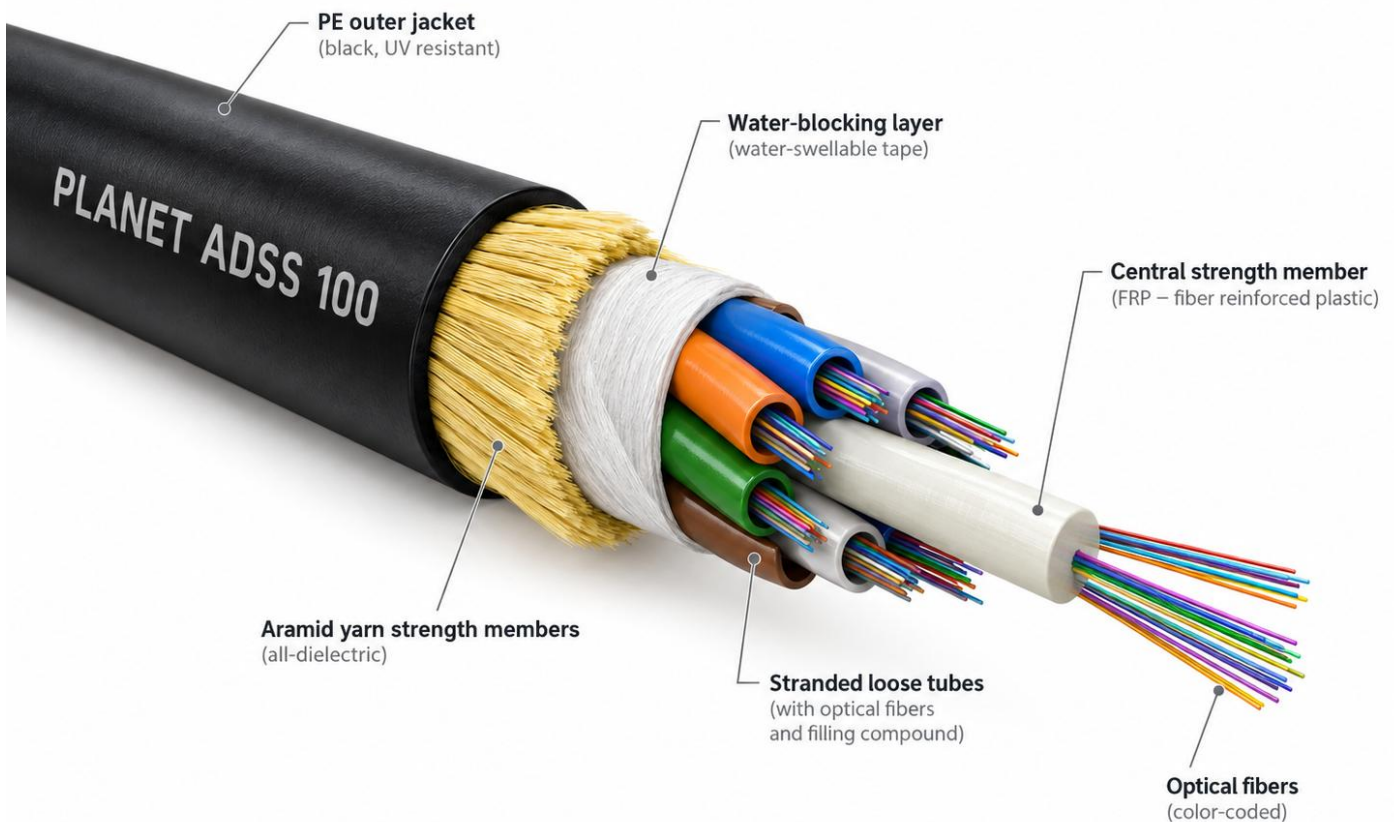


PRODUCT DESCRIPTION

PLANET ADSS 100 is an all-dielectric self-supporting outdoor fiber optic cable intended for aerial installation on poles without a metallic messenger. The family is designed for short-to-medium aerial spans up to 100 m, subject to the confirmed fiber count, suspension / tension hardware, route conditions and approved sag-tension design. Typical construction uses color-coded optical fibers in stranded PBT loose tubes around a central FRP strength member, longitudinal water blocking, aramid yarn as the primary tensile element, and a black virgin UV-resistant PE outer jacket.

MAIN CLASSIFICATION

Fiber Type Options	Structure	Cable Classification	Span / Installation Class
OS2 / OM3 / OM4 / OM5	Stranded Loose Tube + FRP + Aramid + Water Blocking + PE	ALL-DIELECTRIC / NON-METALLIC	SELF-SUPPORTING / UP TO 100 m



GENERAL SPECIFICATIONS & CABLE CONSTRUCTION

Environment	Outside Plant OSP , pole-to-pole aerial telecom, campus, industrial, road / CCTV and access networks.
Applications	Self-supporting aerial distribution and backbone routes with span class up to 100 m, subject to route engineering.
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 12F to 96F. Common counts 12F, 24F, 48F, 72F and 96F.
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 - dielectric.
Water Blocking	Water-swellable yarn / tape and/or filling compound to prevent longitudinal water ingress.
Strength Members	Aramid yarn as the primary tensile reinforcement for self-supporting aerial installation.
Outer Jacket	Virgin black HDPE / MDPE PE, UV-resistant and weather-resistant outdoor grade.
Aarmor / Metallic Content	None. Non-armored and fully all-dielectric; no steel messenger, steel tape, aluminum tape or metallic reinforcement.
Cable Marking	PLANET ADSS 100, fiber count, fiber type, span class, sequential meter marking and production traceability.
Span Class	Up to 100 m under the approved design load case; final route-specific sag-tension confirmation required.

