

All-Dielectric Loose Tube

All-Dielectric · Single Jacket · OSP Rated · No Metal Components — 12 to 144

- ALL-DIELECTRIC
- NO METAL
- HV CORRIDOR SAFE
- OS2 / OM4

FRP/Aramid
Strength Members

No Ground Req.
HV ROW Safe

-40°C to 70°C
Temp Range

12–144F
Strand Range

PRODUCT OVERVIEW

Mirabel Energy USA All-Dielectric Loose Tube fiber optic cable contains no metallic components — eliminating induced voltage concerns on high-voltage transmission and distribution corridors, near high-power equipment, and in lightning-prone environments. FRP central member and aramid yarn strength members provide tensile and compressive load resistance without requiring grounding. Gel-free dry-block water blocking and a rugged PE outer jacket provide full OSP moisture and UV protection for duct, lashed aerial, and conduit installations.

APPLICATIONS

- Utility substation and transmission conduit runs
- SCADA / relay fiber on HV corridors (no grounding)
- Underground conduit in electrical substations
- Lashed aerial on distribution pole lines
- Lightning-prone areas — no ground potential transfer
- Renewable energy site OSP fiber in conduit
- Campus OSP runs in duct or conduit

CONSTRUCTION DESCRIPTION

- Fiber Element:** 250µm coated OS2 or OM4, per buffer tube
- Buffer Tube:** Loose tube, 6 or 12 fibers per tube
- Water Block:** Dry-block tape — gel-free, clean termination
- Central Strength:** FRP (Fiberglass Reinforced Plastic) rod
- Outer Strength:** Aramid yarn over-wrap — no metal
- Jacket:** Polyethylene (PE) black — OSP/UV-rated
- Cert.:** No metallic components — all-dielectric
- Color Code:** TIA-598-C 12-color sequential

TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION — OS2	SPECIFICATION — OM4
Fiber Type	OS2 9/125µm ITU-T G.652.D	OM4 50/125µm IEC 60793-2-10
Attenuation @ 1310nm	≤0.40 dB/km	—
Attenuation @ 1550nm	≤0.40 dB/km	—
Attenuation @ 850nm	—	≤3.0 dB/km
Metallic Components	None — fully dielectric	None — fully dielectric
Strength Members	FRP central rod + aramid yarn	FRP central rod + aramid yarn
Tensile Strength	2,700 N (installation)	2,700 N (installation)
Min. Bend Radius	20x cable OD (installation)	20x cable OD (installation)
Operating Temperature	-40°C to +70°C	-40°C to +70°C
Jacket Material	HDPE black, UV-stable	HDPE black, UV-stable
Installation Method	Duct / conduit / lashed aerial	Duct / conduit / lashed aerial
Standards	Telcordia GR-20, IEC 60794-2	Telcordia GR-20, IEC 60794-2

STRAND COUNT — ORDERING INFORMATION

FIBER COUNT	AVAILABILITY	OD (mm)	WEIGHT (kg/km)	MBR (mm)	ORDER CODE
12 Strand	IN STOCK - Reno/Houston	8.2	76	164	MB-ADL-012