CORNING

Glass Optical Fiber Connectivity Solutions for In-Vehicle Communication

Optical Technologies Meet Automotive Expertise

Corning® has transformed the way the world connects through industry-leading innovations in optical fiber and connectivity solutions for high-bandwidth applications. In parallel, Corning has been a critical automotive supplier for more than 50 years, pioneering technology for cleaner, safer and more connected vehicles.

Combining 50 years as a market leader in glass optical fiber and automotive products, Corning is now offering optical connectivity solutions for in-vehicle networks.

Automotive Challenges Vs. Glass Optical Fiber Solutions

Challenge Increasing Data Rates
Solution Same optical media for 1 – 200 Gb/s

Challenge Faster Development Cycles
Solution Inherent electromagnetic compatibility

Challenge Vehicle Mass
Solution 3X lighter weight and smaller footprint

Challenge Compact ECU's
Solution High density multi-channel connectors

Challenge Harness Design Flexibility
Solution Tighter bends (4x)

Challenge Greater Sustainability
Solution 3X Lower carbon footprint [1]

Corning's fibers, cables, connectors and cable assemblies are reliable, robust and meet the emerging needs of the Automotive market

Optical Fiber: Corning® ClearCurve® OM3 Multimode Fiber

- High bandwidth (2000 MHz km)
- Low attenuation: ⩽ 2.3 dB/km (@ 850 nm)
- Low insertion loss (IEEE 802.3cz)

Optical Cable: 2-Fiber zipcord

- Lightweight (10 g/m)
- Temperature capability: -40°C to +125°C
- Tight bend capability: 15 mm radius min.
- Cyclic bend capability: millions of cycles
- Chemical durability (USCAR-2)
- Meets ISO24581 performance requirements
- Cable diameter (nominal): 2 mm x 4.2 mm

Optical Connector: Duplex Glass Optical Fiber Connectors

- Scoop-proof
- Connector Position Assurance (CPA)
- Clip mounting (EWCAP)
- PCB mountable headers
- Meets 1SO24581 performance requirements
- Low insertion loss (IEEE 802.3cz)

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[1] Sullivan, A., Tandon, Dr. P., McCool, Dr. R. Corning Inc. Diaz, A., Herrmann, Dr. Ing. C. Sphera Solutions. A sustainable future with optical fiber. USA, 2023.