

Optical
Fiber



CORNING
Discovering Beyond Imagination

Corning® SMF-28e® Optical Fiber

Evolving Networks Now

As the global standard of excellence for ITU-T G.652-compliant fiber, SMF-28e fiber is the world's most widely demanded single-mode fiber. SMF-28e fiber is advancing communications applications worldwide by evolving networks to a higher level of performance capability. Introduced in 2001, SMF-28e fiber is optimized for widespread deployment in metropolitan and access networks. It has also been installed and is dependably operating in a variety of networks through-out the world, proving its capability in diverse transmission applications.

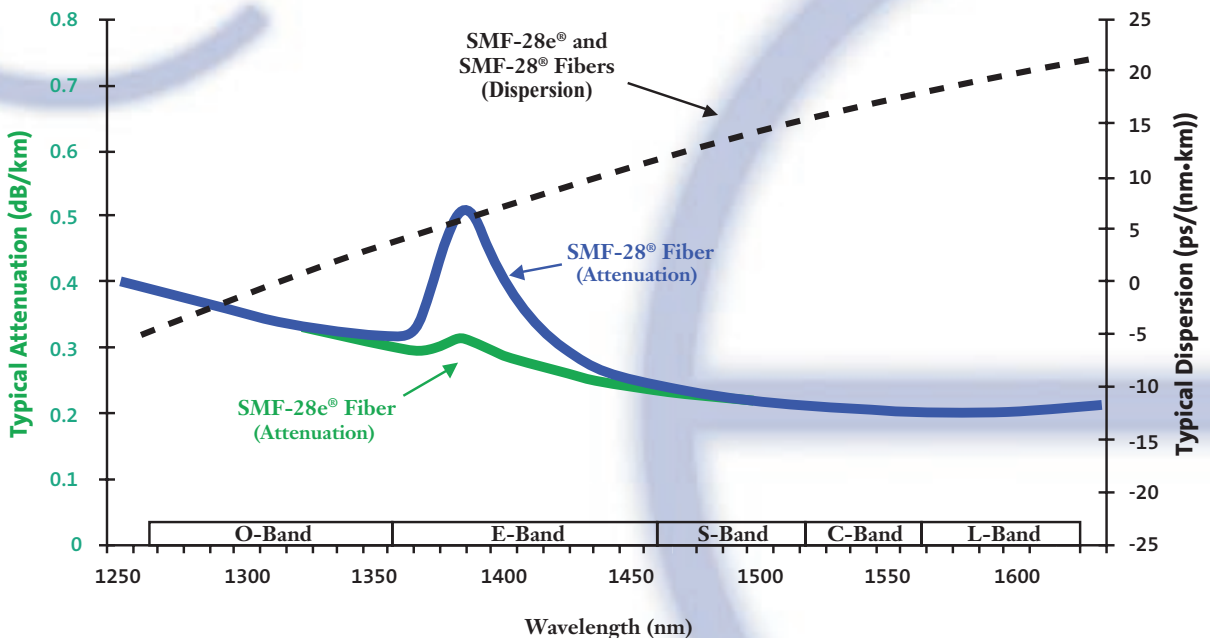
SMF-28e fiber continues Corning's long history of optical innovation and outstanding product performance. Corning Optical Fiber was the first fiber manufacturer to upgrade its standard single-mode fiber worldwide to a full-spectrum product that offers customers greater value today and in the future. SMF-28e fiber meets the communications industry's most stringent requirements and exceeds them with enhanced product attributes offering customers precision fibers backed by the most comprehensive specifications in the fiber industry.





Building on a Solid Foundation

Corning SMF-28[®] fiber, the long-standing industry benchmark for quality and performance, was the foundation for the development of SMF-28e fiber with enhanced product capability and specifications. SMF-28e fiber offers improved optical and environmental performance while providing the same reliability, splicing performance and easily strippable CPC[®] coating that made SMF-28 fiber the preferred standard single-mode fiber of cabling, operators and installers. As the enhanced version of Corning SMF-28 fiber, SMF-28e fiber is fully compatible and inter-operable with legacy standard single-mode networks.



