Application

The Optical Ground Wire (OPGW) serves as a versatile solution in electrical transmission lines, fulfilling both the roles of a ground wire and a conduit for the transmission of voice, video, or data signals. Its innovative design, featuring an Al-covered Stainless Steel tube, enhances fault current and lightning resistance performance while offering excellent anti-corrosion properties. OPGW is ideally suited for transmission lines requiring small diameters and large fault currents.

Construction

The central Al-covered steel tube serves as the backbone of the OPGW, surrounded by single or double layers of AWA Alumoweld ACS or a combination of ACS wires and aluminum alloy wires. This robust construction ensures durability and reliability in diverse operating conditions.

Feature

Cost-Effective Installation: Overhead transmission of optical fibers offers significant cost advantages over underground installations, making it a preferred choice for extending network connectivity.
Enhanced Durability: The Al-covered Stainless Steel tube design not only increases the cross-section of aluminum for improved fault current and lightning resistance but also provides superior anti-corrosion performance, ensuring long-term reliability.
Versatile Application: OPGW's dual-purpose functionality allows it to protect phase lines from short circuits and lightning strikes while facilitating the transmission of audio and video data. This versatility makes it an invaluable asset, particularly in areas where underground optical fiber installation is impractical or cost-prohibitive, such as mountainous regions.

Specification

-IEC 60793-1: Optical fiber Part 1: Generic specifications
-IEC 60793-2: Optical fiber Part 2: Product specifications
-ITU-T G.652: Characteristics of a single-mode optical fiber cable
-ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
-EIA/TIA 598 B: Color code of fiber optic cables
-IEC 60794-4-10: Aerial optical cables along electrical power lines – Family specification for OPGW
-IEC 60794-1-2: Optical fiber cables-Part 1-2: Generic specification-Basic optical cable test procedures
-IEEE1138-2009: IEEE Standard for testing and performance for optical ground wire (OPGW) for use on electric utility power lines
-IEC 61232: Aluminum-clad steel wire for electrical purposes
-IEC 60104: Aluminum magnesium-silicon alloy wire for overhead line conductors
-IEC 61089: Round wire concentric lay overhead electrical stranded conductors

Eastful Cable Lab

We have CNAS Accredited Facility to assure conformity assessment services with a focus on quality, expertise, and customer satisfaction.
CNAS has international mutual recognition among IAF, ILAC, APLAC and PAC.

Accreditation

We meet the requirements of ISO9001, ISO14001, ISO45001 and ISO50001 and our cables have certificate of CCC, RoHS, CASC, UL, cUL, TÜV Rhineland and CCS.

National Green Factory

Our facility has been awarded of National Green Factory by Ministry of Industry and Information Technology of China.
We are committed to the development of high-end, intelligent and green manufacturing industry.

*The overall energy consumption level of green factories is better than the energy efficiency benchmark level.

Technical Parameters

Single Layer				
Fiber Count	Diameter	Weight	RTS	Short Circuit
Max.	mm	kg/km	kN	kA^2s
24	11.6	498	78.7	37.6
28	11.6	451	63.6	41.6
28	11.6	496	78.6	36.2
48	13.8	511	58.9	103.7
48	18	679	75.3	308.2
48	11.9	458	63.2	46.7
60	11.4	444	68.5	36.4
60	12.1	383	42.4	59.9
72	13.2	597	95.8	54.8
72	15.2	593	65.9	146.4
96	13	563	90	50.6
96	15.8	781	110.3	150.8

Double Layer				
Fiber Count	Diameter	Weight	RTS	Short Circuit
Max.	mm	kg/km	kN	kA^2sec
24	18	809	110.8	296
28	15.8	625	84.3	172
28	15.8	591	72.7	177.4
48	18.4	845	115.3	322.2
60	19.7	954	128.6	414.2
72	17.1	778	96.2	224.8
96	19	959	118.7	336.1