MECHANICAL & ENVIRONMENTAL PERFORMANCE

Parameter	PLANET Minimum / Reference Requirement
Operating / Storage Temp.	-40°C to +70°C
Installation Temp.	-20°C to +60°C
Span Class	Aerial spans up to 100 m under the approved route / design load case
Minimum Bend Radius - Installation	20 × cable O.D.
Minimum Bend Radius - Static	10 × cable O.D.
Tensile Load - Long / Short	≥ 800 N / ≥ 2000 N
Crush Resistance - Long / Short	≥ 300 N/100 mm / ≥ 1000 N/100 mm
Water Penetration	No longitudinal leakage under applicable IEC 60794 water penetration test conditions
OS2 / OM3 / OM4 / OM5	ADSS 100 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 A1a.2	IEC 60793-2-10 A1a.3	IEC 60793-2-10 A1a.4

TYPICAL FIBER COUNT / 100 m SPAN DESIGN GUIDE

Fiber Count	Typical O.D.	Typical Weight	Span Class	Typical Use
12F	10.5 ± 0.6 mm	95 ± 12 kg/km	100 m	Short aerial spans
24F	11.0 ± 0.6 mm	105 ± 12 kg/km	100 m	Telecom / CCTV aerial routes
48F	12.0 ± 0.7 mm	118 ± 15 kg/km	100 m	Campus / access backbone
96F	13.5 ± 0.8 mm	145 ± 18 kg/km	100 m	Higher-count 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.
IEEE 1222	Design guidance for all-dielectric self-supporting fiber optic cable applications where applicable.
RoHS	Hazardous-substance compliance subject to applicable production declaration.
CE / Project Approval	Subject to applicable market / project conformity documentation and final approved configuration.

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 qualified FRP central strength member, approved aramid yarn, water-blocking materials and virgin outdoor-grade PE jacket.
- Mechanical type-test evidence for tensile, crush, impact, bend, repeated bend / flex and torsion to applicable IEC 60794 methods, plus span / sag-tension design verification for the approved ADSS 100 configuration.
- 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

- Aerial telecom distribution networks.
- Inter-building aerial links.
- Campus and industrial aerial routes.
- Road, CCTV, ISP and access backbone networks.
- Routes where a metallic messenger is not desired and electrical isolation is required.
- OS2 as the standard long-distance selection; OM3 / OM4 / OM5 for project-specific multimode aerial links.

SELECTION NOTE

ADSS 100 is an all-dielectric, non-metallic, non-armored, self-supporting aerial cable. It shall not contain a steel messenger, steel wire strength member, steel tape, aluminum tape or other metallic reinforcement. The 100 m span designation is a design class, not an unconditional installation guarantee; final allowable span depends on cable load, fiber count, route geometry, wind / ice conditions and compatible fittings.

QUALITY & CHANGE CONTROL

- Approved optical fiber, qualified FRP central strength member, qualified aramid yarn and virgin outdoor-grade HDPE / MDPE jacket; no silent recycled-material substitution.
- Aramid yarn shall remain the primary tensile element for the self-supporting aerial design; no metallic messenger or reinforcement is permitted.
- Longitudinal water blocking shall use approved water-swellable yarn / tape and/or filling compound according to the final stranded loose-tube construction.
- No change to fiber manufacturer/type, FRP size, aramid coverage, water-blocking system, PE compound, cable diameter, span performance or mechanical values without prior PLANET written approval.
- Final production drawing, sag-tension design 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.
- 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 ADSS 100 stranded loose-tube design range.
- Custom jacket printing and sequential meter marking.
- Project-specific AT / anti-tracking sheath only when separately engineered and documented; standard ADSS 100 uses outdoor PE.

ORDERING DESCRIPTION

Part Number Family	To be assigned by PLANET
Typical OS2 Description	PLANET ADSS 100 - 24F - OS2 G.652.D - Stranded Loose Tube - FRP + Aramid - All-Dielectric Self-Supporting - Up to 100 m Span - Black PE Jacket
Typical OM3 Description	PLANET ADSS 100 - 24F - OM3 50/125 - Stranded Loose Tube - FRP + Aramid - All-Dielectric Self-Supporting - Up to 100 m Span - Black PE Jacket
Typical OM4 Description	PLANET ADSS 100 - 24F - OM4 50/125 - Stranded Loose Tube - FRP + Aramid - All-Dielectric Self-Supporting - Up to 100 m Span - Black PE Jacket
Typical OM5 Description	PLANET ADSS 100 - 24F - OM5 50/125 - Stranded Loose Tube - FRP + Aramid - All-Dielectric Self-Supporting - Up to 100 m Span - Black PE Jacket

PRODUCT IDENTIFICATION PRINCIPLE

The approved product description shall state the actual construction and shall not rely only on the ADSS family name: fiber type + fiber count + stranded loose-tube structure + FRP central member + water blocking + aramid tensile reinforcement + all-dielectric status + rated span class + outer jacket + intended aerial application.

25-Year System Warranty

Subject to proper installation and certified components usage.

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

XX: Number of Core