

Article Overview

Aerial communication optical cables must meet mechanical, environmental, and safety standards, including proper cable type selection, tensioning, sag control, UV protection, grounding, and adherence to installation guidelines.

Cable Types and Construction

- o ADSS (All-Dielectric Self-Supporting): Non-metallic, carries its own weight, suitable near power lines due to electrical isolation, requires careful attention to tension and creep behavior .
- o Figure-8 / Self-Supporting: Integrated steel messenger in a figure-eight cross-section, supports longer spans, allows single-pass installation .
- o Lashed Cables: Fiber cable lashed to a pre-installed messenger strand, flexible for adding fibers to existing aerial networks .
- o Jacket Material: Polyethylene (PE) with carbon black for UV protection is standard; black jackets are preferred for aerial exposure .

Mechanical and Environmental Requirements

- o Tensile Strength: Minimum 1,500N for short spans, up to 12,000N for long-distance ADSS cables .
- o Temperature Range: -40°C to +80°C for outdoor durability .
- o Bend Radius: ≥ 20 times the cable diameter to prevent microbending loss .
- o Sag and Tension: Sag generally

UNDERGROUND COMMUNICATIONS CABLE DESIGN THE DESIGNER DETERMINES THE FINAL COMMUNICATIONS CABLE

Learn what aerial fiber optic cable is, its main types including ADSS, Figure 8 and OPGW, core features, installation

A 2026 field guide to NESC aerial fiber clearance: which edition applies, communication space rules, vertical and mid

The scene of aerial cables hanging in the pole is ubiquitous in our daily lives. Unlike other common fiber optic cables,

Aerial Operation Standards for Communication Optical Cables

Documentation of the fiber optic cable plant should follow TIA-606, Administration Standard for the Telecommunications

BICSI G2.2-22 provides installation methods and instructions for installing OSP cable within aerial pathway. Within this 150 page

Cables must be sufficiently high above the ground to clear all obstacles including traffic that may pass underneath it. All cables must

In addition, aerial fiber optic cable resists environmental concerns such as ever-changing weather conditions in the form of excess

The combination of strand and optical fiber into a single cable allows rapid one-step installation and results in a more durable aerial

This document excludes figure-8 optical cables to be used on telephone utility poles. The IEC TR 62839-1 gives

Recommendation ITU-T L.26 describes characteristics, construction and test methods of optical fibre cables for aerial application

This standard applies to the installation of telecommunication cable within aerial pathways. The methods within are

Optical fibre cables - Part 4: Sectional specification - Aerial optical cables along electrical power lines. IEC 60794

Fiber optic cable sequential numbers are required at each pole location and vault wall. Sequential numbers will identify conduit

The old story about the most likely fiber optic communications system failure being caused by "backhoe fade" is not a joke - it

ITU-T has been active in the standardization of optical communications technology and the techniques for its optimal application

Web: <https://bssoda.pl>

