

# 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

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|------------------|---|
| <b>Challenge</b> | Increasing Data Rates                   |
| <b>Solution</b>  | Same optical media for 1 – 200 Gb/s     |
| <b>Challenge</b> | Faster Development Cycles               |
| <b>Solution</b>  | Inherent electromagnetic compatibility  |
| <b>Challenge</b> | Vehicle Mass                            |
| <b>Solution</b>  | 3X lighter weight and smaller footprint |
| <b>Challenge</b> | Compact ECU's                           |
| <b>Solution</b>  | High density multi-channel connectors   |
| <b>Challenge</b> | Harness Design Flexibility              |
| <b>Solution</b>  | Tighter bends (4x)                      |
| <b>Challenge</b> | Greater Sustainability                  |
| <b>Solution</b>  | 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:  $\leq 2.3$  dB/km (@ 850 nm)
- Low insertion loss (IEEE 802.3cz)

#### Optical Cable: 2-Fiber zipcord



- Lightweight (10 g/m)
- Temperature capability:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- 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 ISO24581 performance requirements
- Low insertion loss (IEEE 802.3cz)