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本样本内相关数据如因印刷和校对错误,不再另行通知,请以订货时的实际数据为准。我们将在www.tiankang.com上及时提供最新的电子样本。



光纤光缆选型样本

Optical fiber cable catalogue

安徽天康股份有限公司

ANHUI TIANKANG SHARES CO.,LTD.

Brief Introduction to Anhui Tiankang Shares Co., Ltd.

企业简介

安徽天康集团创建于 1974 年，总部位于长江之滨的天长市，南接古城南京，东与扬州相邻，地处充满活力的“长三角”经济圈，有着良好的投资与发展环境。

集团所属的仪表、光电缆、医药、医疗器械、特种钢管、钛酸锂电池等产品被广泛应用于石油、化工、冶金、电力、通讯、卫生等行业。集团现已成为国家级守合同重信用企业、国家级高新技术企业、省依法纳税先进企业、银行资信 AAA 级企业。

安徽天康股份有限公司作为安徽天康集团的全资企业和拟上市公司，负责仪表、光电缆产品的生产与销售。公司的“天仪”商标荣获中国驰名商标，“洲鸽”商标荣获安徽省著名商标，并在行业内率先通过了 ISO9001、ISO14001、OHSAS18001 三标一体认证及国军标认证。

公司作为全国最大的仪表生产基地，生产的温度、压力、物位、流量等系列产品得到广大用户的一致好评。其中拥有自主知识产权的核级仪表产品，经过国家权威机构的认证后，在核电行业得到广泛应用与推广。公司还专注于自动化仪表成套和系统集成领域，拥有一批具有丰厚经验的专业工程技术人员和销售人员，成功地石油、化工、冶金、电力、通讯等行业的用户，提供了自动化工程的咨询、设计、配套、集成、安装、调试等自动化解决方案及系统工程服务，具有良好的声誉。

公司生产的光电缆产品在国内市场具有较高份额，其中 IE 级 K3 类电缆进入核电市场后，为我国的核电事业做出了应有的贡献。具有国际先进水平的航空电缆产品目前也进入了开发试制阶段，有望近期进入我国航空领域，并替代进口。船用电缆、机车电缆、光伏电缆等一批特种电缆产品快速抢占高端产品市场。光缆产品在全国同行业中率先获得国家信息产业部、广电总局和总参的入网许可及使用，为众多国家大型项目提供了大量优质产品。

位于省级高新技术开发区，占地 500 余亩的天康仪表电缆产业园正在建设之中，届时公司将拥有一座拥有国内最先进的生产设备与制造工艺的现代化生产基地，为市场和广大客户提供更优质的产品与服务。

三十多年的风雨兼程，站在新起点的天康，将始终秉持“有跨越才有卓越”的天康精神，加速实现在国内 A 股主板成功上市，着力打造“百亿天康、科技天康、幸福天康”，不断开创天康历史新纪元。





Established in 1974, Anhui Tiankang (Group)Shares Co., Ltd. lies in Tianchang city on bank of Yangtze River, near Nanjing in the south, and Yangzhou in the east, within the most active Yangtze River Delta Economic Cooperation Area in China, There is a good environment for economic development.

Our instrument, Optic-electric cable, medical products, medicine, special steel pipe, Titanium acid lithium battery and so on are widely used in petrochemical industry, metallurgy, power station, communication industry, hygiene, etc. The company has been awarded many titles, such as "Trustable Enterprise in China", "Good Tax Payer in Anhui", "Class-AAA Credit Enterprise", and "National Hi-tech Enterprise".

PRE-IPO of Anhui Tiankang Shares Co., Ltd is exclusively-invested by Anhui Tiankang (Group) Shares Co., Ltd, which takes charge of instrument, cable production and sales. Our "Tian Yi" won national famous trademark, "Zhou Ge" won Anhui famous trademark, besides we firstly got certificate of ISO9001,ISO14001, OHSAS18001and National certificate for Military standard.

As the biggest instrument production bases in China, our products are popular with clients, such as temperature instrument, pressure instrument, level meter and flow meters., our instrument for nuclear station with Independent Intellectual Property Rights are widely used and promoted in nuclear power industry after getting certificate from National authoritative organization. We have many experienced and professional engineers and salesmen to concentrate on automation instrument complete and system integration field. Therefore, we succeed to supply automation engineering consulting, design, corollary equipment, integration, installation, testing etc. with good reputation for customers of Petroleum, chemical industry, metallurgy, electric power, communication, etc

Our cable products have high domestic market share, especially K3 cable IE grade makes a due contribution to our nuclear power industry after it is introduced to the market. of Aircraft electric cables with international advanced technology moves to trail-produce stage by hopes of entering our aviation field and import substitution. Cable for ship, Locomotive Cable, PV cable etc. are fast taken high-end special cable market. Meanwhile optical fiber cable takes leader in obtaining license from Ministry of Information industry, General Bureau of Radio, Film and Television and General Staff Headquarters in the whole country. We provide many national large projects with good products.

Tiankang instrument and cable industrial park covers over 500 acres are under construction, locating in provincial high-tech development zone. At that time we will supply better products and service to clients as a modern production base with the most advanced production equipment and fabrication technology.

Standing in the new start line, Tiankang always holds the spirits of "Spanning makes outstanding" through over thirty-year difficulties. We will speed up the realization of domestic A-share listed companies. Besides we focus on creating "ten billion Tiankang, Science and technology Tiankang, happy Tiankang" for purpose of going forward to a new era of tiankang.



