

10-3. __ FIBER OPTIC GLOSSRY

Breakout.--The cable "breakout" is produced by (1) removing the jacket just beyond the last tie-wrap point, (2) exposing 3 to 6 ft of the cable buffers, aramid strength yarn and central fiberglass strength member, and (3) cutting aramid yarn, central strength member and the buffer tubes to expose the individual glass fibers for splicing or connection to the appropriate device.

Connector.--A mechanical device used to align and join two fibers together to provide a means for attaching to and decoupling from a transmitter, receiver, or another fiber (i.e., patch panel).

Connectorized.--A term that describes the termination point of a fiber after connectors have been affixed.

Connector Module Housing (CMH).--A patch panel used in the FDU to terminate singlemode fibers with most common connector types. It may include a jumper storage shelf and a hinged door.

Couplers.--Couplers are devices which mate two fiber optic connectors to facilitate the transition of optical light signals from one connector into another. Couplers may also be referred to as: adapters, feed-thrus, and barrels. They are normally located within FDUs mounted in panels. They may also be used unmounted, to join two simplex fiber runs.

End-to-End Loss —The maximum permissible end-to-end system attenuation is the total loss in a given link. This loss could be the actual measured loss, or calculated using typical (or specified) values. A designer should use typical values to calculate the end-to-end loss for a proposed link. This number will determine the amount of optical power (in dB) needed to meet the System Performance Margin.

Fan Out Termination —Permits the branching of fibers contained in an optical cable into individual cables and can be done at field locations; thus, allowing the cables to be connectorized or terminated per system requirements. A kit provides pull-out protection for individual bare fibers to support termination. It provides three layers of protection consisting of a Teflon inner tube, a dielectric strength member, and an outer protective PVC jacket.

FBC.--Fiber Backbone Cable.

Fiber Distribution Unit (FDU).—Combination of a Connector Module Housing (CMH) and a Splice Module Housing (SMH) in a rack mountable enclosure.

Fiber Storage Enclosure (FSE).--Designed for holding excess cable slack for protection. The FSE allows the user flexibility in equipment location and the ability to pull cable back for resplicing.

F/O.--Fiber optic.

FOIP.--Fiber optic inside plant cable.

FOOP.--Fiber optic outside plant cable.

FOTP.--Fiber optic test procedure(s) as defined by EIA/TIA standards.

FPC.--Fiber Pigtail Cable

FTC.--Fiber Trunkline Cable.

Light Source.--A transportable piece of fiber optic test equipment that, when coupled with a power meter, is used to perform end-to-end attenuation testing. It contains a stabilized light source operating at the designed wavelength of the system under test. It also couples light from the source into the fiber to be received at the far end by the receiver.

Link.--A passive section of the system, the ends of which are to be connected to active components. A link may include splices and couplers. For example, a video link may be from video F/O transmitter to video F/O receiver.

Link Loss Budget.--A calculation of the overall permissible attenuation from the fiber optic transmitter (source) to the fiber optic receiver (detector).

Loose Tube Cable.--Type of cable construction in which fibers are placed in buffer tubes to isolate them from outside forces (stress). A flooding compound or material is applied to the interstitial cable core to prevent water migration and penetration.

Mid-span Access Method —Description of a procedure in which fibers from a single buffer tube are accessed and spliced to an adjoining cable without cutting the unused fibers in the buffer tube, or disturbing the remaining buffer tubes in the cable.

MMFO —Multimode Fiber Optic Cable.

Optical Time Domain Reflectometer (OTDR).--A piece of fiber optic test equipment similar in appearance to an oscilloscope that is used to measure the total amount of power loss between two points. It provides a visual and printed display of the relative location of system components such as fiber sections, splices and connectors as well as the losses that are attributed to each component.

Patch cord.--A short jumper used to join two Connector Module Housing (CMH) couplers, and or a CMH and an active optical electronic devices.

Pigtail.--Relatively short length of fiber optic cable that is connectorized on only one end. All pigtails shall be tight buffer cable.

Power Meter.--A transportable piece of fiber optic test equipment that, when coupled with a light source, is used to perform end-to-end attenuation testing. It contains a detector that is sensitive to light at the designed wavelength of the system under test. Its display indicates the amount of power injected by the light source that arrives at the receiving end of the link.

Segment.--A section of fiber optic cable that is not connected to any active device and may or may not have splices per the design.

SMFO.—Singlemode Fiber Optic Cable.

Splice.--The permanent joining of fiber ends to identical or similar fibers.

Splice Enclosure.--An environmentally sealed container used to organize and protect splice trays. The container allows splitting or routing of fiber cables from multiple locations.

Splice Module Housing (SMH).--Stores splice trays as well as pigtailed and short cable lengths.

Splice Tray.--A container used to organize and protect spliced fibers.

Splice Vault.—An underground container used to house excess cable and splice enclosures.

System Performance Margin.—A calculation of the overall "End to End" permissible attenuation from the fiber optic transmitter (source) to the fiber optic receiver (detector). The system performance margin should be at least 6 dB. This includes the difference between the active component link loss budget, the passive cable attenuation (total fiber loss) and the total connector/splice loss.

Tight Buffer Cable.--Type of non-breakout cable construction where each glass fiber is tightly buffered (directly coated) with a protective thermoplastic coating to 900 μm with the exception of the protective thermoplastic coating. The tight buffer cable shall meet all the characteristics of the fiber in the fiber optic outside plant cable specified elsewhere in these specifications.