Heraeus

Covantics

Pandia®

Single-mode fiber compliant with ITU-T G.652.D and ITU-T G.657.A1

Physical Characteristics:

Clad Diameter:	125.0 ± 0.7 µm
Clad Non-Circularity:	≤ 0.7 %
Core-Clad Conc. Error:	≤ 0.5 µm
Coating Diameter (uncolored):	237 – 247 µm
Coating-Clad Conc. Error:	≤ 12 µm
Tensile Proof Test:	100 kpsi (0.69 GPa)
Coating Strip Force Range:	1.0 N ≤ CSF ≤ 8.9 N
Standard Reel Lengths:	50.4 km

Attenuation Characteristics:

	Maximum	Typical
1310 nm	≤ 0.34 dB/km	≤ 0.33 dB/km
1385 nm	≤ 0.31 dB/km	≤ 0.27 dB/km
1490 nm	≤ 0.24 dB/km	≤ 0.21 dB/km
1550 nm	≤ 0.20 dB/km	≤ 0.19 dB/km
1625 nm	≤ 0.23 dB/km	≤ 0.20 dB/km

Point Discontinuities 1310 nm, 1550 nm ≤ 0.05 dB

Macrobend Performance:

Bending-induced attenuation does not exceed the specified values under the following deployment conditions:

Deployment Condition	Wavelength	Induced Attenuation
1 turn on 10 mm radius mandrel	1550 nm	≤ 0.75 dB
	1625 nm	≤ 1.5 dB
10 turns on 15 mm radius mandrel	1550 nm	≤ 0.25 dB
	1625 nm	≤ 1.0 dB
100 turns on 25 mm radius mandrel	1550 nm	≤ 0.03 dB
	1625 nm	≤ 0.03 dB

Environmental Characteristics (at 1310, 1550 and 1625 nm):

- Temperature Cycling (-60 °C to +85 °C) ≤ 0.05 dB/km
- High Temperature Aging (85 ± 2 °C) ≤ 0.05 dB/km
- Temperature & Humidity Cycling (at -10 °C to +85 °C, and 95 % RH) ≤ 0.05 dB/km
- Water Immersion (23 ± 2 °C) ≤ 0.05 dB/km
- Dynamic Fatigue Stress Corrosion Parameter $n_d \geq 20$

Attenuation vs. Wavelength:

Range	Reference	Max Difference α
1285 – 1330 nm	1310 nm	≤ 0.03 dB/km
1525 – 1575 nm	1550 nm	≤ 0.02 dB/km

The attenuation in a given wavelength range does not exceed the attenuation of the reference wavelength by more than the value α.

Other Characteristics:

Zero Dispersion Wavelength λ_0:	1302 – 1322 nm
Zero Dispersion Slope S_0:	≤ 0.090 ps/nm²·km
Fiber PMD Link Design Value:	≤ 0.04 ps/√km
Maximum Individual Fiber PMD:	≤ 0.1 ps/√km
Mode Field Diameter (1310 nm):	9.2 ± 0.4 µm
Mode Field Diameter (1550 nm):	10.4 ± 0.5 µm
Cable Cut-Off Wavelength λ_{cc}:	≤ 1260 nm

HERAEUS COVANTICS HEADQUARTERS

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