

PRODUCT DESCRIPTION

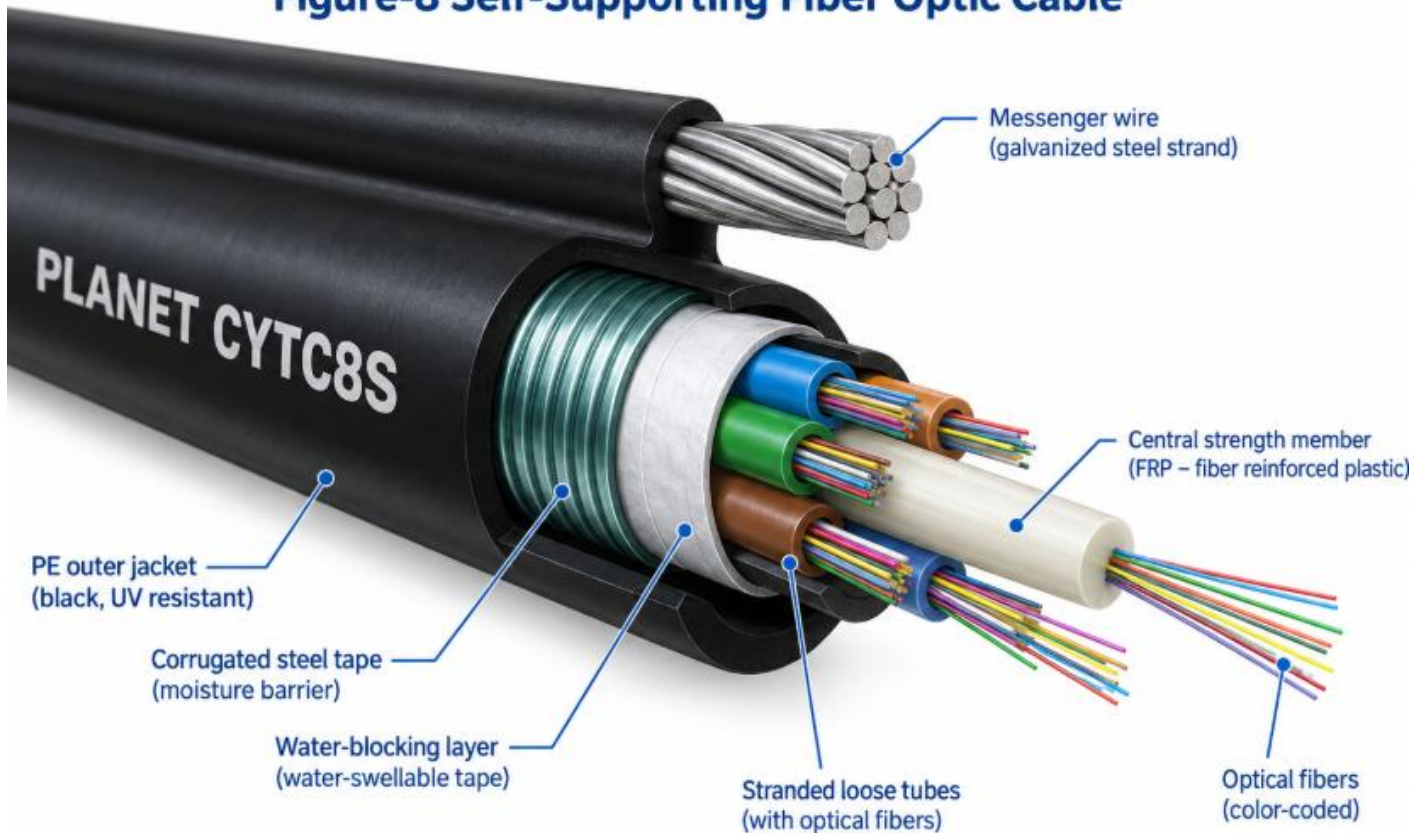
PLANET GYTC8S is a metallic, armored, figure-8 self-supporting outdoor fiber optic cable designed for pole-to-pole aerial installation using an integrated galvanized steel messenger. The optical cable body uses stranded PBT loose tubes around an FRP central strength member, longitudinal water blocking, corrugated steel tape mechanical armor and a UV-resistant black PE jacket. OS2 is the standard fiber selection; OM3, OM4 and OM5 multimode versions are available for approved project requirements.

