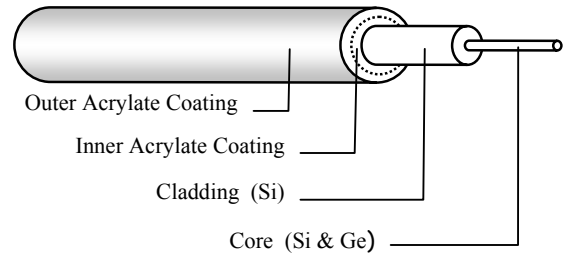




**Product Information for
Low PMD and Low Water Peak Single-Mode Optical Fiber
(G.652-D Compliant)
Product Code: OFO-652D
Version 06.T-D.01**



FIBER APPLICATION

OFO-652D is a step-index, non-dispersion shifted low water peak single mode optical fiber that can be used for transport systems operating entire wavelength range from 1280 to 1625 nm comprising O,E,S,C and L bands. OFO-652-D fiber is also well suited for Coarse wavelength division multiplexing systems up to and over 10 Gbps bit rates.

The fiber is well suited for high bit-rate, long distance digital transmission of voice, data & video and most suitable choice for Metropolitan network. OFO-652-D can be loose buffered, tight buffered or ribbonized. The fiber is fully compatible with all common cable materials including thixotropic gels, filling compounds, super absorbent polymers, etc.

SPECIFICATIONS

OFO-652-D exceeds the requirements of the following industry standards:

- ✓ ITU-T Recommendation G.652-D
- ✓ IEC Publication 60793-2 (type B.1.3)
- ✓ EIA/TIA-492
- ✓ EN-188000

Verification tests are preformed against these standards and the EIA/TIA-455 series of test methods and IEC Publication 60793-2. A list of these standards is available upon request.

ADVANTAGES



To meet the needs of future high bit rate systems, OFO-652D has been fine tuned for very low polarization mode dispersion (PMD). Additionally, the fiber has outstanding micro bend & macro bend resistance. OFO-652D is a matched clad fiber with a nominal mode field diameter of 9.2 μm

OFO-652D has excellent splice compatibility with all G.652D fibers including those made with the OVD, VAD, MCVD, PCVD and other preform technologies.

COATING

OFO-652D fiber is coated with a double layer of UV cured acrylate. The inner coating provides optimal adhesion to the cladding glass. The outer coating provides optimal abrasion resistance. The coatings do not generate hydrogen.

The coating offers a stable wet or dry strip force over a wide range of environmental conditions.

When stripped with industry standard stripping tools (such as “Miller” strippers), the coating leaves no residue on the bare glass fiber.

OPTICAL SPECIFICATIONS

Parameter	Conditions	Standard Fiber	Premium Fiber
Attenuation coefficient*	1310/1550 nm	≤ 0.35/0.22 dB/km	≤ 0.34/0.20 dB/km
Attenuation coefficient*	1625 nm	≤ 0.25 dB/km	≤ 0.22 dB/km
Attenuation at water peak*	1383 ± 3 nm	Less than specified at 1310 nm	≤ 0.31 dB/km
Fiber cutoff wavelength		1180-1320 nm	1200-1320 nm
Cable cutoff wavelength		≤ 1260 nm	≤ 1260 nm
Zero dispersion wavelength		1300-1324 nm	1300-1324 nm
Zero dispersion slope		≤ 0.092 ps/nm ² •km	≤ 0.092 ps/nm ² •km
Chromatic dispersion	1285-1330 nm	≤ 3.5ps/nm•km	≤ 3.0 ps/nm•km
Chromatic dispersion	1550 nm	≤ 18 ps/nm•km	≤ 17 ps/nm•km
Polarization mode dispersion	Individual fiber	≤ 0.2 ps/√km	≤ 0.2 ps/√km
Polarization mode dispersion	Link value	≤ 0.1 ps/√km	≤ 0.1 ps/√km
Point Discontinuity	1310 & 1550 nm	≤ 0.05 dB	≤ 0.05 dB
Attenuation uniformity	1310 & 1550 nm	≤ 0.05 dB/km	≤ 0.05 dB/km
Reflections		None allowed	None allowed
Group refractive index (typical)	1310/1550 nm	1.466/1.467	1.466/1.467

