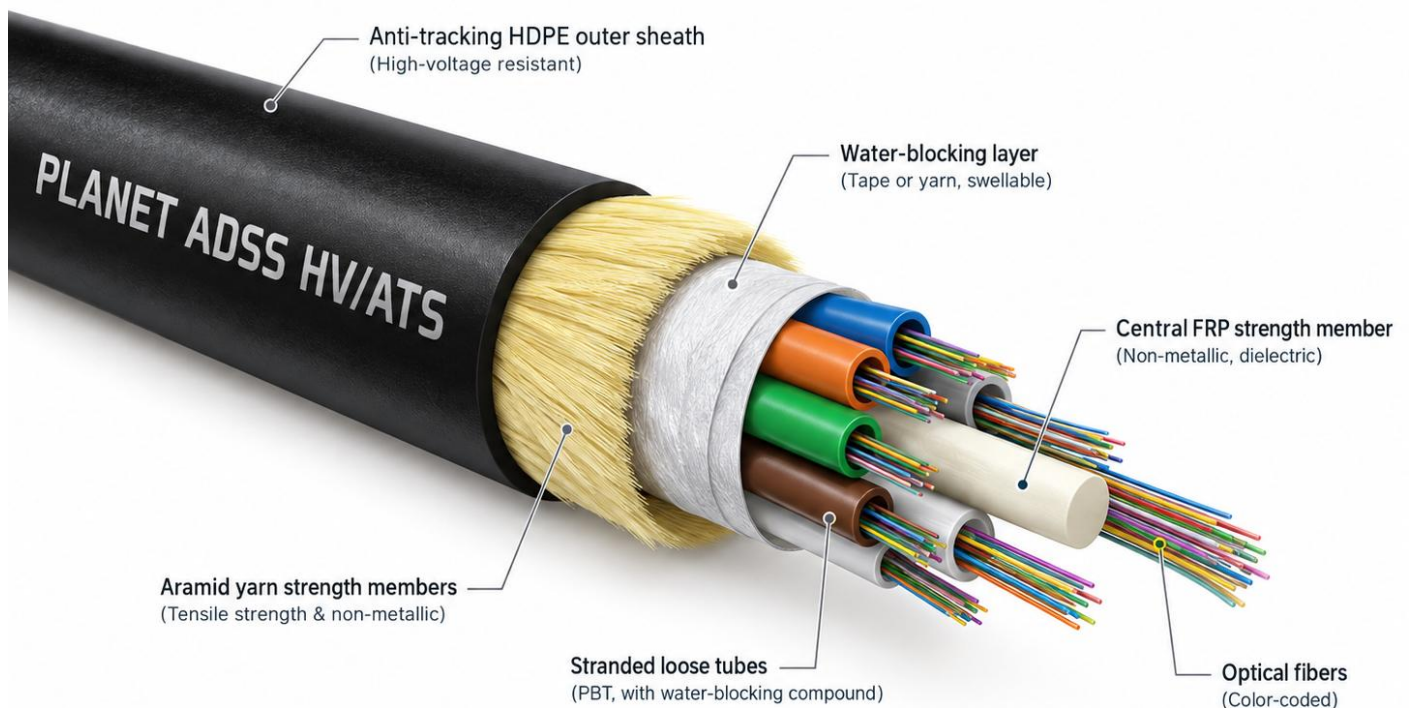


PRODUCT DESCRIPTION

PLANET ADSS HV/ATS is an all-dielectric self-supporting outdoor fiber optic cable intended for aerial installation in power utility and high-voltage environments where an anti-tracking sheath is required. The stranded loose-tube design uses a dielectric FRP central strength member, aramid yarn tensile reinforcement, longitudinal water blocking and a dedicated AT / AT-HDPE outer sheath. Final span, sag-tension design, hardware selection and route suitability shall be confirmed for the actual electrical and mechanical environment.

MAIN CLASSIFICATION

Fiber Type Options	Structure	Cable Classification	Span / Installation Class
OS2 / OM3 / OM4 / OM5	Stranded Loose Tube + FRP + Aramid + Water Blocking + AT/HDPE	ALL-DIELECTRIC / NON-METALLIC / NON-ARMORED	HV / POWER UTILITY / ANTI-TRACKING



GENERAL SPECIFICATIONS & CABLE CONSTRUCTION

Environment	Outside Plant (OSP), power utility, high-voltage corridors, substation, transmission, SCADA / protection and other engineered aerial routes.
Applications	All-dielectric self-supporting aerial communication routes in electrical-field environments requiring a dedicated anti-tracking outer sheath.
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 144F. Common counts: 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 - dielectric.
Water Blocking	Water-swellable yarn / tape and/or filling compound to prevent longitudinal water ingress.
Strength Members	Aramid yarn serving as the primary tensile reinforcement for self-supporting aerial installation.
Outer Jacket	Dedicated black anti-tracking AT sheath / AT-HDPE compound for high-voltage utility environments; UV- and weather-resistant.
Aarmor / Metallic Content	None. Non-armored and fully all-dielectric; no steel messenger, steel tape, aluminum tape or metallic reinforcement.
Cable Marking	PLANET ADSS HV/ATS, fiber count, fiber type, sequential meter marking and production traceability.
Span Class	HV / utility aerial design. Final allowable span and sag-tension shall be confirmed for the actual route, electrical field, loading and hardware.

