

# MaxCap Safe 弯曲不敏感万兆多模光纤光学特性



		MaxCap Safe 300 50/125 μm (BI-OM3)	MaxCap Safe 550 50/125 μm (BI-OM4)	MaxCap Safe 550WB 50/125 μm (BI-OM5)
衰减 Attenuation	@850nm @953nm @1300nm	≤ 2.6dB/km ≤ 0.8dB/km	≤ 2.6dB/km ≤ 0.8dB/km	≤ 2.6dB/km ≤ 1.7dB/km
满注入带宽 Over filled Launch Bandwidth	@850nm @953nm @1300nm	≥ 1500MHz-km ≥ 500MHz-km	≥ 3500MHz-km ≥ 500MHz-km	≥ 3500MHz-km ≥ 1850MHz-km
有效带宽 Effective Modal Bandwidth	@850nm @953nm	≥ 2000MHz-km	≥ 4700MHz-km	≥ 4700MHz-km ≥ 2470MHz-km
40&100 Gb/s 传输距离 Gigabit Ethernet (850nm)		≤ 100m	≤ 150m	≤ 200m
10Gb/s 传输距离 10GBASE-SR(850nm)		≤ 300m	≤ 550m	≤ 600m
差分模式延时 Differential Mode Delay(DMD) @850nm		Any one of the following template		
DMD	Templates	内模版 0~18μm半径	外模版 0~23μm半径	
1		≤ 0.33ps/m	≤ 0.33ps/m	
2		≤ 0.27ps/m	≤ 0.27ps/m	
3		≤ 0.26ps/m	≤ 0.26ps/m	
4		≤ 0.25ps/m	≤ 0.25ps/m	
5		≤ 0.24ps/m	≤ 0.24ps/m	
6		≤ 0.23ps/m	≤ 0.23ps/m	
数值孔径 Numerical Aperture		0.200±0.015NA		
有效群折射率(Neff) Group Index of Refraction	@850nm @1300nm	1.482 1.477		
零色散波长 Zero dispersion wavelength		1295~1320nm	1295~1320nm	1297~1328nm
零色散斜率 Zero dispersion slope	ps/(nm <sup>2</sup> - km)	≤ 0.001(λo-1990)	≤ 0.001(λo-1990)	≤ 4(-103)/(840(1-(λo/840) <sup>4</sup> ))

## 逆向散射特性 Backscatter Characteristics (@1300nm)

台阶(双向平均值) Step(Mean of bidirectional measurement)	≤ 0.10dB
不均匀性(整个光纤长度)和衰减点不连续性 Irregularities over fiber length and point discontinuity	≤ 0.10dB

## 几何特性 Geometrical Characteristics

核直径 Core diameter	50±2.5μm
核偏心率 Core noncircularity	≤ 5%
壳直径 Cladding diameter	124.8±1.0μm
壳偏心率 Cladding noncircularity	≤ 1%
核壳同心度误差 Core/Cladding concentricity error	≤ 1.0μm

## 环境特性 Environmental Characteristics (@850nm/@1300nm)

温度附加衰减 Δα (-60 °C ~ + 85°C) Attenuation at temperature cycling Δα (-60 °C ~ + 85°C)	≤ 0.10dB/km
温度湿度循环附加衰减 (-10°C ~ + 85°C . 90% 相对湿度 ) Attenuation at temperature-humidity cycling (-10 °C ~ + 85°C . 90% R.H.)	≤ 0.10dB/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)	≤ 0.10dB/km
浸水附加衰减 (20°C . 30 天) Attenuation at watersoak dependence (20°C . 30 days)	≤ 0.10dB/km

## 机械特性 Mechanical Characteristics

筛选张力(离线) Proof test (off line)	≥ 9.0N (≥ 100kpsi)
宏弯损耗(2圈, ψ15mm, R=7.5mm) Attenuation at bending dependence (2turns,15mm diameter,7.5mm radius)	≤ 0.2dB
@850nm @1300nm	≤ 0.5dB
涂层剥离(Coating strip force(Typical))	1.5N
动态疲劳参数( n <sub>d</sub> ,典型值) Dyanamics stress corrosion susceptibility parameter(n <sub>d</sub> , Typical)	≥ 27