FIBER OPTIC CABLE · GYTC8S

# GYTC8S

Self-Supporting Figure-8 Aerial Armored Fiber Optic Cable

G.652D / G.655 · 2–30 cores · aerial self-supporting

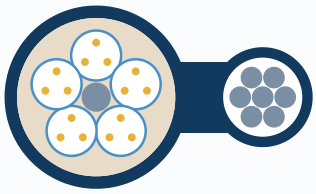
## PRODUCT DESCRIPTION

GYTC8S is the stranded figure-eight aerial cable: a conventional loose-tube core — steel wire central member, gel-filled tubes stranded with fillers, aluminium tape moisture barrier, PSP steel tape armour — is extruded together with a stranded steel messenger into a single figure-eight PE sheath. The messenger carries the span, so the route needs no separate suspension strand; the armour protects the core where the route passes through trees or along walls.

## KEY FEATURES

- Messenger and cable in one sheath — one pulling pass, no separate suspension strand
- PSP steel tape armour: crush and rodent protection on rural routes
- Aluminium tape moisture barrier over the stranded core
- Tube and filler count is fixed at five elements, so OD and weight stay constant from 2 to 30 cores
- Tensile rating set by the messenger wire diameter — state the span and load when ordering

Other fibre types, core counts and sheath compounds are available on request — see the ordering information on page 2.



Cross-section — schematic, not to scale

PE figure-8 sheath
Armour / moisture barrier
Gel-filled loose tube
Steel wire / messenger strand
250 µm fibre

## GENERAL SPECIFICATIONS

| | |
|---|---|
| CABLE TYPE | **GYTC8S** |
| APPLICATION | **Aerial self-supporting · Pole to pole · Rural FTTx and backbone** |
| STANDARDS | **YD/T 1155 · IEC 60794-1** |
| TEMPERATURE | **-40 °C to +70 °C** |
| SHEATH OPTIONS | **PE · LSZH** |

## CABLE CONSTRUCTION

| | |
|---|---|
| **Central strength member** | Single steel wire, PE coated |
| **Loose tube** | PBT, gel-filled, max. 12 fibres per tube |
| **Core assembly** | Tubes and fillers stranded — five elements in total |
| **Armour / barrier** | Aluminium tape plus corrugated steel tape (PSP) |
| **Messenger** | Stranded steel wire, extruded into the second lobe |
| **Outer sheath** | UV-stabilised MDPE, black, figure-eight profile |

Options: LSZH sheath · dry core · larger messenger for longer spans · 38–60 cores built to order · customer sheath printing.

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## STRUCTURE AND DIMENSIONS

| Cable model | Fibre count | Loose tubes | Fillers | Cable size H × W (mm) | Nominal weight (kg/km) |
|---|---|---|---|---|---|
| **GYTC8S-2~6Xn** | 2~6 | 1 | 4 | 9.2 × 18 | 215 |
| **GYTC8S-8~12Xn** | 8~12 | 2 | 3 | 9.2 × 18 | 215 |
| **GYTC8S-14~18Xn** | 14~18 | 3 | 2 | 9.2 × 18 | 215 |
| **GYTC8S-20~24Xn** | 20~24 | 4 | 1 | 9.2 × 18 | 215 |
| **GYTC8S-26~30Xn** | 26~30 | 5 | 0 | 9.2 × 18 | 215 |

| TENSILE LOAD L / S | CRUSH RESISTANCE L / S | BEND RADIUS S / D |
|---|---|---|
| **600 / 1500** | **300 / 1000** | **10D / 20D** |
| N, by messenger | N/100 mm | × cable OD |

## OPTICAL CHARACTERISTICS

| Fibre type | Attenuation 1310 nm (dB/km) typ. / max | Attenuation 1550 nm (dB/km) typ. / max | Cut-off λcc (nm) | Remark |
|---|---|---|---|---|
| **G.652D** | 0.36 / 0.50 | 0.22 / 0.40 | ≤ 1260 | Low water peak, full band 1260–1625 nm |
| **G.655** | 0.40 / 0.50 | 0.23 / 0.40 | ≤ 1450 | Non-zero dispersion shifted, for DWDM backbone |
| **G.657A1/A2** | 0.36 / 0.50 | 0.22 / 0.40 | ≤ 1260 | Bend insensitive, min. bend radius 10 mm |

Attenuation measured at +20 °C on cabled fibre, before splicing. Multimode fibre (OM1–OM4) available on request.

## QUALITY ASSURANCE

- 100 % attenuation and length test on every fibre before packing
- Inspection certificate and test report issued with every drum
- Third-party inspection (SGS, TÜV, BV) can be arranged on request
- Pre-shipment sample and drum marking approved by the customer

## TYPE TESTS

| Test | Method | Acceptance |
|---|---|---|
| **Tensile strength** | IEC 60794-1-21 E1 | Rated load applied, no fibre strain, Δα ≤ 0.05 dB |
| **Crush** | IEC 60794-1-21 E3 | Rated load applied, Δα ≤ 0.05 dB after recovery |
| **Impact** | IEC 60794-1-21 E4 | 10 impacts, 4.5 J, R300 mm, Δα ≤ 0.05 dB |
| **Temperature cycling** | IEC 60794-1-22 F1 | −40 °C to +70 °C, 2 cycles, Δα ≤ 0.05 dB/km |
| **Water penetration** | IEC 60794-1-22 F5B | 1 m head, 24 h, no water at the far end |

## ORDERING INFORMATION

Order code: **GYTC8S-[cores]Xn-[fibre type]-[sheath].** Example: GYTC8S-48Xn-G652D-PE. State the fibre type, sheath compound, drum length and any sheath marking. Standard drum length 2 km or 4 km; other lengths on request.

Nominal values, subject to normal manufacturing tolerances.
Core counts and fibre types outside the table are built to order — weight, tensile and bending data confirmed on the order drawing.

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