

# TeraCap 零水峰单模光纤光学特性



TeraCap™ 9/125μm (G.652D Zero Water Peak)		
衰减 Attenuation	@1310nm	≤ 0.34dB/km
	@1383nm	≤ 0.34dB/km (After H <sub>2</sub> aging)
	@1550nm	≤ 0.20dB/km
	@1625nm	≤ 0.24dB/km
色散 Dispersion coefficient	1285~1340nm	≤ 3.4 ps/nm . km
	1285~1340nm	≥ -3.4 ps/nm . km
	@1550nm	≤ 18 ps/nm . km
	@1625nm	≤ 22 ps/nm . km
零色散波长 Zero dispersion wavelength		1300~1324nm
零色散斜率 Zero dispersion slope		≤ 0.091 ps/nm <sup>2</sup> . km
偏振模色散系数(PMD) Polarization Mode Dispersion	单根光纤最大值 Maximum Individual Fiber	≤ 0.1ps/√km
	光纤链路值 Design Link Value	≤ 0.06ps/√km
截止波长 Cut-off wavelength		1180~1330nm
模场直径(MFD) Mode field diameter(MFD)	@1310nm	8.7~ 9.5μm
	@1550nm	9.9~ 10.9μm
有效群折射率(典型值) Group Index of Refraction	@1310nm	1.466
	@1550nm	1.467

## 逆向散射特性 Backscatter Characteristics

(@1310nm/@1550nm)

台阶(双向平均值) Step(Mean of bidirectional measurement)	≤ 0.05dB
不均匀连续点损耗(整个光缆长度) Irregularities over fiber length and point discontinuity	≤ 0.05dB
逆向散射衰减系数差异(双向测量) Difference backscatter coefficient(Bidirectional measurement)	≤ 0.03dB/km

## 几何特性 Geometrical Characteristics

核直径 Core diameter	9μm
核偏心率率 Core noncircularity	≤ 6.0%
壳直径 Cladding diameter	125±0.7μm
壳偏心率率 Cladding noncircularity	≤ 1.0%
初始附着层直径 Primary Coating diameter	242±7μm
核壳同心度偏差 Core/Cladding concentricity error	≤ 0.6μm

## 环境特性 Environmental Characteristics (@1310nm/@1550nm)

温度附加衰减Δα (-60°C~ + 85°C) Attenuation at temperature cycling Δα (-60°C~ + 85°C)	≤ 0.05dB/km
温度湿度循环附加衰减 (-10°C~ + 85°C . 98%相对湿度) Attenuation at temperature-humidity cycling (-10°C~ + 85°C . 98% R.H.)	≤ 0.05dB/km
加速老化附加衰减 (85°C . 85%相对湿度 . 30天) Attenuation at damp heat dependence (85°C . 85% R.H. . 30days)	≤ 0.05dB/km
浸水附加衰减 (23°C . 30天) Attenuation at watersoak dependence (23°C . 30days)	≤ 0.05dB/km

## 机械特性 Mechanical Characteristics

筛选张力(离线) Proof test (off line)	≥ 9.0N (≥ 100kpsi)	
宏弯损耗 @1550nm Attenuation at bending dependence	1圈,ψ32mm 1 turn,32mm diameter	≤ 0.05dB
	100圈,ψ60mm 100 turn,60mm diameter	≤ 0.05dB
涂层剥离(典型值) Coating strip force(Typical)	1.7N	
动态疲劳参数 (n <sub>d</sub> , 典型值) Dyanamics stress corrosion susceptibility parameter(n <sub>d</sub> , Typical)	≥ 20	