Planet
Structure Cabling Systems

Central PBT Loose Tube | Dielectric Glass Yarn Reinforcement | Water Blocking Black LSZH UV-Resistant Jacket

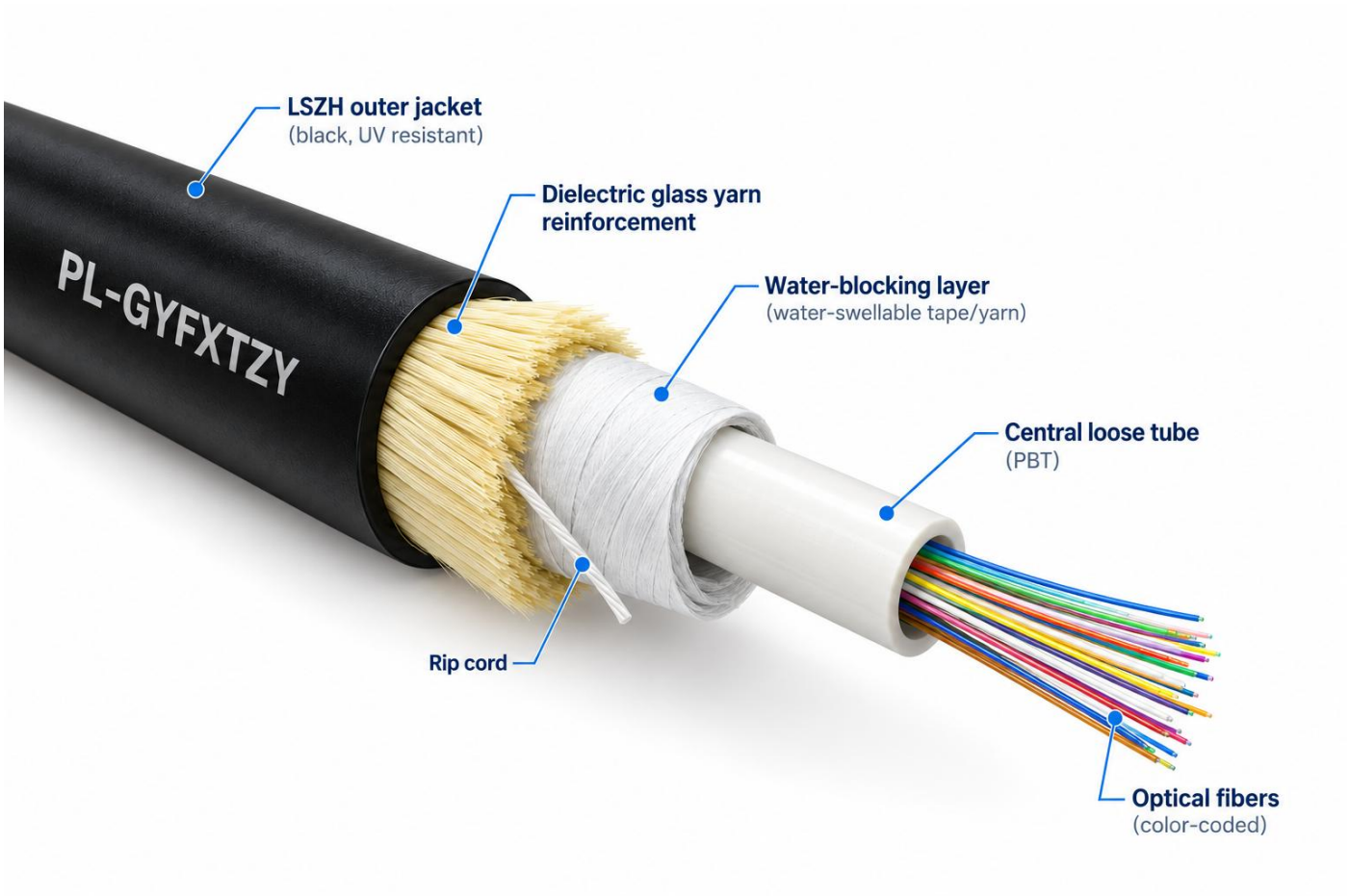
Fiber Optic Cable

PRODUCT DESCRIPTION

PLANET GYFXTZY is an all-dielectric, non-metallic indoor/outdoor central loose-tube fiber optic cable designed for backbone, FTTx, campus, building and indoor/outdoor transition applications requiring dielectric mechanical reinforcement. Optical fibers are placed inside a central PBT loose tube, protected by water-blocking materials and dielectric glass yarn reinforcement, and finished with a black LSZH UV-resistant outer jacket. Standard fiber is OS2 G.652.D; OM3, OM4 and OM5 multimode fibers are available for project-specific requirements.