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Technical Indices of Optic Fiber

G.652 Single-mode Optic Fiber (SF)
G.655 Single-mode Optic Fiber (SV)
G.651 Multi-mode Optic Fiber (MM)

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Fiber Optic Cable

Central Tube FOC
Loose Tube Stranded FOC
Loose Tube Stranded FOC (Flame-retardant, anti-mouse & termite FOC)
Underwater Loose Tube Stranded FOC
8-shape Self-supporting FOC
Non-metallic Loose Tube Stranded FOC
All Dielectric Self-Supporting Aerial FOC
Soft Indoor (Local) FOC for Telecommunication
FTTH Cable
Adapter
FOC Repeater & Terminal Box
Optic Fiber Connector
Water-proof Cable Pigtail

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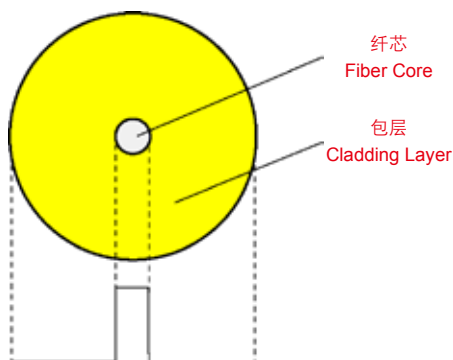
Type Naming Description
Cautions in Transportation & Mounting of FOC

二氧化硅系匹配型普通单模光纤 (G652 即 B1 类光纤)

SiO₂ Matched-cladding Single Mode Optic Fiber (G.652/B1 Optic Fiber)

光纤几何尺寸

模场直径 (1310nm) : $(8.6 \sim 9.5) \pm 0.6 \mu\text{m}$
 包层直径: $125 \pm 1.0 \mu\text{m}$
 包层不圆度: $\leq 1\%$
 纤芯 / 包层同心度误差: $\leq 0.6 \mu\text{m}$
 涂覆层直径: $245 \pm 10 \mu\text{m}$ (未着色)
 包层 / 涂覆层同心度误差: $\leq 12.5 \mu\text{m}$
 光纤翘曲度: $R \geq 4\text{m}$



Geological Sizes

Mode field Diameter (1310nm): $(8.6 \sim 9.5) \pm 0.6 \mu\text{m}$
 Cladding Layer Diameter: $125 \pm 1.0 \mu\text{m}$
 Cladding Layer Non-circularity: $\leq 1\%$
 Core/Cladding Layer Concentricity Tolerance: $\leq 0.6 \mu\text{m}$
 Coating Layer Diameter: $245 \pm 10 \mu\text{m}$ (uncolored)
 Cladding/Coating Layer Concentricity Tolerance: $\leq 12.5 \mu\text{m}$
 Bending Radius: $R \geq 4\text{m}$

光纤光学及传输特性 Optic & Transmission Performance

群折射率: **1.466**

Group Refraction Index: 1.466

衰减常数:

Attenuation Constant:

1310nm 1550nm 1625nm
 $\leq 0.35\text{dB/km}$ $\leq 0.21\text{dB/km}$ $\leq 0.24\text{dB/km}$

1310nm 1550nm 1625nm
 $\leq 0.35\text{dB/km}$ $\leq 0.21\text{dB/km}$ $\leq 0.24\text{dB/km}$

宏弯衰减:

$\Phi 60\text{mm}$ 100圈 A类 1550nm $\leq 0.10\text{dB}$
 B类 1625nm $\leq 0.10\text{dB}$

Macro bend Attenuation:

$\Phi 60\text{mm}$ 100 rings A 1550nm $\leq 0.10\text{dB}$
 B 1625nm $\leq 0.10\text{dB}$

波长附加衰减:

1285~1330nm 波长附加衰减系数: $\leq 0.05\text{dB/km}$
 1525~1575nm 波长附加衰减系数: $\leq 0.05\text{dB/km}$

Wavelength Additional Attenuation:

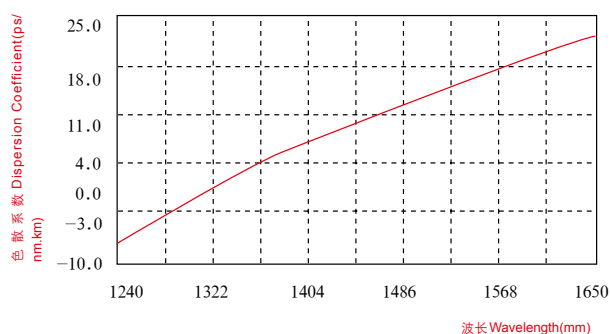
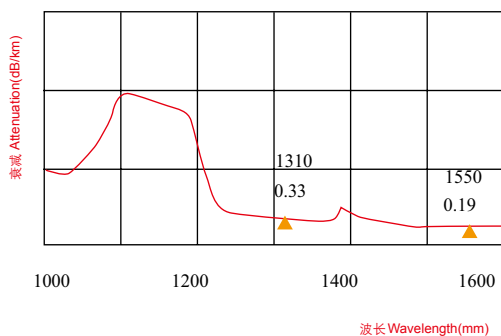
1285~1330nm Wavelength Additional Attenuation Constant
 $\leq 0.05\text{dB/km}$
 1525~1575nm Wavelength Additional Attenuation Constant
 $\leq 0.05\text{dB/km}$

衰减不均匀性:

在光纤后向散射曲线上, 任意 500m 长度上的实测衰减与全长上平均 500m 的衰减之差的最好值不大于 0.05dB。

Attenuation Non-conformity

Attenuation Difference Tolerance: no more than 0.05dB .



