



## Fiber Myths Busted

**Fiber optic cabling has been around for decades.** It is the backbone of our modern connected world. There isn't a phone call placed or an email received that doesn't involve a conversion from audio to electrical to light and back again.

The truth is, fiber is easier to work with than you think. In fact, it is easier than ever before thanks to Cleerline SSF™ fiber. We're here to bust common myths about fiber optics and to explain why adopting fiber for use today allows for easier transitions to new technology.

It's time for a paradigm shift in thought about connectivity. With Category or UTP infrastructure, cable is constantly being reinvented, twisted more or shielded to accommodate higher bandwidth. Over the last decade, we have gone through coax, to Cat 5e, Cat 6, Cat 6a, Cat 7, and now to Cat 8.

In contrast, fiber optic cable has remained relatively constant in terms of its available bandwidth. The main changes have been to hardware components, continuously advancing to take advantage of fiber's native bandwidth potential. What do you want to replace in just a few years? The cable in the walls, or the components to which it connects?

Has the fiber termination process improved? Yes! Mechanically, Cleerline Technology Group has made a Stronger, Safer, and Faster-to-terminate fiber optic cable. No need to worry about length or inconvenient polishing procedures. With Cleerline SSF™, you can terminate fiber in as little as one minute – or even less!

Let's get to the myth busting!

### MYTH: FIBER IS DIFFICULT TO TERMINATE

Previously, working with fiber was difficult. The fiber was fragile; you had to limit the amount of exposed glass during the process; shards of glass were dangerous. Terminating fiber was also a skill that took days of training and practice.

Cleerline SSF™ has removed every one of these challenges. Our fiber can be terminated in less than one minute! The patented polymer coating at the glass level makes our fiber safer and easier to handle.

### MYTH: FIBER IS FRAGILE (PULL & BEND)

Fiber cables can hold up to serious tensile strength demands. In general, category cable allows 25 lb (11.3 kg) of pulling force during installation. Cleerline SSF™ fiber, conversely, can handle 225 lb (102 kg) short-term load if pulled correctly. On bend, the minimum bend radius SSF™ fiber wins again, with minimum bend radii as low as 3.0 mm (1 x OD depending on the cable type), versus over 25 mm for Category cable. Highly flexible micro distribution fiber optic cables provide an excellent solution for tight spaces, such as data centers.

### MYTH: FIBER TERMINATION TOOLS ARE EXPENSIVE

Economical solutions available! To terminate fiber you do need tools, and just as with terminating Category, the correct tools cost money. However, it is very possible to successfully terminate fiber without investing in expensive fusion splicing equipment.

### MYTH: ALL EQUIPMENT THAT UTILIZES FIBER IS EXPENSIVE

Are fiber hardware components more expensive than copper equivalents? Fiber component costs continue to decrease. We have found equipment solutions in the market that range only 10-20% more in cost than copper-compatible equipment and those solutions will soon be equal in cost. That 10-20% can easily be made up by not having to replace the cable in the walls to accommodate increasing bandwidth requirements.

**MYTH: FIBER INFRASTRUCTURES ARE TOTALLY  
DIFFERENT THAN COPPER**



Fiber connectivity is a very well-developed marketplace, and there are many solutions available. The topography or layout is very similar to Category UTP infrastructures. Wall plates, in-wall components, enclosures, patch cables, etc. are all available, and the process of designing a fiber optic system requires similar considerations to any other system design.

**MYTH: FIBER IS NOT REALLY NEEDED**



Can you engineer around fiber today? Yes, you can try to get by. Should you? No!

Bandwidth demands are only going to continue increasing. For premise applications, with the rise of 4K and upcoming 8K video demanding 48 Gbps links, achieving uncompressed signal without fiber is next to impossible. Fiber provides the ability to transmit as much data as needed without compression, unlike copper. For data centers, 400 Gbps is on the rise. To handle this kind of demand over a longer distance, a fiber link is a necessity.

**MYTH: 5G IS GOING TO MAKE FIBER OBSOLETE**



5G requires numerous small cells in order to be most effective. To support high data demand, the medium of choice to connect these cells in the backhaul is fiber. Fiber is not going to fade away in the face of 5G. In fact, fiber is key to 5G deployment.

**To learn more about Cleerline SSF™ Fiber Optic Technology,  
visit us online at  
[www.cleerlinefiber.com](http://www.cleerlinefiber.com)**