MAIN CLASSIFICATION

Fiber Type Options	Structure	Cable Classification	Installation Class
OS2 / OM3 / OM4 / OM5	Central PBT Loose Tube + Dielectric Glass Yarn + Water Blocking + LSZH	ALL-DIELECTRIC / NON-METALLIC / DIELECTRIC ARMORED	INDOOR / OUTDOOR



Central PBT Loose Tube | Dielectric Glass Yarn Reinforcement | Water Blocking Black LSZH UV-Resistant Jacket

GENERAL SPECIFICATIONS & CABLE CONSTRUCTION

Environment	Indoor / outdoor backbone, building transition, campus, telecom and FTTx infrastructure.
Applications	Telecom backbone, FTTx feeder / distribution, campus links, building backbone and indoor/outdoor transition installations.
Fiber Type	OS2 G.652.D standard; G.657.A1 / G.657.A2 optional; OM3 / OM4 / OM5 50/125 μm multimode available upon project request.
Fiber Count	2F / 4F / 6F / 8F / 12F / 24F standard family counts.
Fiber Proof Test	≥ 100 kpsi proof-tested optical fiber.
Central Loose Tube	One central PBT loose tube: 2.4 ± 0.2 mm for 2-12F; 2.8 ± 0.2 mm for 24F.
Strength Members	Dielectric glass yarn reinforcement; fully metal-free construction.
Water Blocking	Water-blocking glass yarn and water-blocking yarn / approved longitudinal water-blocking materials.
Armor	Dielectric glass yarn reinforcement providing non-metallic mechanical protection.
Outer LSZH Jacket	Black LSZH, UV-resistant, flame-retardant jacket; nominal thickness 1.5 mm.
Cable Structure	Central PBT loose tube + water blocking + dielectric glass yarn reinforcement + black LSZH UV-resistant outer jacket.
Cable Classification	All-Dielectric | Non-Metallic | Dielectric Armored | Indoor / Outdoor.
Cable Marking	PLANET-GYFXTZY + fiber count + fiber type + sequential meter marking + production traceability.

DIMENSIONAL & MECHANICAL DESIGN GUIDE

Fiber Count	Typical O.D.	Nominal Weight	Max Tensile	Crush Resistance
2F	6.6 ± 0.3 mm	50 ± 10% kg/km	1000 N	600 N/100 mm
4F	6.6 ± 0.3 mm	50 ± 10% kg/km	1000 N	600 N/100 mm
6F / 8F	6.6 ± 0.3 mm	50 ± 10% kg/km	1000 N	600 N/100 mm
12F	6.6 ± 0.3 mm	50 ± 10% kg/km	1000 N	600 N/100 mm
24F	7.0 ± 0.3 mm	55 ± 10% kg/km	1000 N	600 N/100 mm

MECHANICAL & ENVIRONMENTAL PERFORMANCE

Parameter	PLANET Minimum / Reference Requirement
Operating / Storage Temp.	-40°C to +70°C
Installation Temp.	-10°C to +60°C
Maximum Tensile Strength	1000 N
Crush Resistance - Long / Short	200 N/100 mm / 600 N/100 mm
Bend Radius - Static / Installation	10D / 20D
Water Penetration	Pass IEC 60794-1-F5B / current equivalent; no leakage through open cable end
Temperature Cycling	-40°C to +70°C; attenuation increment ≤ 0.1 dB @1550 nm after test
Impact / Repeated Bend / Torsion	Pass applicable IEC 60794-1 mechanical test methods; attenuation increment ≤ 0.1 dB; no jacket cracking or fiber breakage
OS2 / OM3 / OM4 / OM5	GYFXTZY 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	≤ 0.36 dB/km @1310	≤ 1.0 dB/km @1300	≤ 1.0 dB/km @1300	≤ 1.0 dB/km @1300
Attenuation @ 1550 nm	≤ 0.22 dB/km	—	—	—
Attenuation @ 1625 nm	Project / fiber approval	—	—	—
Mode Field / Core Diameter	9.2 ± 0.4 µm @1310	50 ± 2.5 µm	50 ± 2.5 µm	50 ± 2.5 µm
Cladding Diameter	125 ± 1.0 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 A1a.2	IEC 60793-2-10 A1a.3	IEC 60793-2-10 A1a.4

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 project options.
IEC 60332-1-2	Flame propagation test for the approved LSZH flame-retardant cable construction.
ISO/IEC 11801 / ANSI/TIA-568.3-D	Structured cabling / optical fiber cabling references stated for the product family.
RoHS / REACH	Compliance subject to production declaration / report.

