

OFS Announces Improved Geometry for LaserWave® Multimode Fibers

OFC 2021, Virtual Booth #2249, June 7, 2021 – OFS, a leading designer, manufacturer, and supplier of innovative fiber optic network products, today announced it has improved important geometry specifications for its family of LaserWave multimode fibers, including LaserWave WideBand (OM5), LaserWave *FLEX* 550 (OM4) and LaserWave *FLEX* 300 (OM3) fibers.

The new, tighter specifications can reduce connector loss and improve link system performance in cabled fiber for demanding data center and enterprise applications. The enhancements can provide extra margin, or “headroom,” in today’s high speed 40, 100 and 400 Gb/s applications, enabling greater network design flexibility and reliability.

After leading the industry in tightening geometry and attenuation specifications in 2013, OFS has further improved several key geometry specifications in its LaserWave multimode fibers. Clad diameter tolerance has been tightened from $125.0 \pm 0.8 \mu\text{m}$ to $125.0 \pm 0.7 \mu\text{m}$, while core non-circularity has been improved from $\leq 5.0\%$ to $\leq 2.5\%$. Combined with a core/clad concentricity that has been tightened from $\leq 1.0 \mu\text{m}$ to $\leq 0.7 \mu\text{m}$, these improved specifications allow for better core-to-core alignment and light-coupling efficiency in connectors and splices, thereby helping to reduce insertion loss at these connections.

Modeling of simulated connections conducted by OFS indicates that the tighter specifications can result in average insertion loss improvement of 0.07 dB per connection compared to industry standard fiber. The model distribution also shows that 97% of insertion losses would be below 0.25 dB using LaserWave fiber, but 0.40dB using standards compliant fiber. As loss budgets drop below 2 dB for 40, 100, and 400 Gb/s network, this improved insertion loss performance is critical for links containing multiple connections.

OFS is able to realize these improvements through the use of its patented Modified Chemical Vapor Deposition (MCVD) fiber manufacturing process. This process is optimally suited for creating the precision refractive index profiles required for today’s high-performance laser-optimized multimode fiber.

About OFS

OFS is a world-leading designer, manufacturer and provider of optical fiber, fiber optic cable, connectivity, fiber-to-the-subscriber (FTTx), and specialty fiber optic products. We put our development and manufacturing resources to work creating solutions for applications in such areas as telecommunications, medicine, industrial automation, sensing, aerospace, defense, and energy. We provide reliable, cost-effective fiber optic solutions that help our customers meet the needs of consumers and businesses today and into the future.

Headquartered in Norcross (near Atlanta) Georgia, U.S.A., OFS is a global provider with facilities in China, Denmark, Germany, Morocco, Russia, and the United States. OFS is part of Furukawa Electric Co. Ltd, a multi-billion dollar leader in optical communications.

For more information, please visit www.ofsoptics.com.

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