截止波长

光缆截止波长: $\lambda_{cc} \leq 1260\text{nm}$
 光纤截止波长: 对于最坏情形下光缆长度和弯曲的使用场合, $\lambda_c \leq 1250\text{nm}$

色散

零色散波长范围 (λ_0): 1300~1324nm
 零色散斜率 (S_0): $\leq 0.092\text{ps}/\text{nm}^2 \cdot \text{km}$
 色散系数绝对值: 1288~1339nm $\leq 3.5\text{ps}/(\text{nm} \cdot \text{km})$
 1271~1360nm $\leq 5.3\text{ps}/(\text{nm} \cdot \text{km})$

1550nm 波长范围

色散系数绝对值: $\leq 18.0\text{ps}/\text{nm} \cdot \text{km}$
 从 1200nm 到 1600nm 波长范围内任何波长 (λ) 处的色散都可用下式计算:

$$\text{色散} = D(\lambda) = \frac{S_0}{4} \left[\lambda - \lambda_0 - \lambda^3 \right] \text{ps}/\text{nm} \cdot \text{km}$$

Cutoff Wavelength

Cutoff Wavelength of FOC: $\lambda_{cc} \leq 1260\text{nm}$
 Cutoff Wavelength of Optic Fiber: $\lambda_c \leq 1250\text{nm}$

Dispersion:

Zero Dispersion Wavelength Range: 1300~1324nm
 Zero Dispersion Slope: $\leq 0.092\text{ps}/\text{nm}^2 \cdot \text{km}$
 Dispersion Coefficient Absolute Value:
 1288~1339nm $\leq 3.5\text{ps}/(\text{nm} \cdot \text{km})$
 1271~1360nm $\leq 5.3\text{ps}/(\text{nm} \cdot \text{km})$

1550nm Wavelength Range:

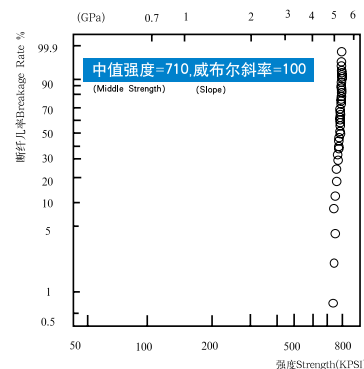
Dispersion Coefficient Absolute Value: $\leq 18.0\text{ps}/\text{nm} \cdot \text{km}$
 1200nm~1600nm Dispersion Calculation Formula:

$$\text{Dispersion} = D(\lambda) = \frac{S_0}{4} \left[\lambda - \frac{\lambda_0^4}{\lambda^3} \right] \text{ps}/\text{nm} \cdot \text{km}$$

机械特性 Mechanical Performance

筛选试验: 1% (0.69GPa, 8.5N, 100KPSI)
 动态疲劳系数: $nd \geq 20$
 涂层剥离力: 1.0~8.9N
 涂层外观: 双涂层内无空隙和夹杂的气泡

Selection Test: 1% (0.69GPa, 8.5N, 100KPSI)
 Dynamic Fatigue Coefficient: $nd \geq 20$
 Coating Splitting Force: 1.0~8.9N
 Coating Appearance: No gap and air bubble should be found within double coating layers.



环境特性 Environment & Performance

使用温度范围: $-60^\circ\text{C} \sim +85^\circ\text{C}$

衰减的温度关系:

在 1310nm、1550nm 波长下 $-60^\circ\text{C} \sim +85^\circ\text{C}$ 产生的附加衰减 $\leq 0.05\text{dB}/\text{km}$

温度湿度循环:

光纤试样在 $23^\circ\text{C} \pm 2^\circ\text{C}$ 温度下浸泡在水中 30 天后, 在 1310nm 和 1550nm 波长允许附加衰减 $\leq 0.05\text{dB}/\text{km}$ 。
 光纤在温度为 $85^\circ\text{C} \pm 2^\circ\text{C}$ 和相对湿度 $\geq 85\%$ 条件下放置 30 天后, 在 1310nm 和 1550 波长允许附加衰减 $\leq 0.05\text{dB}/\text{km}$ 。

Temperature Range: $-60^\circ\text{C} \sim +85^\circ\text{C}$

Temperature & Attenuation Relation:

The additional attenuation should be no more than 0.05dB/km at 1310nm, 1550nm under temperature of $-60^\circ\text{C} \sim +85^\circ\text{C}$

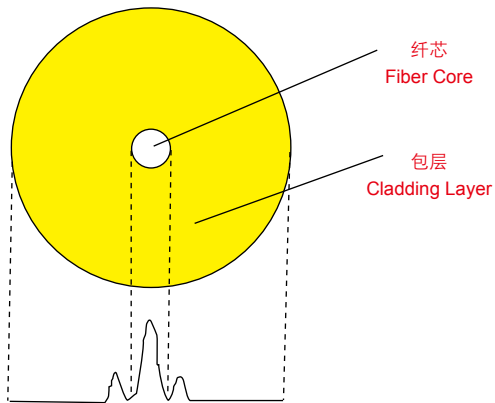
Temperature and Humidity Cycle:

The additional attenuation allowed of tested fiber at wavelength 1310nm & 1550nm should be no more than 0.05dB/km after it is immersed in water under temperature of $23^\circ\text{C} \pm 2^\circ\text{C}$ for 30 days.

The additional attenuation allowed of tested fiber at 1310nm & 1550nm should be no more than 0.05dB/km after it is laid in the environment with temperature of $85^\circ\text{C} \pm 2^\circ\text{C}$ and relative humidity no less than 85% for 30 days.

