

Handling + Storing Fiber Optic Cables



Proper maintenance is important to the performance of fiber optic cables. This includes handling and storage to keep contaminants away from the connectors and for protection against breaking fiber optic glass strands.

Rule #1 Keep it Clean

A 1-micrometer dust particle on a single mode core can completely block the fiber core. Note—a typical human hair is 50 to 75 micrometers.

Fiber optic connectors can easily be contaminated by dust, oils from human hands, film residue (condensed from vapors in the air), and powdery coatings left after water or other solvents evaporate.

Always clean all connectors on the cable and cables or ports you may be connecting it to.

Rule #2 Be Gentle

While fiber optic cable is extremely durable and tactical fiber optic cable is built to military specs for harsh environments, the actual fiber is made of strands of glass that are approximately the size of a human hair.

All fiber cables consist of cladding, coatings, and jackets to protect the delicate glass strands for strength and to manage pull and bend radii. Still, if mishandled, such as exceeding the bend radius, the glass can fracture affecting signal transmission.

Rule #3 Leave Dust Caps on Until Ready to Connect

When dust caps are removed, the connector ferrules should be cleaned carefully and inspected before connecting to another cable or device. Use fiber optic cleaning products such as dry fiber cleaners, sprays, wet wipes, or cassette cleaners.

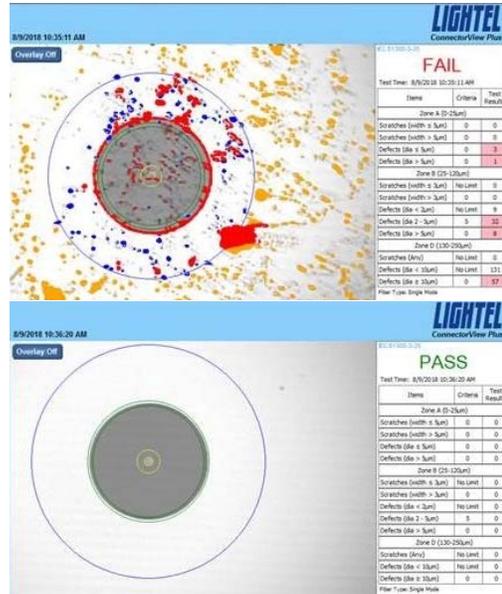
Rule #4 Avoid Tangled Cables

Keep the cables safely coiled using ties with Velcro fasteners. Avoid using zip ties but when that is the only solutions and cinch then loosely so as to not compress the cable. Compressed cables could cause a loss in signal.

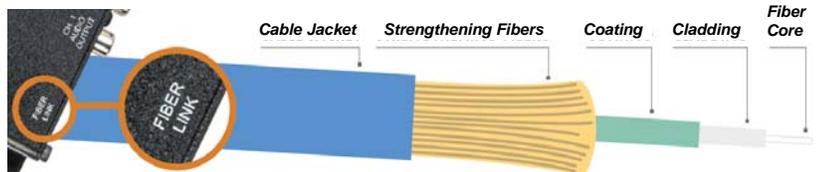
Rule #5 Provide Dry, Crush Free Storage

Many cables have water resistance jackets. However, store cables in dry areas as moisture can corrode the terminations. Also make sure there is room for the cable to avoid long term crushing damage.

To check to see if the cable is damaged, use a visual fault locator (VFL) to identify any points of failure or a power meter tester to determine signal loss.



Fiber End Face Before & After Cleaning



Fiber Optic Cable Construction



Leave Dust Caps on Until Ready to Connect & Clean all Connectors & Ports



When using a Visual Fault Locator a red light indicates a potential break or a bend radius violation in the fiber cable.

Inspect Cables Before Use to Find Failures and Determine Signal Loss