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	Power utility / high-voltage aerial routes requiring anti-tracking sheath; final span is route-engineered
Minimum Bend Radius - Installation	20 × cable O.D.
Minimum Bend Radius - Static	10 × cable O.D.
Tensile Load - Long / Short	≥ 1500 N / ≥ 4000 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 HV/ATS 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

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 / HV-ATS DESIGN GUIDE

Fiber Count	Typical O.D.	Typical Weight	Span Class	Typical Use
24F	11.5 ± 0.6 mm	118 ± 15 kg/km	HV/ATS	Utility aerial links
48F	12.8 ± 0.7 mm	132 ± 16 kg/km	HV/ATS	Power line communications
96F	14.2 ± 0.8 mm	165 ± 20 kg/km	HV/ATS	High-count utility backbone
144F	15.8 ± 0.8 mm	190 ± 22 kg/km	HV/ATS	Utility backbone / transmission route

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.
Power Utility / Project Approval	Route-specific power utility approval, electrical-field assessment and final approved configuration are project dependent.

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 dedicated HV / utility-grade anti-tracking AT / AT-HDPE sheath compound.
- Mechanical type-test evidence for tensile, crush, impact, bend, repeated bend / flex and torsion to applicable IEC 60794 methods, plus route-specific sag-tension design verification where required.
- 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

- Power utility aerial routes.
- High-voltage corridor communication links.
- Substation and transmission support networks.
- Utility SCADA / protection communications.
- Aerial routes where an anti-tracking sheath is required.
- OS2 as the standard long-distance selection; OM3 / OM4 / OM5 for project-specific multimode utility links.

SELECTION NOTE

ADSS HV/ATS is an all-dielectric, non-metallic, non-armored, self-supporting aerial cable with a dedicated anti-tracking sheath for power utility / high-voltage environments. It shall not contain a steel messenger, steel wire strength member, steel tape, aluminum tape or other metallic reinforcement. Standard PE-only ADSS constructions shall not be identified as ADSS HV/ATS.

QUALITY & CHANGE CONTROL

- Approved optical fiber, qualified FRP central strength member, qualified aramid yarn, water-blocking materials and dedicated HV / utility-grade AT / AT-HDPE sheath compound; no recycled or silent material substitution.
- Aramid yarn shall remain the primary tensile element for the all-dielectric self-supporting aerial design; no metallic messenger or metallic 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.
- The anti-tracking sheath compound shall be separately identified, controlled and documented; substitution with ordinary PE jacket material is not permitted without prior PLANET written approval.
- No change to fiber manufacturer/type, FRP size, aramid coverage, water-blocking system, AT sheath compound, cable diameter 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 ADSS HV/ATS stranded loose-tube design range.
- Custom jacket printing and sequential meter marking.
- Route-specific AT / anti-tracking sheath grade, dimensions and hardware interface subject to approved electrical and mechanical design.

ORDERING DESCRIPTION

Part Number Family	To be assigned by PLANET
Typical OS2 Description	PLANET ADSS HV/ATS - 48F - OS2 G.652.D - Stranded Loose Tube - FRP + Aramid - All-Dielectric Self-Supporting - Anti-Tracking AT/HDPE Sheath - Power Utility Application
Typical OM3 Description	PLANET ADSS HV/ATS - 48F - OM3 50/125 - Stranded Loose Tube - FRP + Aramid - All-Dielectric Self-Supporting - Anti-Tracking AT/HDPE Sheath - Power Utility Application
Typical OM4 Description	PLANET ADSS HV/ATS - 48F - OM4 50/125 - Stranded Loose Tube - FRP + Aramid - All-Dielectric Self-Supporting - Anti-Tracking AT/HDPE Sheath - Power Utility Application
Typical OM5 Description	PLANET ADSS HV/ATS - 48F - OM5 50/125 - Stranded Loose Tube - FRP + Aramid - All-Dielectric Self-Supporting - Anti-Tracking AT/HDPE Sheath - Power Utility Application

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 strength member + aramid tensile reinforcement + water-blocking system + all-dielectric self-supporting application + anti-tracking AT / AT-HDPE outer sheath + approved route / span design.

25-Year System Warranty

Subject to proper installation and certified components usage.

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

XX: Number of Core