二氧化硅系非零色散单模光纤 (G655 即 B4 类光纤)

SiO₂ Non-zero Dispersion Single Mode Optic Fiber (G.655/B4 Fiber)



光纤几何尺寸

模场直径 (1550nm): $(8.0 \sim 11.0) \pm 0.6 \mu\text{m}$
包层直径: $125 \pm 1.0 \mu\text{m}$
包层不圆度: $\leq 1.0\%$
纤芯 / 包层同心度误差: $\leq 0.6 \mu\text{m}$
涂覆层直径: $245 \pm 10 \mu\text{m}$ (未着色)
包层 / 涂覆层同心度误差: $\leq 12.5 \mu\text{m}$
光纤翘曲度: $R \geq 4\text{m}$

Geological Sizes

Mode field Diameter (1550nm): $(8.0 \sim 11.0) \pm 0.6 \mu\text{m}$
Cladding Layer Diameter: $125 \pm 1.0 \mu\text{m}$
Cladding Layer Non-circularity: $\leq 1.0\%$
Core/Cladding Layer Concentricity Tolerance: $\leq 0.6 \mu\text{m}$
Coating Layer Diameter: $245 \pm 10 \mu\text{m}$ (uncolored)
Cladding/Coating Layer Concentricity Tolerance: $\leq 12.5 \mu\text{m}$
Bending Radius: $R \geq 4\text{m}$

光纤光学及传输特性 Optic & Transmission Performance

衰减常数: Attenuation Constant:

1550nm	1625nm
A 类 $\leq 0.22\text{dB/km}$	$\leq 0.27\text{dB/km}$
B 类 $\leq 0.25\text{dB/km}$	$\leq 0.30\text{dB/km}$

宏弯衰减: Macro bend Attenuation:

$\Phi 60\text{mm}$ 100 圈 rings : A,B,C 类 1625nm $\leq 0.2\text{dB}$
D,E 类 1625nm $\leq 0.1\text{dB}$

截止波长

跳线缆截止波长 (λ_{cj}) : $\leq 1450 \text{ nm}$
光缆截止波长 (λ_{cc}) : $\leq 1450 \text{ nm}$

Cutoff Wavelength:

Cutoff Wavelength of Optic Fiber Jump cable: $\leq 1450 \text{ nm}$
Cutoff Wavelength of FOC: $\leq 1450 \text{ nm}$

色散

C 波段色散区

非零色散区 (nm) $1530 \leq \lambda_{\min} \leq \lambda_{\max} \leq 1565$
非零色散区色散系数绝对值: A 类: $0.1\text{-}6.0 \text{ PS}/(\text{nm}\cdot\text{km})$
B,C 类: $1.0\text{-}10.0 \text{ PS}/(\text{nm}\cdot\text{km})$

偏振模色散系数 (PMD) : A,B 类 $\leq 0.5 \text{ ps} \sqrt{\text{km}}$
C,D,E 类 $\leq 0.2 \text{ ps} \sqrt{\text{km}}$

Dispersion:

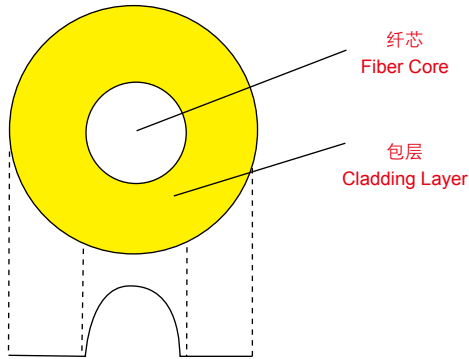
Dispersion Zone at Waveband C

Non-zero Dispersion Zone(nm)1530:
 $\leq \lambda_{\min} \leq \lambda_{\max} \leq 1565$
Dispersion Absolute Value of Non-zero Dispersion
Zone: A : $0.1\text{-}6.0 \text{ PS}/(\text{nm}\cdot\text{km})$
B,C 类: $1.0\text{-}10.0 \text{ PS}/(\text{nm}\cdot\text{km})$
PMD Value: A,B $\leq 0.5 \text{ ps} \sqrt{\text{km}}$
C,D,E $\leq 0.2 \text{ ps} \sqrt{\text{km}}$

二氧化硅系 50/125 μm 多模光纤 (G651 即 A1a 类光纤)

SiO₂ 50/125 μm Multi-mode Optic Fiber (G.651/A1a Optic Fiber)

光纤几何尺寸



纤芯直径: $50 \pm 2.5 \mu\text{m}$
包层直径: $125 \pm 2.0 \mu\text{m}$
包层不圆度: $\leq 2.0\%$
纤芯 / 包层同心度误差: $\leq 1.5 \mu\text{m}$
涂覆层直径: $245 \pm 10 \mu\text{m}$
包层 / 涂覆层同心度误差: $\leq 12.5 \mu\text{m}$

Geological Sizes

Fiber Core Diameter: $50 \pm 2.5 \mu\text{m}$
Cladding Layer Diameter: $125 \pm 2.0 \mu\text{m}$
Cladding Layer Non-circularity: $\leq 2.0\%$
Core/Cladding Layer Concentricity Tolerance: $\leq 1.5 \mu\text{m}$
Coating Layer Diameter: $245 \pm 10 \mu\text{m}$
Cladding/Coating Layer Concentricity Tolerance: $\leq 12.5 \mu\text{m}$

光纤光学及传输特性 Optic & Transmission Performance

衰减常数: **Attenuation Constant:**
850nm 1300nm
2.4~3.5dB/km 0.55~1.5dB/km

带宽: **Bandwidth:**
850nm 200-800MHz·km
1300nm 200-1200MHz·km

数值孔径: 0.20 ± 0.02 或 0.23 ± 0.02
Nominal Aperture: 0.20 ± 0.02 或 0.23 ± 0.02

宏弯衰减:
 $\Phi 75\text{mm}$ 100 圈 850nm $\leq 0.5\text{dB}$
1300nm $\leq 0.5\text{dB}$

Macro bend Attenuation:
 $\Phi 75\text{mm}$ 100 rings 850nm $\leq 0.5\text{dB}$
1300nm $\leq 0.5\text{dB}$

机械特性 Mechanical Performance

筛选试验: 1% (0.69GPa, 8.8N, 100KPSI)
动态疲劳系数: $nd \geq 20$
涂层剥离力: 1.0~8.9N
Select Test: 1% (0.69GPa, 8.8N, 100KPSI)
Dynamic Fatigue Coefficient: $nd \geq 20$
Coating Splitting Force: 1.0~8.9N