Corning used its 30 years of optical fiber experience to evolve standard single-mode fiber to meet and exceed the highest industry standards. SMF-28e fiber conforms to the major optical fiber industry standards including ITU-T G.652 (Tables A, B, C & D), IEC 60793-2-50 (type B1.3) and TIA/EIA-492CAAB fiber. Not only does SMF-28e fiber have low attenuation in the water-peak region, but the combination of optical, environmental, dimensional and mechanical specifications through-out the single-mode fiber transmission window ensure its consistent and trouble-free, long-term performance as a full-spectrum fiber.

Attribute	ITU-T	ITU-T	ITU-T	ITU-T	Corning®
	G.652.A Standard	G.652.B Standard	G.652.C Standard	G.652.D Standard	SMF-28e® Fiber
Mode Field Diameter at 1310 nm	✓	✓	✓	✓	✓+
Mode Field Diameter at 1550 nm					✓+
Cladding Diameter	✓	✓	✓	✓	✓+
Core Concentricity Error	✓	✓	✓	✓	✓+
Cladding Noncircularity	✓	✓	✓	✓	✓+
Fiber Curl					✓+
Coating Diameter					✓+
Coating-Cladding Concentricity					✓+
Cable Cut-off Wavelength	✓	✓	✓	✓	✓
Proof Stress	✓	✓	✓	✓	✓
Zero Dispersion Wavelength	✓	✓	✓	✓	✓+
Zero Dispersion Slope	✓	✓	✓	✓	✓+
Attenuation at 1310 nm*	✓	✓	✓	✓	✓+
Attenuation at 1383 nm* (post H ₂ aging)			✓	✓	✓
Attenuation at 1550 nm*	✓	✓	✓	✓	✓+
Attenuation at 1625 nm*		✓	✓	✓	✓+
Macrobend Loss at 1310 nm					✓+
Macrobend Loss at 1550 nm	✓	✓	✓	✓	✓+
Macrobend Loss at 1625 nm		✓	✓	✓	✓+
Maximum PMD _Q * ≤ 0.5 ps/√km	✓	✓	✓	✓	✓+
Maximum PMD _Q * ≤ 0.20 ps/√km		✓		✓	✓+
Maximum Individual Fiber PMD	Optional	Optional	Optional	Optional	✓+
Comprehensive Environmental Specifications at 1310 nm, 1550 nm and 1625 nm					✓+

Notes:

- ✓+ SMF-28e fiber specification exceeds ITU-T G.652.A, B, C and D requirements
- ✓ SMF-28e fiber specification conforms to ITU-T G.652.A, B, C and D requirements
- ⊙ Additional requirements over Table A

* SMF-28e fiber specifications support the ITU cabled performance requirements

Confidence for Today and the Future

Corning SMF-28e fiber is the ideal fiber choice for widespread deployment in rapidly growing and dynamically changing metropolitan and access networks. SMF-28e fiber's world-class geometry, superior coating and leading bending specifications provide immediate value in environments where the demands for numerous splices and equipment connections require the consistent, precisely manufactured products on which Corning has built and earned its reputation.

Low attenuation combined with comprehensive environmental specifications throughout the 1285 nm to 1625 nm wavelength range provide full-spectrum capability. SMF-28e fiber enables flexible network designs such that customers can be confident that they will be able to evolve their metropolitan and access networks to the current and emerging wavelength division multiplexing systems increasingly being used for high-bandwidth, multiple services or multi-protocol applications. Full-spectrum capability also prepares network infrastructures for competing and maturing broadband architectures. Corning

SMF-28e fiber's outstanding PMD performance ensures it is also suitable in a variety of other transmission applications.

Optical fiber must evolve so that it is continually aligned with the dynamic changes in communications network designs. New optical fiber deployments must be inter-operable with current systems as well as emerging technologies and future networks. Corning SMF-28e fiber provides customers with a fiber designed for networks today and for decades to come, while continuing Corning's tradition of ensuring full compatibility with Corning ITU G.652 compliant fibers.

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