

# FiberGuide outperforms competitor in controlled test

Using CommScope's state-of-the-art testing facility, FiberGuide® was tested for structural integrity against a leading competitor's equivalent product. The test parameters subjected both raceway systems to the following conditions:

<b>Temperature</b>	65°C Note: The temperature was based on the competitor's claims
<b>Cable load</b>	85±2 lb (38.5 kg) of cable representing 7.1 lb (3.2 kg) per linear foot (the equivalent weight of 1200 3mm fibers), with 50 lbs (22.6 kgs) attached to the junctions 120 hours
<b>Performance over time</b>	120 hours

These are the types of conditions that optical raceway systems must handle in the event of an HVAC failure in a data center, central office, mobile switching center and other heat-intensive environments. The conditions were based on industry standard engineering specifications, with the exception of temperature, which was based on the competitor's claims. Note: During an HVAC failure, temperatures can climb rapidly in a data center or similar facility due to the amount of heat-generating equipment running in an enclosed room.

Deflection was measured throughout the test. ***In order to pass, deflection could not exceed 1.25 inches (3.18 centimeters).***

## FiberGuide's strengths over the competition

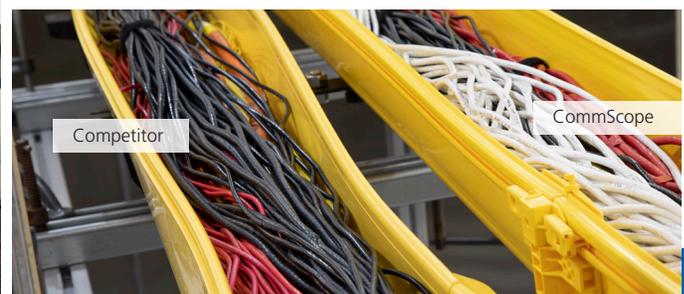
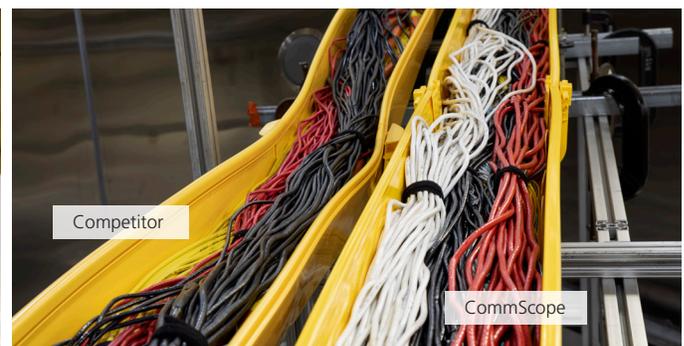


FiberGuide® passed the engineering specification for the entire duration of the test—120 hours—with .87" (2.21 cm) deflection.



The competitor's system failed within the first hour, with a deflection greater than 1.25" (3.18 cm).

With the external load removed and cable load still in place, the sample continued to sag until bottoming out at a secondary stop. Permanent deformation was extreme.



## About the test setup

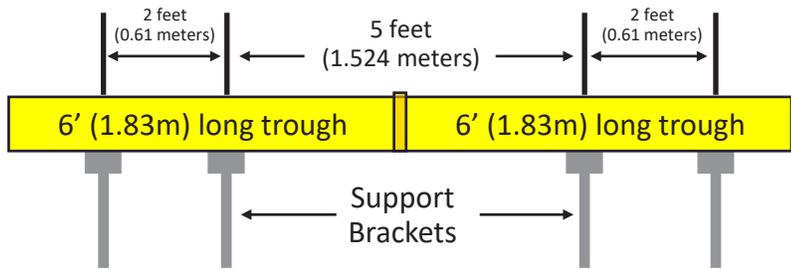


Figure 1.

The test setup, shown in Figure 1, is the one used in the testing facility's environmental chamber for the FiberGuide system. This setup was modified to decrease the span between supports from six feet to five feet, per the competitor's specification.

The samples provided by both vendors had to be based on processes and tooling used to manufacture products for sale.