环境特性 Environment & Attenuation

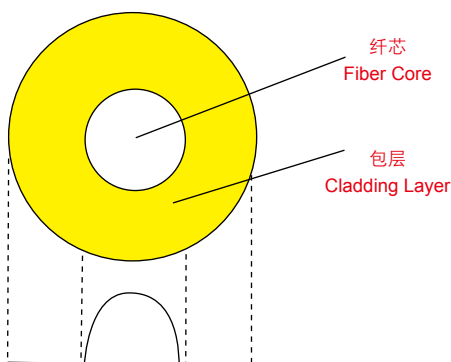
在 850nm、1300nm 波长下 $-60^\circ\text{C} \sim +85^\circ\text{C}$ 涂覆光纤相对于室温允许的附加衰减 $< 0.02\text{dB/km}$

The additional attenuation of Cladding Layer optic at wavelength of 850nm, 1300nm under temperature of $-60^\circ\text{C} \sim +85^\circ\text{C}$ be less than 0.02dB/km

二氧化硅系 62.5/125 μm 多模光纤 (G651 即 A1b 类光纤)

SiO₂ 62.5/125 μm Multi-mode Optic Fiber (G.651/A1b Optic Fiber)

光纤几何尺寸



纤芯直径: $62.5 \pm 2.0 \mu\text{m}$
 包层直径: $125 \pm 2.0 \mu\text{m}$
 包层不圆度: $\leq 2.0\%$
 纤芯 / 包层同心度误差: $\leq 1.5 \mu\text{m}$
 涂覆层直径: $245 \pm 10 \mu\text{m}$
 包层 / 涂覆层同心度误差: $\leq 12.5 \mu\text{m}$

Geological Sizes

Fiber Core Diameter: $62.5 \pm 2.0 \mu\text{m}$
 Cladding Layer Diameter: $125 \pm 2.0 \mu\text{m}$
 Cladding Layer Non-circularity: $\leq 2.0\%$
 Core/Cladding Layer Concentricity Tolerance: $\leq 1.5 \mu\text{m}$
 Coating Layer Diameter: $245 \pm 10 \mu\text{m}$
 Cladding/Coating Layer Concentricity Tolerance: $\leq 12.5 \mu\text{m}$

光纤光学及传输特性 Optic & Transmission Performance

衰减常数: Attenuation Constant:

850nm	1300nm
2.8-3.5dB/km	0.6-1.5dB/km

带宽: Bandwidth:

850nm	160-800MHz·km
1300nm	200-1000MHz·km

数值孔径: 0.275 ± 0.015

Nominal Aperture: 0.275 ± 0.015

宏弯衰减:

$\Phi 75\text{mm}$ 100 圈 850nm $\leq 0.5\text{dB}$
 1300nm $\leq 0.5\text{dB}$

Macro bend Attenuation:

$\Phi 75\text{mm}$ 100 rings 850nm $\leq 0.5\text{dB}$
 1300nm $\leq 0.5\text{dB}$

机械特性 Mechanical Performance

筛选试验: 1% (0.69GPa, 8.8N, 100KPSI)

动态疲劳系数: $nd \geq 20$

涂层剥离力: 1.0~8.9N

Select Test: 1% (0.69GPa, 8.8N, 100KPSI)

Dynamic Fatigue Coefficient: $nd \geq 20$

Coating Splitting Force: 1.0~8.9N

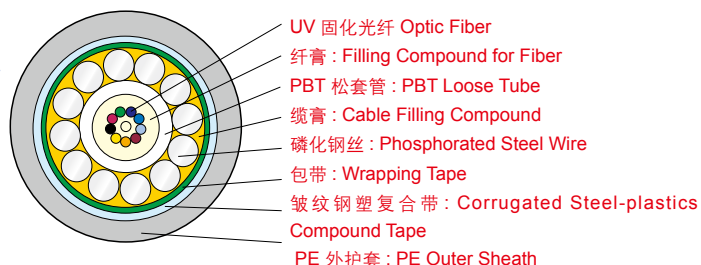
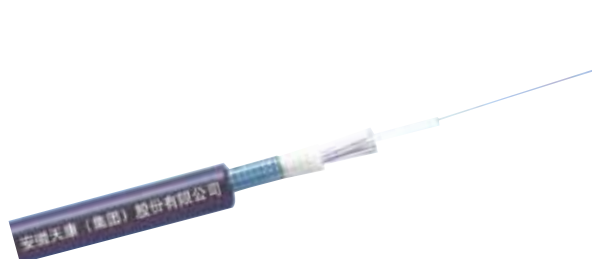
环境特性 Environment & Attenuation

在 850nm、1300nm 波长下 $-60^\circ\text{C} \sim +85^\circ\text{C}$ 涂覆光纤相对于室温允许的附加衰减 $< 0.05\text{dB/km}$

The additional attenuation of Cladding Layer optic at wavelength of 850nm, 1300nm under temperature of $-60^\circ\text{C} \sim +85^\circ\text{C}$ be less than 0.05dB/km

2-12 芯中心束管式光缆 (钢丝铠装)

2~12 Cores Central Tube Fiber Optic Cable (Steel Wire Armored)



产品型号: GYXTS

- 中心松套管光纤
- 缆芯填充油膏
- 12 根钢丝均匀绞合于松套管周围
- 双面涂塑钢带粘结 PE 护套

应用范围: 适用于长途通信和局间通信

敷设方式: 管道、架空和直埋

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长, 使光缆具有优良的机械性能和环境性能;
- 重量轻, 敷设方便;
- 光缆柔韧性和抗弯曲能力优良;
- 钢丝铠装抗压力优良。
- 钢带纵包缆芯使光缆防潮效果更为优良, 具有防弹能力。

