

RIVO MULTITRADE OPTICAL SYSTEMS

Aerial ground wire optical cable model



Overview

The 26 kV Isolator Kit is designed for aerial optical cable system applications in which complete electrical discontinuity is required .

Key Takeaways

Optical Ground Wire (OPGW) cables, including AlumaCore, HexaCore, CentraCore, and MASS, serve both as lightning protection and high-speed fiber optic communication paths for overhead power lines. Overview of OPGW

An Optical Ground Wire (OPGW) is a dual-function cable installed at the top of high-voltage transmission lines. It combines grounding and lightning protection with embedded optical fibers for telecommunications. The cable contains a tubular structure housing optical fibers, surrounded by layers of steel and aluminum wires. The conductive layers bond towers to earth ground and shield power conductors from lightning, while the optical fibers provide high-speed data transmission for utility control, voice, or leased communication services .

Common OPGW Models

- AlumaCore OPGW
- Features a central aluminum pipe with color-coded optical tubes.
- Provides excellent fiber protection, suitable for high-tension and long-span installations.
- Preferred for rugged conditions and basic to advanced installations .

- HexaCore OPGW
- Uses gel-filled stainless steel tubes to house optical fibers.
- Stranded aluminum-clad steel and aluminum alloy wires create a dual-layer design.
- Offers high fiber protection and mechanical strength, similar to traditional conductors .
- CentraCore OPGW
- Combines stainless steel tube technology with aluminum pipe benefits.
- Compact, lightweight, and high fiber density, supporting up to 96 fibers.
- Designed to reduce diameter and weight on overloaded towers while maintaining reliability .
- Metallic Aerial Self-Supporting (MASS) Cable
- Alternative to OPGW when replacing existing ground wires is impractical.
- Compact, lightweight, and self-supporting with no electrical function.
- Provides a telecommunications path without interfering with existing power lines .

Construction and Features

- Fiber Protection: Optical fibers are placed in stainless steel or aluminum tubes, often gel-filled, to prevent damage from mechanical stress or electrical faults.
- Mechanical Strength: Stranded steel and aluminum layers allow the cable to withstand wind, ice, and tension.
- Electrical Function: OPGW provides a path to ground for lightning and short circuits without harming the optical fibers.
- Applications: Suitable for transmission lines of 100kV, 220kV, and 500kV, and can be used for both utility and third-party communication networks .

Summary

Choosing the right OPGW model depends on fiber count requirements, mechanical load, span length, and environmental conditions. AlumaCore is ideal for rugged, high-tension applications, HexaCore for high fiber protection with multi-layer stranded design, CentraCore for compact high-density installations, and MASS cable for self-supporting telecommunications without electrical grounding. Manufacturers like AFL provide detailed specifications, WIR files for sag and tension calculations, and custom solutions to match specific project needs .

Article Content

OPGW Fiber Optic Cable | Optical Ground Wire for Aerial Networks

Optical Ground Wire (OPGW) is a dual functioning cable, meaning it serves two purposes. It is designed to replace traditional static /

AERIAL FIBER OPTIC CABLE

The 26 kV Isolator Kit is designed for aerial optical cable system applications in which complete electrical discontinuity is required .

Optical ground wire

An OPGW cable contains a tubular structure with one or more optical fibers in it, surrounded by layers of steel and aluminum wire.

Aerial AFL Fiber Optic Cables

As the leading world manufacturer of fiber optic cable, AFL is uniquely positioned to provide a full line of all

OPGW Fiber, OPGW Cable, Optical Ground Wire, OPTGW-Aerial

AFL's stainless steel tubes are suitable for use as a component in aerial applications such as Optical Ground Wire or for buried

Optical Ground Wire (OPGW): Selection, Installation & Performance

Explore OPGW cable design, fiber counts, mechanical specs, installation best practices, combining grounding and

Optical Ground Wire Loose Tube AFL-ADSS SkyWrap

ADSS® || SkyWrap® Optical Ground Wire (OPGW) AFL has supplied over 415,000 kilometers across the world and is the globa.

OPGW Fiber, OPGW Cable, Optical Ground Wire, OPTGW-Aerial Cable

ATS carries OPT-GW Aerial Cable- Call (866) FIBER-21 Optical Power Ground Wire (OPTGWos OPGW) is a dual functioning cable

The FOA Reference For Fiber Optics -Outside Plant Construction

Safety Aerial cable installation can be hazardous as personnel may working at considerable height above the ground on ladders,

Aerial Fiber Optic Cable Overview and Installation Guide

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

What Is Aerial Fiber Optic Cable? Types, Features & Applications

Aerial fiber optic cable is a specialized outdoor optical cable designed exclusively for overhead deployment. Unlike

Optical Ground Wire, OPT-GW-Aerial Cable, OPT-GW, OPT-GW Aerial

American Data Supply Carries OPT-GW Aerial Cable- Call (866) FIBER-21 Optical Ground Wire (OPT-GW) is a dual functioning

OPGW Cable Aerial Optical Power Ground Wire Supplier

The OPGW Cable (optical power ground wire), also known as the optical ground wire, is a type of cable or wire that is used in

Globe Fiber Optic Aerial Installation Standards

This document provides standards and guidelines for aerial installation of fiber optic cables including pole setting, grounding, cable

AlumaCore Optical Ground Wire (OPGW)

AFL AlumaCore Optical Ground Wire (OPGW) is a dual purpose cable replacing traditional shield or earth wire with the added benefit

Aerial Fiber Optic Cable Overview and Installation Guide

Network designers use Aerial fiber optic cable for aerial applications or cabling installation, utilizing the pole infrastructure common

Aerial fiber optic cable offering OPGW, ADSS, Skywrap | AFL Global

As the leading world manufacturer of fiber optic cable, AFL is uniquely positioned to provide a full line of all-dielectric self-supporting

Aerial Fiber Optic Cable Installation Guide

This document discusses aerial fiber optic cables, including their classification, features, and installation procedures. Aerial fiber optic

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