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 virgin PBT central loose tube, qualified dielectric glass yarn reinforcement, approved water-blocking materials and virgin LSZH UV-resistant jacket compound.
- Mechanical type-test evidence for tensile, crush, impact, repeated bend and torsion to applicable IEC 60794-1 methods.
- Water penetration, temperature-cycling and IEC 60332-1-2 flame test evidence for the approved LSZH flame-retardant construction.
- RoHS / REACH declaration or report and final drum inspection with sealed cable ends and continuous sequential meter marking.

RECOMMENDED APPLICATIONS

- Telecom backbone networks and FTTx feeder / distribution links.
- Campus and inter-building backbone.
- Building backbone and indoor/outdoor transition routes.
- Data, telecom and infrastructure routes requiring metal-free dielectric construction.
- Indoor/outdoor installations requiring an LSZH UV-resistant jacket and dielectric mechanical reinforcement.
- OS2 as the standard long-distance selection; OM3 / OM4 / OM5 for project-specific multimode backbone links.

SELECTION NOTE

GYFXTZY is an all-dielectric, non-metallic, dielectric-armored indoor/outdoor central loose-tube cable. Its mechanical reinforcement is provided by glass yarn rather than steel or aluminum armor. The standard PLANET construction uses a central PBT loose tube, water-blocking system, dielectric glass-yarn reinforcement and black LSZH UV-resistant outer jacket. It should not be confused with metallic central-tube models such as GYXTW or with PE-only outdoor dielectric families.

QUALITY & CHANGE CONTROL

- Use virgin, qualified PBT loose-tube material and virgin LSZH UV-resistant jacket compound; no silent recycled-material substitution.
- Dielectric glass yarn shall be maintained as the standard tensile / armor reinforcement and shall remain fully metal-free.
- Longitudinal water blocking shall use approved water-blocking glass yarn, water-blocking yarn and/or filling materials according to the approved central loose-tube construction.
- No change to fiber manufacturer/type, PBT compound, glass-yarn construction, water-blocking system, LSZH compound, cable diameter or mechanical performance without prior PLANET written approval.
- Final production specification and type-test documentation shall be approved before mass production.

AVAILABLE PROJECT OPTIONS

- OS2 G.657.A1 / G.657.A2 bend-insensitive single-mode fiber for approved project requirements.
- OM3, OM4 or OM5 50/125 µm multimode fiber.
- Dry-core / dry water-blocking configuration subject to approved central loose-tube construction.
- Standard fiber counts: 2F / 4F / 6F / 8F / 12F / 24F; other counts subject to approved design.
- Custom jacket printing and continuous sequential meter marking.
- CPR / additional flame or smoke classifications only when separately tested and documented for the exact cable construction.

ORDERING DESCRIPTION

Part Number Family	PL-GYFXTZY
Typical OS2 Description	PLANET GYFXTZY - 12F - OS2 G.652.D - Central Loose Tube - Dielectric Glass Yarn Armored - All-Dielectric - Black LSZH UV-Resistant Jacket
Typical OM3 Description	PLANET GYFXTZY - 12F - OM3 50/125 - Central Loose Tube - Dielectric Glass Yarn Armored - All-Dielectric - Black LSZH UV-Resistant Jacket
Typical OM4 Description	PLANET GYFXTZY - 12F - OM4 50/125 - Central Loose Tube - Dielectric Glass Yarn Armored - All-Dielectric - Black LSZH UV-Resistant Jacket
Typical OM5 Description	PLANET GYFXTZY - 12F - OM5 50/125 - Central Loose Tube - Dielectric Glass Yarn Armored - All-Dielectric - Black LSZH UV-Resistant Jacket

25-Year System Warranty	**Subject to proper installation and certified components usage.**

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

XX: Number of Core