Type: GYXTS

- Optic fiber in central loose tube
- Cable core filled with filling compound
- 12 pieces of steel wire evenly stranded around loose tube
- Plastics-coated steel tape bound with PE sheath

Application Range: for long distance & local communications

Mounting Ways: in pipe, aerial or direct burial

Application Temperature: -40°C ~+60°C

Features:

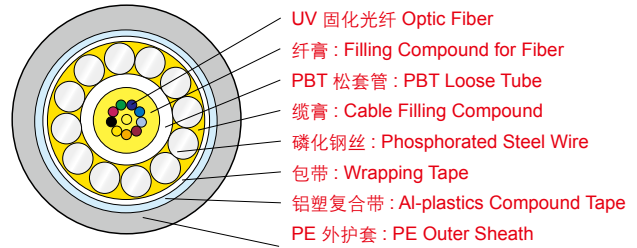
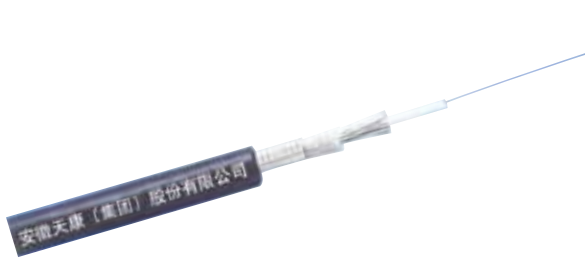
- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- with light weight and easy for laying
- with better pliability
- Steel wire armor ensures better crush-resistant performance.
- Cable core wound with corrugated steel tape ensures better moisture & shooting-proof performance.

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~12	10.0	160	110	220	1500	600	1000	300

2-12 芯中心束管式光缆 (钢丝铠装)

2~12 Cores Central Tube Fiber Optic Cable (Steel Wire Armored)



产品型号: GYXTA

- 中心松套管光纤
- 缆芯填充油膏
- 12 根钢丝均匀绞合于松套管周围
- 双面涂塑铝带粘结 PE 护套

应用范围: 适用于长途通信和局间通信

敷设方式: 管道、架空

适用温度: -40°C ~+60°C

Type: GYXTA

- Optic fiber in central loose tube
- Cable core filled with filling compound
- 12 pieces of steel wire evenly stranded around loose tube
- Plastics-coated steel tape bound with PE sheath

Application Range: for long distance & local communications

Mounting Ways: in pipe or aerial or mounting

Application Temperature: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长, 使光缆具有优良的机械性能和环境性能;
- 重量轻, 敷设方便;
- 光缆柔韧性和抗弯曲能力优良;
- 钢丝铠装抗压力能力优良。
- 铝带纵包缆芯使光缆防潮效果更为优良。

Features:

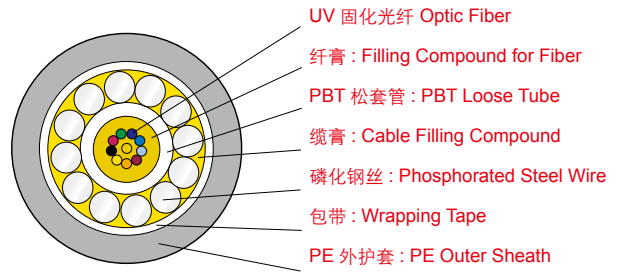
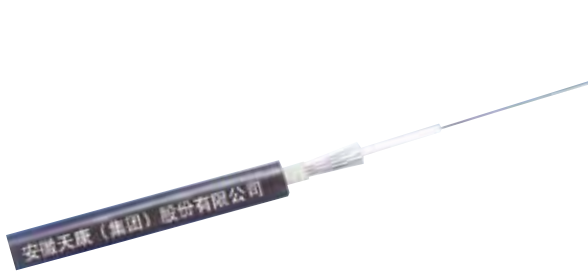
- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- with light weight and convenient for laying
- with better pliability
- Steel wire armor ensures better crush-resistant performance.
- Cable core wound with corrugated Al tape ensures better moisture-proof performance.

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~12	10.0	140	110	220	1500	600	1000	300

2-12 芯中心束管式光缆 (钢丝铠装)

2~12 Cores Central Tube Fiber Optic Cable (Steel Wire Armored)



产品型号: GYXTY

- 中心松套管光纤
- 缆芯填充油膏
- 12 根钢丝均匀绞合于松套管周围
- PE 护套

应用范围: 适用于局间通信

敷设方式: 管道、架空

适用温度: -40°C ~+60°C

Type: GYXTY

- Optic fiber in central loose tube
- Cable core filled with filling compound
- 12 pieces of steel wire evenly stranded around loose tube
- PE sheath

Application Range: for local communications

Mounting Ways: in pipe, aerial

Application Temperature: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长, 使光缆具有优良的机械性能和环境性能;
- 重量轻, 敷设方便;
- 光缆柔韧性和抗弯曲能力优良;
- 钢丝铠装抗拉能力优良。
- 具有防弹能力。

Features:

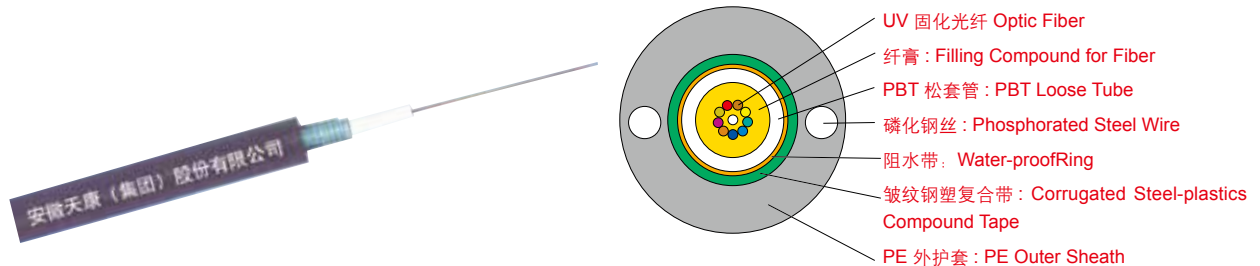
- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- with light weight and convenient for laying
- with better pliability
- Steel wire armor ensures better tension-resistant performance.
- with shooting-proof performance