MAIN CLASSIFICATION

Fiber Type Options	Structure	Cable Classification	Span / Installation Class
OS2 / OM3 / OM4 / OM5	Figure-8 Stranded Loose Tube + FRP + Water Blocking + CST + Steel Messenger	METALLIC / STEEL-TAPE ARMORED	AERIAL / SELF-SUPPORTING / MESSENGER-SUPPORTED

GYTC8S

Figure-8 Self-Supporting Fiber Optic Cable



GENERAL SPECIFICATIONS & CABLE CONSTRUCTION

Environment	Outside Plant (OSP), pole-to-pole aerial telecom, campus, industrial, CCTV / road-surveillance and access backbone routes.
Applications	Figure-8 messenger-supported aerial communication routes requiring integrated support wire and metallic armor.
Fiber Type	OS2 G.652.D standard; G.657.A1 / G.657.A2 optional; OM3 / OM4 / OM5 50/125 µm available upon project request.
Fiber Count	Typical family range 4F to 144F. Common counts: 12F, 24F, 48F, 72F, 96F and 144F.
Loose Tube	Color-coded high-modulus PBT loose tubes; dry-core or jelly-filled according to approved order, typically up to 12 fibers per tube.
Tube Stranding	Loose tubes and fillers stranded around the central FRP strength member.
Central Strength Member	Solid FRP (Fiber Reinforced Plastic) central strength member.
Water Blocking	Water-swellable yarn / tape and/or filling compound to prevent longitudinal water ingress.
Armor	Corrugated steel tape (CST) mechanical armor over the optical cable core.
Messenger	Integrated galvanized stranded steel messenger wire for self-supporting aerial installation.
Outer Jacket	Virgin black HDPE / MDPE PE jacket for main cable body and messenger lobe; UV- and weather-resistant.
Cable Identification	PLANET name, model family, fiber count, fiber type, sequential meter marking and production traceability.
Cable Classification	Metallic Corrugated Steel Tape Armored Figure-8 Self-Supporting Integrated Steel Messenger Not All-Dielectric

MECHANICAL & ENVIRONMENTAL PERFORMANCE

Parameter	PLANET Minimum / Reference Requirement
Operating / Storage Temp.	-40°C to +70°C
Installation Temp.	-20°C to +60°C
Installation Class	Figure-8 messenger-supported aerial; final span and sag-tension performance subject to approved messenger design and route loading.
Minimum Bend Radius - Installation	20 × cable O.D.
Minimum Bend Radius - Static	10 × cable O.D.
Tensile Load - Long / Short	≥ 1500 N / ≥ 3000 N
Crush Resistance - Long / Short	≥ 1000 N/100 mm / ≥ 3000 N/100 mm
Water Penetration	No longitudinal leakage under applicable IEC 60794 water penetration test conditions
OS2 / OM3 / OM4 / OM5	GYTC8S Optical & Compliance Data
	Consultant-Oriented Performance Data

OPTICAL CHARACTERISTICS - OS2 / OM3 / OM4 / OM5

Parameter	OS2 G.652.D	OM3 50/125	OM4 50/125	OM5 50/125
Attenuation @ 850 nm	—	≤ 3.0 dB/km	≤ 3.0 dB/km	≤ 3.0 dB/km
Attenuation @ 953 nm	—	—	—	≤ 3.0 dB/km
Attenuation @ 1300 / 1310 nm	≤ 0.35 dB/km @1310	≤ 1.0 dB/km @1300	≤ 1.0 dB/km @1300	≤ 1.0 dB/km @1300
Attenuation @ 1550 nm	≤ 0.21 dB/km	—	—	—
Attenuation @ 1625 nm	≤ 0.23 dB/km	—	—	—
Mode Field / Core Diameter	8.6-9.5 μm @1310	50 ± 2.5 μm	50 ± 2.5 μm	50 ± 2.5 μm
Cladding Diameter	125.0 ± 0.7 μm	125 ± 1.0 μm	125 ± 1.0 μm	125 ± 1.0 μm
Coating Diameter	245 ± 10 μm	245 ± 10 μm	245 ± 10 μm	245 ± 10 μm
PMD	≤ 0.20 ps/√km	—	—	—
EMB @ 850 nm	—	≥ 2000 MHz·km	≥ 4700 MHz·km	≥ 4700 MHz·km
EMB @ 953 nm	—	—	—	≥ 2470 MHz·km
Fiber Standard	ITU-T G.652.D / IEC 60793-2-50	IEC 60793-2-10 / OM3	IEC 60793-2-10 / OM4	IEC 60793-2-10 / OM5

TYPICAL FIBER COUNT / FIGURE-8 DESIGN GUIDE

Fiber Count	Typical O.D.	Typical Weight	Class / Structure	Typical Use
12F	11.5 ± 0.6 mm	165 ± 15 kg/km	Figure-8	Aerial distribution
24F	12.0 ± 0.6 mm	180 ± 18 kg/km	Figure-8	Telecom / CCTV routes
48F	13.0 ± 0.7 mm	205 ± 20 kg/km	Figure-8	Campus / access backbone
96F	14.5 ± 0.8 mm	255 ± 25 kg/km	Figure-8	Aerial backbone

STANDARDS & COMPLIANCE

IEC 60794 Series	Optical fiber cable construction, mechanical and environmental test framework.
ITU-T G.652.D	Standard OS2 single-mode fiber.
IEC 60793-2-50	Single-mode optical fiber product specification reference.
IEC 60793-2-10	Multimode optical fiber product specification reference for OM3 / OM4 / OM5.
RoHS	Hazardous-substance compliance subject to applicable production declaration.
Aerial / Messenger Design	Messenger size, galvanization, sag-tension and allowable span subject to approved mechanical design and route conditions.
Project Approval	Customer / consultant-specific approvals subject to confirmed production scope and supplied test documentation.

