


1 Application / Construction

| | | | |
|-----------------------------------|--|-----------------------------|---------------------------|
| Identification | GJFH-1..12 G.657A1 | | |
| Application | Indoor device connection | | |
| Cross section ..not to scale.. | 1..12 fibres  | | |
| Configuration | - 1..12 Colored fibers(250µm) - Aramid yarns - Outer sheath: LSZH, Black, UV proof | | |
| Temperature range | Storage and transport -20 to +70°C | Installation -5 to +55°C | Operation -20 to +60°C |
| Standards | IEC 60793-1, IEC 60793-2, IEC 60794-2 | | |
| ZTT Specification | 23-XJ33236-5-C | | |
| Customer Reference | Common standard | | |

2 Dimensions

| | | | | | | | |
|-----------------------|----|-----|---|---|---|---|----|
| Fiber counts | | 1 | 2 | 4 | 6 | 8 | 12 |
| Outer diameter (±0.2) | mm | 3.0 | | | | | |
| Weight /km | kg | 8.6 | | | | | |

Sizes and values without tolerances are nominal values

3 Mechanical Properties

| | |
|---------------------|---------------------------|
| Tensile load | 800N |
| Crush resistance | 300N/10cm |
| Min. bending radius | Without tension 10xCableΦ |

See Point 6: Test Methods

4 Marking

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

Outer Sheath: black, ink jet print, marking in 1 meter intervals as follows (for example) :

| | | | | |
|------------|----------------------|---------------------------|-------------------------|-------------------------------|
| ZTT | OPTICAL CABLE | <cable type> | <batch ID> | <meter marking > |
|------------|----------------------|---------------------------|-------------------------|-------------------------------|

5 Optical Fiber

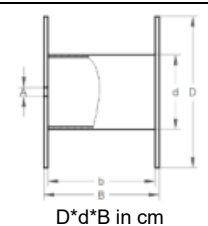
| Standard | ITU-T G.657A1 | | |
|------------|--|----------------------------------|--------------------------------|
| Optical | Fibre attenuation .. cabled | @ 1310 nm ≤0.40 dB/km | @ 1550 nm ≤0.30 dB/km |
| | Mode field diameter (MFD) | 8.8 ± 0.4 μm | 9.9 ± 0.5 μm |
| | Zero dispersion wavelength | 1300~1324 nm | |
| | Zero dispersion slope | ≤0.092 ps/nm ² · km | |
| | Macro bending loss .. 10 turns Ø30 mm .. 1 turn Ø20 mm | @1550 nm ≤0.25 dB ≤0.75 dB | @1625 nm ≤1.0 dB ≤1.5 dB |
| Geometric | Cladding diameter | 125 ± 0.7 μm | |
| | Coating diameter | 250 ± 15 μm | |
| | Core/clad concentricity error | ≤0.6 μm | |
| | Cladding non-circularity | ≤1.0 % | |
| Mechanical | Proof stress | ≥0.69 Gpa | |

6 Test Methods

| Test | Conditions | Acceptance criteria |
|---|--|----------------------------|
| Tension Loading IEC 60794-1-2 E1 | Tensile strength: see point 3 Sample length: ≥50 m, 1min. | - Δα reversible, no damage |
| Crush/Compression IEC 60794-1-2 E3 | Crush: see point 3 Test duration: 1 min, number of tests: 3 | - Δα reversible, no damage |
| Impact Resistance IEC 60794-1-2 E4 | Impact energy: 1Nm R = 300 mm, number of places/tests: 3 | - Δα reversible |
| Torsion IEC 60794-1-2 E7 | Sample length: 1 m, ± 180°, 10 cycles | - Δα reversible, no damage |
| Bend IEC 60794-1-2 E11 | R=15D, 4 turns, 3 cycles | - Δα reversible, no damage |
| Temperature cycling IEC 60794-1-2 F1 | -20°C~+60°C t1=4h, 2 cycles | - Δα ≤ 0.15 dB/km |

All optical measurements at 1550 nm

7 Logistics

| Cable type | Length Tolerance | 2000m -2% / +2% |  |
|--------------------|-----------------------------------|-----------------------------|---|
| GJFH-1..12 G.657A1 | Drum Type Dimensions Weight | Plywood 40*22*32 19kg | |

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

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|----------------|----------------|-----------------|-----------------|-----------------|--------------------------------|
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| | | | | | |
| C | April 17, 2024 | John | Shen Bingbing | Erica | Add more FO, update color code |
| A | Dec. 25, 2023 | John | Shen Bingbing | Erica | / |
| Version | Date | Prepared | Reviewed | Approved | Remark |