

EIA – Electronics Industries Association - Former standards and trade organization composed as an alliance of trade associations for electronics manufacturers in the United States. They developed standards to ensure the equipment of different manufacturers was compatible and interchangeable. The EIA ceased operations on February 11, 2011.

EKG – Electrocardiography, also known as ECG. Refer to ECG for the detailed definition.

Elastic deformation – Change in the shape or size of an object due to an applied force.

Electrostatic meter – Meter that measures voltage, field, and charge without transferring the charge to the instrument.

Elongation – Distance a material can be stretched before it breaks. Expressed in percent (%).

Embossing – Identification by means of molded letters or numbers in the jacket surface.

EMI – Electromagnetic Interference - Also referred to as radio frequency interference or RFI when in high frequency or radio frequency is disturbance that affects an electrical circuit due to either electromagnetic induction or electromagnetic radiation emitted from an external source.

EPA – Environmental Protection Agency - Agency of the United States federal government which was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress.

Environmental stress cracking resistance – Ability of a material to resist crack formation and crack propagation when subjected to stress within a contaminating environment.

ER – Exposed Run - Cable approved for open wire applications.

ETFE – Ethylene Tetrafluoroethylene Fluoropolymer - Can be used as an insulation or jacket material.

Ethernet – Local area network used to connect computers, printers, workstations, and other devices within the same building. Ethernet operates over twisted wire and coaxial cable.

ETL – Electronic Testing Laboratories - Now known as Intertek Group is a multinational inspection, product testing and certification company.

ETO – Ethylene Oxide - Gas used mainly in a sterilization process for medical and pharmaceutical products that cannot support high temperature steam sterilization.

EVE – Electric Vehicle Elastomer - Article 400 of the National Electrical Code® designation for electric vehicle charging systems, 600V, 60° to 105°C.

EVJE – Electric Vehicle Junior Elastomer - Article 400 of the National Electrical Code® designation for electric vehicle charging systems, 300V, 60° to 105°C.

EVJT – Electric Vehicle Junior Thermoplastic - Article 400 of the National Electrical Code® designation for electric vehicle charging systems, 300V, 60° to 105°C.

EVT – Electric Vehicle Thermoplastic - Article 400 of the National Electrical Code® designation for electric vehicle charging systems, 600V, 60° to 105°C.

Exposed Run rated (ER) – Approved cable that does not require armoring and may be installed outside of conduit or another raceway. Prior to 2005, the designation was “open wiring.”

Extrusion – Process of continuously forcing either a plastic or elastomer and a conductor or core through a die, thereby applying an insulation or jacket to the conductor or core.

Farad (F) – Unit of measure for capacitance.

Fatigue resistance – Ability of a repeatedly deformed material to resist crystallization and accompanying failure.

Fault current – Maximum electrical current that will flow in a short-circuited system prior to the actuation of any current-limiting device.

FBI – Federal Bureau of Investigation - Governmental agency belonging to the United States Department of Justice that serves as both a federal criminal investigative body and an internal intelligence agency (counterintelligence).

FDA – Food and Drug Administration - Agency of the United States Department of Health and Human Services, one of the United States federal executive departments. The FDA is responsible for protecting and promoting public health through the regulation and supervision of food safety, tobacco products, dietary supplements, prescription and over-the-counter pharmaceutical drugs (medications), vaccines, biopharmaceuticals, blood transfusions, medical devices, electromagnetic radiation emitting devices and veterinary products.

FEMA – Federal Emergency Management Agency - Agency of the United States Department of Homeland Security. The primary purpose of FEMA is to coordinate the response to a disaster that has occurred in the United States and that overwhelms the resources of local and state authorities.

FEP – Fluorinated Ethylene Propylene - Can be used as an insulation or jacket material.

Fibrous filler – Material used to fill interstices in cables made from fibers, such as jute, polypropylene, cotton, glass, etc.

Fiber optic – Light wave or optical communications system in which electrical information is converted to light energy, transmitted to another location through optical fibers, and is then converted back into electrical information.



There are three basic kinds of fiber optic cables:

Plastic – Uses visible light as the signal-carrying medium. Because of the long wavelengths and the relatively large size of the fiber, the light bounces around while passing down the fiber (called “dispersion”). The effect is that the signal can only go a few feet, maybe 20 or 30 feet.

Multi-mode – Made of glass and can come in various diameters. Multimode fiber uses much shorter wavelengths than plastic fiber. In multimode fiber there are two places in the spectrum which give the lowest loss and are called “windows.”

Single-mode – The king of fiber. It has two windows, they are at different wavelengths, 1300 nm and 1550 nm.