |
| Impact IEC 60794-1-2 E4 | Impact energy: 4.5 J; R = 300 mm Impact points: 3; Impact number: 1 | - $\Delta\alpha \leq 0.4$ dB/km after test - No damage |
| Repeated bending IEC 60794-1-2 E6 | Bending radius: 25D Cycles: 25 cycles; Load 150N | - $\Delta\alpha \leq 0.4$ dB/km after test - No damage |
| Torsion IEC 60794-1-2 E7 | Sample length: 2 m; Angles: ± 180° Cycles: 5 cycles; Load 150N | - $\Delta\alpha \leq 0.4$ dB/km after test - No damage |
| Temperature cycling IEC 60794-1-2 F1 | Steps: -40°C~+70°C Time per each step: 12 hours,Cycles: 2 | - $\Delta\alpha \leq 0.40$ dB/km |
| Water penetration IEC 60794-1-2 F5 | Sample length: 3 m Water column height: 1 m, Duration: 24 h | - No water leakage from the tube |

All optical measurements at 1550 nm

7. Logistics

| Cable type | Length $\pm 1\%$ | 4 km/reel |  <p data-bbox="1145 539 1331 566">D*d*B in(± 5) cm</p> |
|--------------------|---|------------------------------|--|
| GYXT6H-6/12OM3/OM4 | Drum type Dimensions Weight($\pm 15\%$) | Wooden 125*70*75 482kg | |

Dimensions including protection. Indicative values, actually delivered drum sizes and weights may deviate. Cable ends sealed with caps