* Alternate attenuation values available upon request

*The sampled attenuation average at 1383 +/- 3 nm wavelength shall be less than or equal to the value specified at 1310 nm after Hydrogen ageing according to IEC-60793-2-50

*The sampled attenuation average between 1525 to 1575 nm wavelength shall be less than or equal to the value specified at 1550 nm



GLASS PROPERTIES

Parameter	Conditions	Standard Fiber	Premium Fiber
Mode field diameter*	1310 nm	9.2 ± 0.6 μm	9.2 ± 0.4 μm
Mode field diameter*	1550 nm	10.5 ± 1.0 μm	10.5 ± 0.8 μm
Mode field non-circularity		≤ 5.0%	≤ 5.0%
Core-cladding concentricity error		≤ 0.8 μm	≤ 0.5 μm
Cladding diameter		125 ± 1 μm	125 ± 1 μm
Cladding non-circularity		≤ 1.0%	≤ 1.0%
Fiber curl		≥ 4 m	≥ 10 m

*Petermann II definition

COATING PROPERTIES

Parameter	Specified Values
Coating diameter	245 ± 10 μm
Coating non-circularity	≤ 6%
Coating concentricity error	≤ 12 μm
Minimum coating strip force	1.4 N
Maximum coating strip force	5.0 N
Minimum coating pullout force	6.3 N
Maximum coating pullout force	22.0 N

MECHANICAL SPECIFICATIONS

Parameter	Value
Dynamic Tensile Strength (unaged)	>3.8 GPa
Dynamic Tensile Strength (aged)	> 3.0 GPa
Dynamic Fatigue Resistance Parameter (n _d)	≥ 20

BENDING PERFORMANCE

Dia (mm)	Turns	λ	Spec
32	1	1550	≤ 0.5 dB
75	100	1310	≤ 0.05 dB
75	100	1550	≤ 0.10 dB
75	100	1625	≤ 0.10 dB
50	100	1550	≤ 0.10 dB
50	100	1550	≤ 0.10 dB
50	100	1625	≤ 0.10 dB

ENVIRONMENTAL PERFORMANCE

Operating temperature: -60°C to +85°C

Temperature Dependencies (in dB/km)

Parameter	1310 nm	1550 nm
Temperature Dependence -60°C to 85°C (Ref = 23°C)	≤ 0.05	≤ 0.05
Water Soak Dependence (23°C for 30 days)	≤ 0.05	≤ 0.05
Temperature/Humidity Dependence, 85°C, 85% RH	≤ 0.05	≤ 0.05
Heat Aging (85°C, 30 days)	≤ 0.05	≤ 0.05

PROOF TEST

All OFO-652D fiber is subjected to an equivalent tensile proof screening of ≥0.69 GN/m² (= 1% = 100 kpsi). Higher screening levels are available at a premium.

OTHER PARAMETERS

Parameter	Condition	Typical Values
Core Diameter		8.3 μm
NA		0.12
Refractive Index Difference		0.36%
Rayleigh Backscatter Coefficient	1310 nm	-77dB
Rayleigh Backscatter Coefficient	1550 nm	-82 dB

REPORTS

Reports are available with each shipment of fiber. The reports contain key information such as fiber ID, length attenuation coefficients, cutoff wavelength, MFD and geometrical data.



STANDARD REEL LENGTHS

- ✓ Maximum standard length of 25.2 km
- ✓ Minimum standard length of 12.6 km
- ✓ Additional standard lengths in multiples of 2.1 km (23.1 km, 21.0 km, 18.9 km, 16.8 km, 14.7 km)

See Appendix A for packaging information.

ORDERING INFORMATION

To place an order, please send the following information to OFO.

- ✓ Quantity required
- ✓ Attenuation cell required (Premium, Normal or Customer-specified)
- ✓ Reporting requirements
- ✓ Delivery schedule
- ✓ Length requirements
- ✓ Shipping address
- ✓ Billing address

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CONTACT DETAILS



APPENDIX A: PACKAGING INFORMATION

All OFO-652 fiber is delivered on Crellin reels as shown in the drawing below. Crellin reels have been shown to be the best performing reels for shipment, storage and processing of optical fiber. The spools are blue or black colored ABS plastic. The barrel is wrapped with a gray high density PE foam. A gray PS clip on flange is attached to one side of the reel. The inside end of the fiber is ≥ 2 meters in length.

