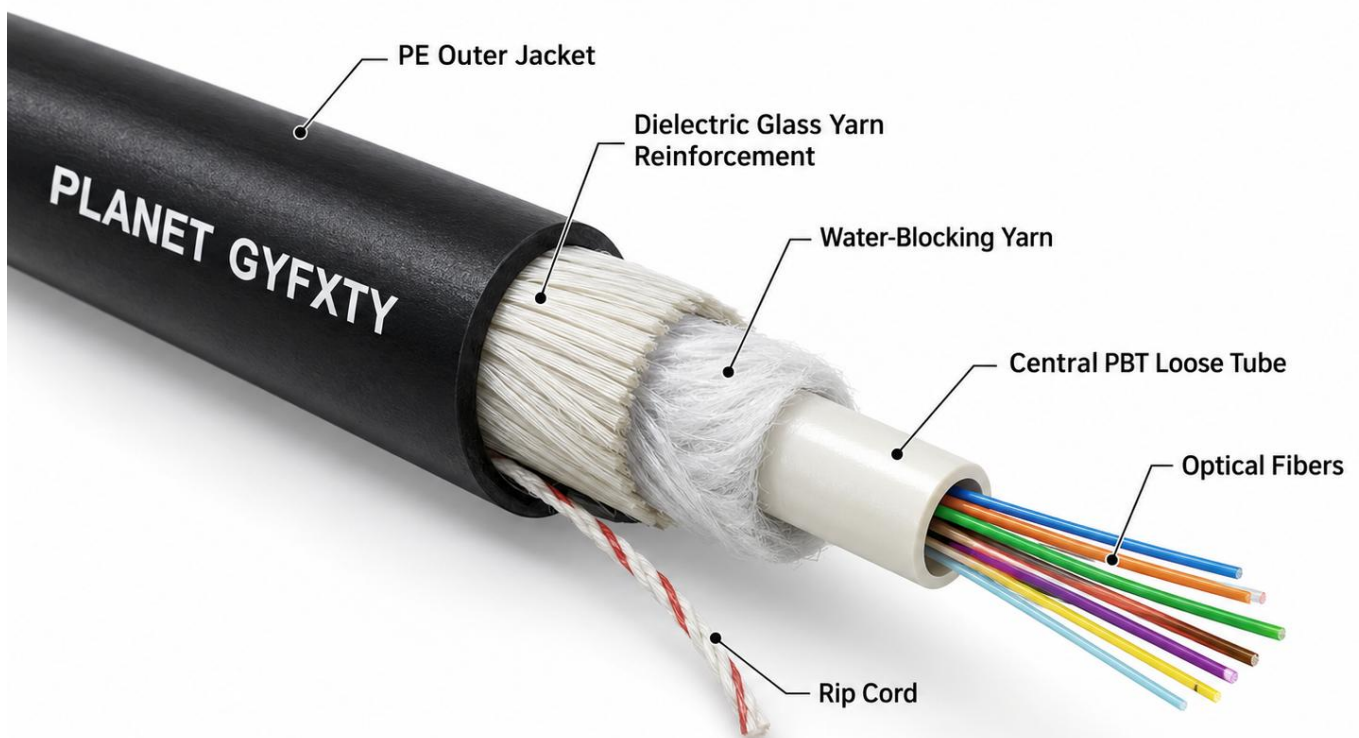


1. General Description

PLANET GYFXTY is an all-dielectric outdoor fiber optic cable family based on central loose tube construction. The GYFXTY code is used as a family reference; project approval shall be based on the actual cable structure, fiber type, reinforcement, sheath and mechanical values stated in the approved product specification.

Typical construction: color-coded optical fibers inside a central PBT loose tube, protected by water-blocking yarn, surrounded by dielectric glass yarn reinforcement, with a rip cord for sheath opening, and finished with a black UV-resistant outdoor PE jacket. The construction is fully non-metallic and suitable for installations requiring dielectric cable design.

OS2 G.652.D	CENTRAL Loose Tube	ALL-DIELECTRIC Metal-Free	PE JACKET Outdoor Grade
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2. Construction

Parameter	Specification
Fiber Type	Single Mode OS2, ITU-T G.652.D standard. G.657.A1 / G.657.A2 available as approved project options.
Fiber Count	Typical range 2F to 24F. Common counts: 2F, 4F, 6F, 8F, 12F and 24F.
Loose Tube	Single central PBT loose tube, dry-core or jelly-filled according to order, sized according to fiber count.
Tube Structure	Compact central loose tube design for outdoor and distribution applications.
Reinforcement	Dielectric glass yarn reinforcement surrounding the central tube to provide mechanical strength without metallic components.
Water Blocking	Water-blocking yarn and/or dry-core material to prevent longitudinal water ingress.
Rip Cord	Integrated rip cord for controlled jacket opening during installation.
Aarmor	No metallic armor. Mechanical protection is achieved by dielectric glass yarn reinforcement.
Outer Jacket	Black virgin HDPE / MDPE PE outer jacket, UV-resistant, weather-resistant, outdoor grade. Recycled jacket material is not permitted.
Cable Identification	Sequential length marking and PLANET / cable-type printing according to approved production artwork.