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~12	9.0	120	90	180	1500	600	1000	300

2-12 芯中心束管式光缆 (钢带铠装)

2~12 Cores Central Tube Fiber Optic Cable (Steel Tape Armored)



产品型号: GYXTW

- 中心松套管光纤
- 皱纹钢带粘结 PE 护套
- PE 护套内加入两根平行钢丝

应用范围: 适用于长途通信和局间通信

敷设方式: 管道、架空

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长, 使光缆具有优良的机械性能和环境性能;
- 重量轻, 敷设方便;
- 光缆柔韧性和抗弯曲能力优良;
- 钢带铠装抗压力强。

Type: GYXTW

- Optic fiber in central loose tube
- Corrugated steel tape bound PE sheath
- Steel tape & loose tube bound together with heat-melting glue
- 2 pieces of paralleled steel wire within PE sheath

Application Range: for long distance & local communications

Mounting Ways: in pipe, or aerial mounting

Application Temperature: -40°C ~+60°C

Features:

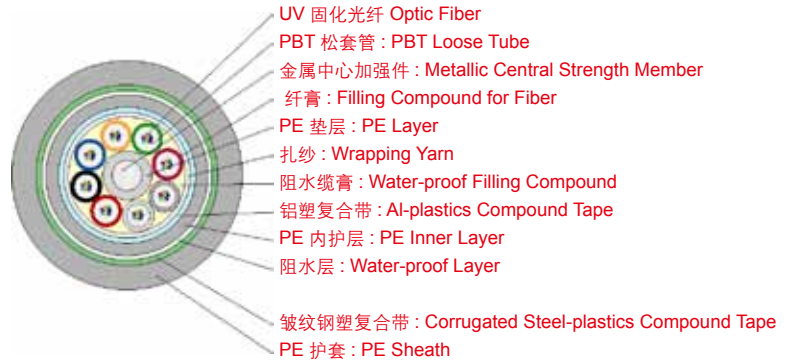
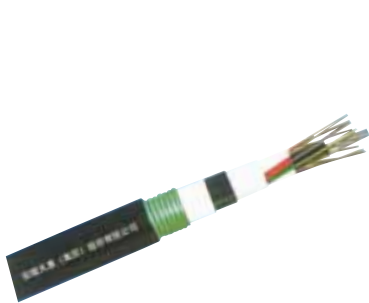
- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- with light weight and easy for laying
- with better pliability
- Steel tape armor ensures better crush-resistant performance.

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	光缆外径 (mm) FOC Outer Diameter	光缆重量 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~12	9.0	80	90	180	1500	600	1000	300

2-144 芯直埋松套管层绞式光缆

2~144 Cores Loose Tubes Stranded FOC for Direct Burial



产品型号: GYTA53

- 光纤松套管
- 金属中心加强件
- SZ 层绞缆芯内填充油膏
- 铝塑复合带粘结 PE 内护套
- 皱纹钢塑复合带粘结 PE 外护套

应用范围: 适用于长途通信和局间通信

敷设方式: 直埋、电缆沟、槽道、进局

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式,使光缆具有优良的机械性能和环境性能;
- 光缆结构紧凑,采用 SZ 层绞结构,确保光缆在恶劣的环境下,光纤不受到应力;
- 加强件外和缆芯内充满阻水缆膏,确保了光缆防潮、阻水效果。
- 光缆柔韧性和抗弯曲能力优良;
- 双层金属带纵包,双层护套抗拉、抗侧压能力强,具有防啮齿类动物破坏的能力。

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm)	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~30	13.1	250	170	340	3000	1000	3000	1000
32~60	14.5	270	170	340	3000	1000	3000	1000
62~72	15.0	290	180	360	3000	1000	3000	1000
74~96	16.6	390	210	420	3000	1000	3000	1000
98~144	19.5	475	230	460	3000	1000	3000	1000

Type: GYTA53

- Optic fiber in loose tube
- Metallic central strength member
- Filling compound for SZ stranded cable cores
- Al-plastics compound tape & PE inner sheath bound together
- Corrugated steel-plastics compound tape & PE outer sheath bound together

Application Range: for long distance & local communications

Mounting Ways: for direct burial, in cable furrow, etc.

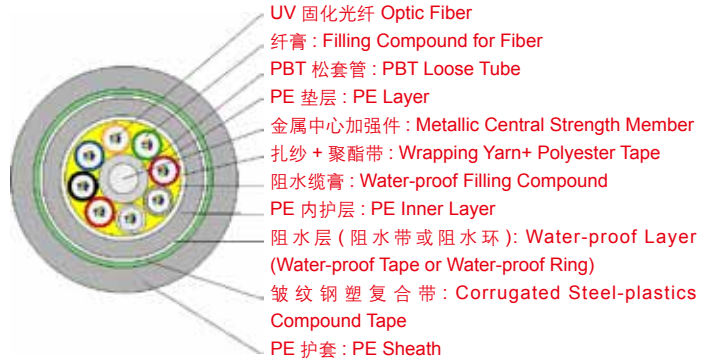
Application Temperature: -40°C ~+60°C

Features:

- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- with better pliability
- It could ensure high tensile strength, better performance of resisting side press and animal biting with double corrugated metallic layers wrapping & double sheaths.