MANDATORY FACTORY TESTS & DOCUMENTATION

- 100% OTDR test per drum at 1310 nm and 1550 nm for OS2; appropriate 850 / 1300 nm test set for multimode production where applicable.
- Factory attenuation report and fiber-batch traceability for each production lot.
- Construction report confirming FRP central strength member, corrugated steel tape armor, galvanized steel messenger, water-blocking materials and virgin PE jacket compound.
- Mechanical type-test evidence for tensile, crush, impact, bend, repeated bend / flex and torsion to applicable IEC 60794 methods, plus messenger / aerial performance verification for the approved design.
- Water penetration and temperature-cycling test evidence.
- RoHS declaration / report and final drum inspection with sealed cable ends and continuous sequential meter marking.

RECOMMENDED APPLICATIONS

- Pole-to-pole aerial telecom routes.
- CCTV and road-surveillance backbone networks.
- Campus and industrial aerial networks.
- Distribution, feeder and access aerial links.
- Projects requiring an integrated galvanized steel messenger and steel-tape armored fiber cable.
- OS2 as the standard long-distance selection; OM3 / OM4 / OM5 for project-specific multimode aerial links.

SELECTION NOTE

GYTC8S is a metallic, corrugated-steel-tape armored, figure-8 aerial cable with an integrated galvanized steel messenger. It is not all-dielectric and should not be confused with ADSS. The messenger carries the aerial load while the armored optical cable body provides additional mechanical protection.

QUALITY & CHANGE CONTROL

- Approved optical fiber, qualified PBT loose tubes, FRP central strength member, corrugated steel tape, galvanized messenger, water-blocking materials and virgin HDPE / MDPE jacket compound; no recycled or silent material substitution.
- Messenger wire construction, galvanization level, diameter and aerial load capability shall be controlled and documented as part of the approved design.
- Corrugated steel tape armor shall be continuous and uniformly applied around the optical cable core; longitudinal water blocking shall use approved tape / yarn and/or filling compound.
- Main cable body and messenger lobe shall use UV-resistant outdoor-grade PE with controlled sheath thickness and concentricity.
- No change to fiber manufacturer/type, loose-tube design, FRP size, steel-tape armor, messenger construction, water-blocking system, jacket compound, cable dimensions or mechanical performance without prior PLANET written approval.

AVAILABLE PROJECT OPTIONS

- OS2 G.657.A1 / G.657.A2 bend-insensitive single-mode fiber.
- OM3, OM4 or OM5 50/125 µm multimode fiber.
- Dry-core / dry water-blocking configuration subject to approved construction.
- Custom fiber counts within the approved GYTC8S stranded loose-tube design range.
- Custom jacket printing and sequential meter marking.
- Project-specific messenger size, galvanization and aerial span class subject to approved mechanical design.

ORDERING DESCRIPTION

Part Number Family	To be assigned by PLANET
Typical OS2 Description	PLANET GYTC8S - 24F - OS2 G.652.D - Figure-8 Stranded Loose Tube - FRP Central Member - CST Armored - Integrated Galvanized Steel Messenger - Black PE Jacket
Typical OM3 Description	PLANET GYTC8S - 24F - OM3 50/125 - Figure-8 Stranded Loose Tube - CST Armored - Integrated Galvanized Steel Messenger - Black PE Jacket
Typical OM4 Description	PLANET GYTC8S - 24F - OM4 50/125 - Figure-8 Stranded Loose Tube - CST Armored - Integrated Galvanized Steel Messenger - Black PE Jacket
Typical OM5 Description	PLANET GYTC8S - 24F - OM5 50/125 - Figure-8 Stranded Loose Tube - CST Armored - Integrated Galvanized Steel Messenger - Black PE Jacket

PRODUCT IDENTIFICATION PRINCIPLE

The approved product description shall state the actual construction and shall not rely only on the GYTC8S family code: fiber type + fiber count + stranded loose-tube structure + FRP central strength member + water blocking + corrugated steel tape armor + integrated galvanized steel messenger + black PE jacket + intended aerial installation class.

25-Year System Warranty

Subject to proper installation and certified components usage.

Part Number	Description
PL-GYTC8S-xxS2	Outdoor Fiber Optic Cable Single Mode OS2
PL-GYTC8S-xxM3	Outdoor Fiber Optic Cable Multi Mode OM3
PL-GYTC8S-xxM4	Outdoor Fiber Optic Cable Multi Mode OM4
PL-GYTC8S-xxM5	Outdoor Fiber Optic Cable Multi Mode OM5

XX: Number of Core