## Deflection Under Load at 65°C

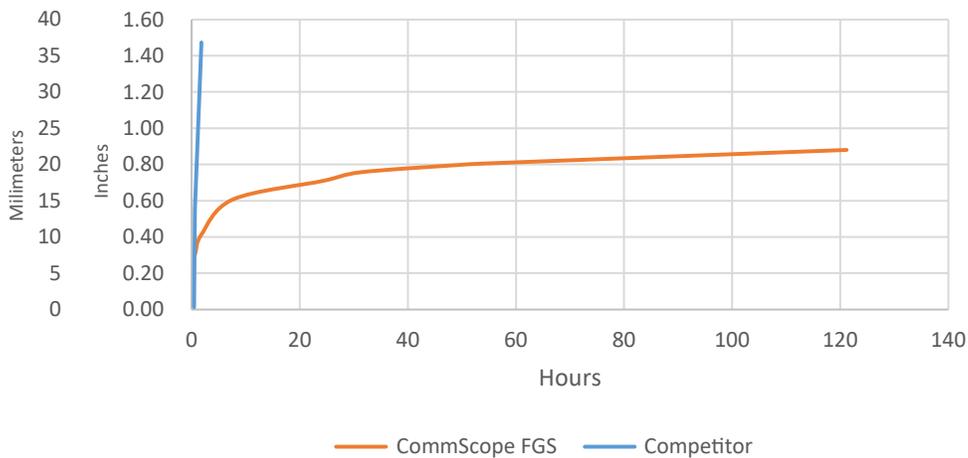


Figure 2.

Figure 2 shows the extreme and permanent deformation of the competitive system over time.

The following product marketing materials are now available online:

- [CATALOG: FIBERGUIDE FIBER MANAGEMENT SYSTEMS](#)
- [ORDERING GUIDE](#)

## Second round of heat testing result

We tested FiberGuide 4x12 system up to a temperature of 70°C with no load applied to determine the temperature at which the FiberGuide would deform. No load was applied as the product is unloaded when subjected to the data center burn-in procedure. No significant deformation, categorized as a deflection greater than 1.25" (3.18 cm) was observed. Simultaneously, a competitor's system was tested and deformed pasted acceptable tolerance between 55°C and 60°C.

### Results table

Sample	Deformation Temperature	Observations
CommScope	>70°C	0.12" (0.3 cm) change in deflection measurement over 10 hours of 60°C to 70°C
Competitor	55°C–60°C	2.52" (6.4 cm) change in deflection measurement over 10 hours of 60°C to 70°C

Test started at 60°C and was checked every hour for sample deforms for 3 hours at each temperature up to 70°C.



Figure 4. Initial



Figure 5. 60° C



Figure 6. 65° C



Figure 7. 70° C

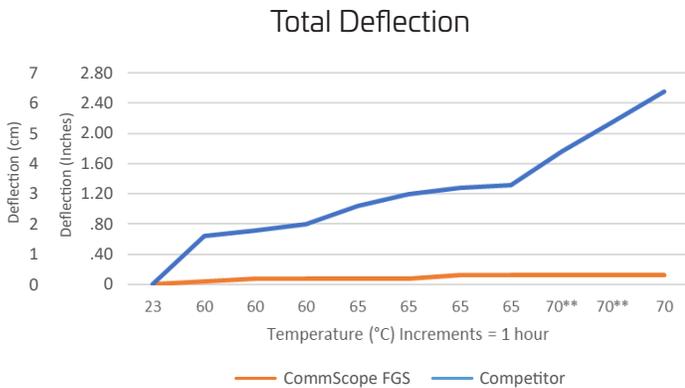


Figure 3. Test Results - Deflection vs Time and Temperature

\*\* No measurements taken at these time increments. 70°C measurements were performed post-test at room temperature.

## FiberGuide's strengths over the competition



**FiberGuide® passed** the engineering specification for the entire duration of the test – 10 hours – with .12" (.30 cm) deflection.



**The competitor's system failed** with a deflection of 2.52" (6.4cm).