3. Mechanical & Environmental Characteristics

Parameter	Minimum Requirement
Operating Temperature	-40°C to +70°C
Installation Temperature	-20°C to +60°C
Storage / Transport Temperature	-40°C to +70°C
Minimum Bend Radius (Installation)	20 × cable O.D.
Minimum Bend Radius (Static)	10 × cable O.D.
Tensile Strength	≥ 1000 N short term / ≥ 300 N long term
Crush Resistance	≥ 1000 N/100 mm short term / ≥ 300 N/100 mm long term
Impact Resistance	Suitable for outdoor backbone and duct installation use
Water Penetration	No leakage under standard water penetration test conditions
UV Resistance	Jacket shall be suitable for continuous outdoor exposure

4. Optical Characteristics (OS2)

Parameter	1310 nm	1550 nm
Maximum Attenuation	≤ 0.35 dB/km	≤ 0.21 dB/km
Chromatic Dispersion	≤ 3.5 ps/(nm·km)	≤ 18 ps/(nm·km)
Zero Dispersion Wavelength	1300 – 1324 nm	According to ITU-T G.652.D
Mode Field Diameter	9.2 ± 0.4 μm	10.4 ± 0.5 μm
PMD (M = 20, Q = 0.01%)	≤ 0.2 ps/√km	According to ITU-T G.652.D
Cut-off Wavelength (λ _{cc})	≤ 1260 nm	According to ITU-T G.652.D

5. Recommended Applications

- Outdoor distribution networks
- FTTx feeder and access links
- Campus and inter-building links
- Duct installation and protected outdoor routes
- EMI-sensitive environments requiring all-dielectric compact cable construction

Construction Identification Note: PLANET GYFXTY is defined as an all-dielectric central loose tube cable with dielectric glass yarn reinforcement and a single outdoor PE jacket. Any metallic strength member, corrugated steel tape armor, APL, or stranded loose-tube construction shall not be supplied under the GYFXTY model family.

6. Typical Fiber Count and Dimensional Guide

The following table is a design guide. Final outer diameter, weight and mechanical values depend on the confirmed fiber count and approved production design. The manufacturer shall not reduce performance below the minimum requirements stated in this datasheet.

Fiber Count	Tube Design	Typical O.D. (mm)	Typical Weight (kg/km)	Typical Use
2–12F	Central Loose Tube	6.6 ± 0.3	50 ± 10%	Outdoor distribution / FTTx
24F	Central Loose Tube	7.0 ± 0.3	55 ± 10%	Access backbone / campus links

7. Standards Compliance

- IEC 60794 series – Optical fibre cables
- ITU-T G.652.D for standard single mode fiber
- RoHS compliance according to project requirement
- Additional customer-specific approvals subject to confirmed production scope

8. Ordering Information

Base Part Number: PL-GYFXTY

Typical ordering description: PLANET GYFXTY – 12F – OS2 G.652.D – Central Loose Tube – Dielectric Glass Yarn Reinforcement – Water-Blocking – Outdoor PE Jacket

Fiber count, sheath marking, drum length and approved options shall be identified in the quotation, proforma invoice and final production release.

9. Enhanced Factory Requirements (Binding to Manufacturer)

Control Item	Binding Requirement
Raw Materials	Use only virgin PBT, virgin HDPE/MDPE jacket compound, qualified dielectric glass yarn and approved fiber. Recycled or reprocessed jacket material is not allowed.
Construction Control	Tube size, reinforcement coverage, water-blocking design, sheath thickness and concentricity shall be controlled to consistently meet this datasheet.
Performance Tests	Each approved design shall meet attenuation, tensile, crush, water penetration, bending and visual inspection requirements.
Documentation	Provide Certificate of Conformance, drum-wise test results, OTDR traces upon request, raw material certificates, and packing list by drum number.
Traceability	Each drum shall be fully traceable by production date, lot number, fiber batch, and final inspection record for minimum 15 years.
Quality Assurance	Factory shall maintain in-process inspection and final inspection. PLANET reserves the right to audit the factory and verify the records.
Change Control	No change in design, materials, construction, dimensions or performance is permitted without prior written approval from PLANET.

25-Year System Warranty

Subject to proper installation and certified components usage.

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

XX: Number of Core