Single-mode Fibre G.652.D

单模光纤.G652.D

Description 产品描述

Low water peak dispersion unshifted Single-mode fibre is designed specially for optical transmission systems operating over the entire wavelength window from 1260 nm to 1625 nm. By suppressing the water peak that occurs near 1383 nm in conventional single mode fibre due to hydroxyl (OH-) ions absorption, fibre is able to open E-band (1360-1460nm) for operation, and consequently provides 100 nm more usable wavelengths.

低水峰色散非位移单模光纤专为工作在 1260 nm 至 1625 nm 整个波长窗口的光传输系统而设计。通过抑制传统单模光纤中由于羟基(OH-)离子吸收而在1383nm附近出现的水峰，光纤能够打开E波段(1360-1460nm)进行操作，从而提供100nm以上的可用波长。

Applications 产品应用

Thanks to its broad usable optical spectrum and outstanding optical performance, fibre is the optimum choice that supports various applications such as Ethernet, Internet Protocol (IP), Asychronous Transfer Mode (ATM), Synchronous Optical Network (SONET) and Wavelength Division Multiplexing (WDM). Fibre provides more bandwidth for backbone, metropolitan area and access networks.

由于其广泛的可用光谱和出色的光学性能，光纤是支持以太网、互联网协议 (IP)、异步传输模式 (ATM)、同步光网络 (SONET) 和波分复用 (WDM) 等各种应用的最佳选择)。光纤为骨干网、城域网和接入网提供更多带宽。

Standards 产品标准

Fibre complies with or exceeds the ITU-T Recommendation G.652.D and the IEC 60793-2-50 typeB1.3 Optical Fibre Specification.

光纤符合或超过 ITU-T建议的 G.652.D 和 IEC 60793-2-50 typeB1.3 光纤规范。

Tightens many parameters of fibre products so as to offer more conveniences to customers.

收紧了纤维产品的多项参数，为客户提供更多便利。

Characteristics 光学特性

- Designed for operation over the full optical spectrum from 1260-1625 nm, which provides 50% more usable wavelengths and hence the transmission capacity is increased
  专为在 1260-1625 nm 的整个光谱范围内运行而设计，可提供多 50% 的可用波长，从而提高传输容量
- Outstanding optical performance supporting high-speed transmission technologies such as DWDM and CWDM
  出色的光学性能支持DWDM和CWDM等高速传输技术
- Being compatible with existing 1310 nm equipment
  与现有的 1310 nm 设备兼容
- Good protection and excellent strip force stability
  良好的保护和出色的剥离力稳定性
- Accurate geometrical parameters that insure low splicing loss and high splicing efficiency
  精确的几何参数，确保低熔接损耗和高熔接效率

Specifications 参数

Optical Characteristics 光学特性

Characteristics 特性	Conditions 条件	Specified values 数据	Units 单位
Attenuation 衰减	1310nm	≤0.34	[dB/km]
	1383nm (after H2-aging) 1383nm(氢老化后)	≤0.34	[dB/km]
	1550nm	≤0.20	[dB/km]
	1625nm	≤0.24	[dB/km]
Attenuation vs. Wavelength Max. α difference 相对于波长的衰减变化	1285-1330nm, in reference to 1310nm 1285~1330nm, 相对于1310nm	≤0.03	[dB/km]
	1525-1575nm, in reference to 1550nm 1525~1575nm, 相对于1550nm	≤0.02	[dB/km]
Dispersion Coefficient 波长范围内的色散	1285-1340nm	-3.5 to 3.5	[ps/(nm·km)]
	1550nm	≤18	[ps/(nm·km)]
	1625nm	≤22	[ps/(nm·km)]
Zero Dispersion Wavelength(λ0) 零色散波长(λ0)		1300-1324	[nm]
Zero Dispersion Slope(S0) 零色散斜率(S0)		≤0.092	[ps/(nm2·km)]
Typical Value 零色散斜率典型值		0.086	[ps/(nm2·km)]
PMD 偏振模色散系数	Maximum Individual Fibre 单根光纤最大值	≤0.1	[ps/√km]
	Link Design Value(M=20, Q=0.01%) 光纤链路值	≤0.06	[ps/√km]
	Typical Value 典型值	≤0.04	[ps/√km]
Cable Cutoff Wavelength (λCC) 光缆截止波长(λcc)		≤1260	[nm]
Mode Field Diameter(MFD) 模场直径(MFD)	1310nm	8.7-9.5	[μm]
	1550nm	9.8-10.8	[μm]
Effective Group Index of Refraction(Neff) 有效群折射率(Neff)	1310nm	1.466	--
	1550nm	1.467	--
Point Discontinuities 点不连续性	1310nm	≤0.05	[dB]
	1550nm	≤0.05	[dB]

Geometrical Characteristics 几何特性

Characteristics 特性	Specified values 数据	Units 单位
Cladding Diameter 包层直径	125.0±0.7	[μm]
Cladding Non-Circularity 包层不圆度	≤1.0	[%]
Coating Diameter 涂层直径	235-250	[μm]
Coating-Cladding Concentricity Error 涂层/包层同心度误差	≤12.0	[μm]
Coating Non-Circularity 涂层不圆度	≤6.0	[%]
Core-Cladding Concentricity Error 芯/包层同心度误差	≤0.6	[μm]
Curl(radius) 翘曲度(半径)	≥4	[m]
Delivery Length 交货长度	Up to 50.4	[km/reel]

Environmental Characteristics 环境特性 (1310nm, 1550nm & 1625nm)

Characteristics 特性	Conditions 条件	Specified values 数据	Units 单位
Temperature Dependence Induced Attenuation 温度附加衰减	-60°C to +85°C	≤0.05	[dB/km]
Temperature-Humidity Cycling Induced Attenuation 温度-湿度循环附加衰减	-10°C to +85°C, 98% RH -10°C 到85°C, 98% 相对湿度	≤0.05	[dB/km]
Water Immersion Dependence Induced Attenuation 浸水附加衰减	23°C, for 30 days 23°C, 30 天	≤0.05	[dB/km]
Damp Heat Dependence Induced Attenuation 湿热附加衰减	85°C and 85% RH, for 30 days 85°C, 85%相对湿度, 30天	≤0.05	[dB/km]
Dry Heat Aging 干热老化	85°C, for 30 days 85°C, 30天	≤0.05	[dB/km]

Mechanical Specifications 机械特性

Characteristics 特性	Conditions 条件		Specified values 数据	Units 单位
Proof Test 筛选张力	--		≥9.0	[N]
	--		≤1.0	[%]
	--		≥100	[kpsi]
Macro-bend Induced Attenuation 宏弯附加损耗	100 Turns Around a Mandrel of 30 mm Radius 100圈, 半径30mm	1625nm	≤0.05	[dB]
	100 Turns Around a Mandrel of 25 mm Radius 100圈, 半径25mm	1310nm and 1550nm	≤0.05	[dB]
	1 Turn Around a Mandrel of 16 mm Radius 1圈, 半径16mm	1550nm	≤0.05	[dB]
Coating Strip Force 涂层剥离力	typical average force 典型平均值		1.5	[N]
	peak force 峰值		1.3-8.9	[N]
Dynamic Fatigue Parameter (nd) 动态疲劳参数(nd)			≥20	--