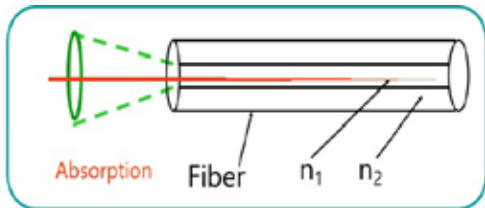


# 弯曲不敏感柔性光缆



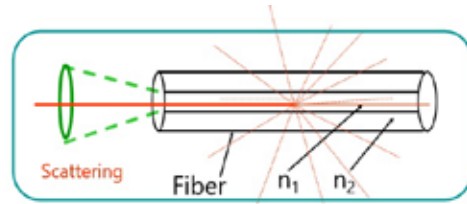
Absorption 吸收



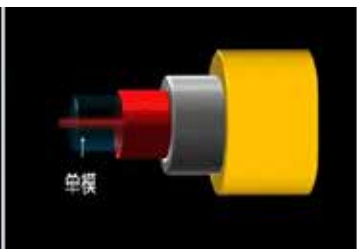
Absorption



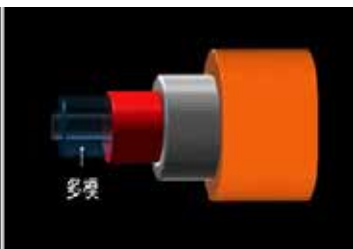
Scattering 散射



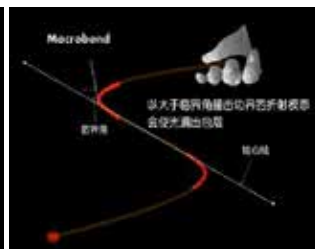
Scattering



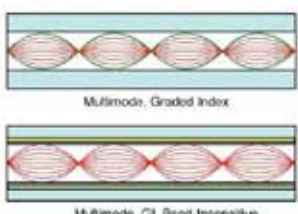
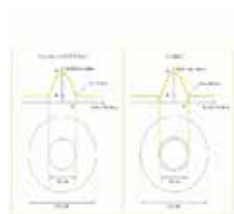
单模



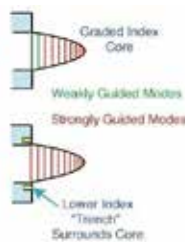
多模



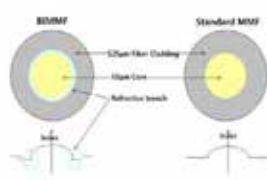
Microbend  
由于在微小半径处光纤芯折射率会发生变化而产生微弯



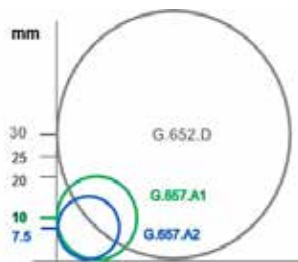
Multimode, Graded Index



Graded Index Core  
Weakly Guided Modes  
Strongly Guided Modes  
Lower Index "Trench" Surrounds Core



ISO / IEC11801	TIA / EA	IEC 60793-2-32	ITU-T
OM1 (62.5 μm)	492AAA	A1b	NA
OM2 (50 μm)	492AAB	A1a.1a	A1a.1b
OM3 (50 μm)	492AAC	A1a.2a	A1a.2b
OM4 (50 μm)	492AAD	A1a.3a	A1a.3b
OM5 (50 μm)	492AAE	A1a.4a	A1a.4b



标准名称	标准号	标准内容
ISO 11801	492AAA	OM1 (62.5 μm) OM2 (50 μm) OM3 (50 μm) OM4 (50 μm) OM5 (50 μm)
TIA/EIA-568	492AAB	OM2 (50 μm) OM3 (50 μm) OM4 (50 μm) OM5 (50 μm)
IEC 60793-2-32	A1a.1a, A1a.2a, A1a.3a, A1a.4a	OM2 (50 μm) OM3 (50 μm) OM4 (50 μm) OM5 (50 μm)
ITU-T	G.651.1	OM1 (62.5 μm) OM2 (50 μm) OM3 (50 μm) OM4 (50 μm) OM5 (50 μm)

光在光纤中传播的过程中会有一定的信号衰减，除了光纤本身对光信号的吸收和散射之外，在光纤被弯曲或扭曲时，也会造成一定的微弯和宏弯损耗。

虽然说在施工过程中应该尽量避免光纤的弯曲损耗，但在现实的光纤布线环境中，如机架内，接插盒内（如光纤到桌面时底盒内光纤的熔接和盘绕），机器外壳内以及其他空间紧张，存在小半径转角或弯曲的情形下，必须在空间多小和线缆多长之间作出取舍，以便追求在狭小空间内的弯曲、扭曲或者拉伸造成的损耗尽量少。

而弯曲不敏感柔性光纤这一革命性发明使得机器、配线架及其他线缆组件的设计可以更加紧凑，同时还不会增加损耗。顾名思义，弯曲不敏感光纤，其光纤弯曲对损耗的影响比标准光纤更加不敏感。

## 单模光纤不同级别间的熔接兼容性：

	OS2 (传统G. 652D)	OS2柔性 (G. 657. A1)	OS2超柔性 (G. 657. A2/B2)
OS2 (传统G. 652D)	✓	✓	✗
OS2柔性 (G. 657. A1)	✓	✓	✗
OS2超柔性 (G. 657. A2/B2)	✗	✗	✓

## 单模光纤不同级别间的耦合(对接)兼容性：

	OS2 (传统G. 652D)	OS2柔性 (G. 657. A1)	OS2超柔性 (G. 657. A2/B2)
OS2 (传统G. 652D)	✓	✓	✓
OS2柔性 (G. 657. A1)	✓	✓	✓
OS2超柔性 (G. 657. A2/B2)	✓	✓	✓