2-144 芯松套管层绞式光缆 (钢带铠装)

2~144 Cores Loose Tubes Stranded FOC (Steel Tape Armored)



产品型号: GYTY53

- 光纤松套管
- 金属中心加强件
- SZ 层绞缆芯内填充油膏
- PE 内护层
- 皱纹钢塑复合带粘结 PE 外护套

应用范围: 适用于长途通信和局间通信

敷设方式: 管道、架空、直埋、进局、槽道、电缆沟

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式, 使光缆具有优良的机械性能和环境性能;
- 光缆结构紧凑, 采用 SZ 层绞结构, 确保光缆在恶劣的环境下, 光纤不受到应力;
- 加强件外和缆芯内充满阻水缆膏, 确保了光缆防潮、阻水效果。
- 光缆柔韧性和抗弯曲能力优良;
- 双护套结构抗侧压能力强, 具有防啮齿类动物破坏的能力。

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~30	12.2	205	150	300	3000	1000	3000	1000
32~60	13.2	230	170	340	3000	1000	3000	1000
62~72	13.8	250	180	360	3000	1000	3000	1000
74~96	15.2	370	210	420	3000	1000	3000	1000
98~144	18.4	425	220	440	3000	1000	3000	1000

Type: GYTY53

- Optic fiber in loose tube
- Metallic central strength member
- Filling compound for SZ stranded cable cores
- PE Inner Sheath
- Corrugated steel-plastics compound tape & PE outer sheath bound together

Application Range: for long distance & local communications

Mounting Ways: in pipe, for aerial mounting or direct burial, in cable furrow, etc.

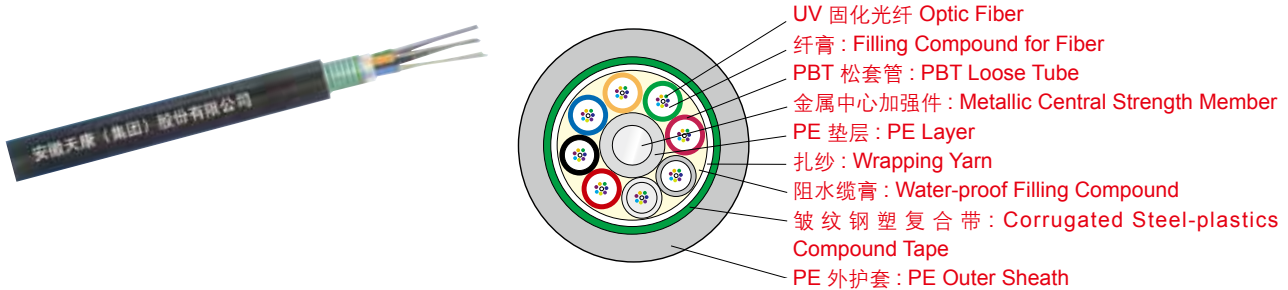
Application Temperature: -40°C ~+60°C

Features:

- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- with better pliability
- It could ensure high tensile strength, better performance of resisting side press and animal biting with double corrugated metallic layers wrapping & double sheaths.

2-144 芯松套管层绞式光缆 (钢带铠装)

2~144 Cores Loose Tubes Stranded FOC (Steel Tape Armored)



产品型号: GYTS

- 光纤松套管
- 金属中心加强件
- SZ 层绞缆芯内填充油膏
- 双面涂塑钢带粘结 PE 护套

应用范围: 适用于长途通信和局间通信

敷设方式: 管道、架空、槽道、电缆沟、直埋

适用温度: -40°C ~+60°C

Type: GYTS

- Optic fiber in loose tube
- Metallic central strength member
- Filling compound for SZ stranded cable cores
- Plastics -coated steel tape & PE sheath bound together

Application Range: for long distance & local communications

Mounting Ways: in pipe, for aerial mounting or direct burial, in cable furrow, etc.

Application Temperature: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式,使光缆具有优良的机械性能和环境性能;
- 光缆结构紧凑,采用 SZ 层绞结构,确保光缆在恶劣的环境下,光纤不受到应力;
- 加强件外和缆芯内充满阻水缆膏,确保了光缆防潮、阻水效果。
- 光缆柔韧性和抗弯曲能力优良;
- 钢带纵包缆芯使光缆挡潮效果更为优良。

Features:

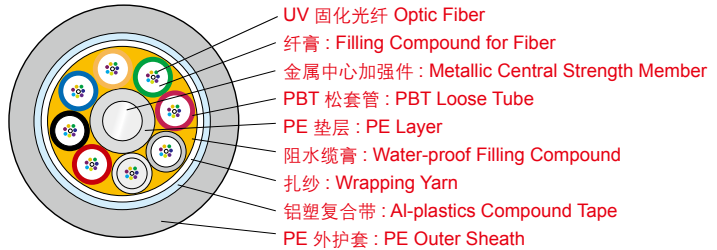
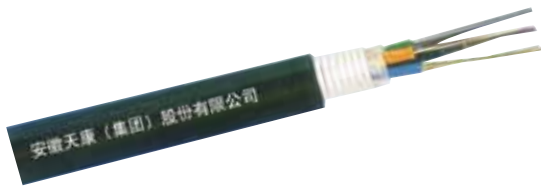
- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- with better pliability
- It could ensure much better moisture-proof performance of FOC with corrugated steel tape wrapping.

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm)	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~30	10.0	150	120	240	1500	600	1000	300
32~60	11.3	170	130	260	1500	600	1000	300
62~72	12.0	190	140	280	1500	600	1000	300
74~96	13.3	280	170	340	1500	600	1000	300
98~144	16.6	360	190	380	1500	600	1000	300

2-144 芯松套管层绞式光缆 (铝带纵包)

2~144 Cores Loose Tubes Stranded FOC (with Corrugated Al Tape)



产品型号: GYTA

- 光纤松套管
- 金属中心加强件
- SZ层绞缆芯内填充油膏
- 双面涂塑铝带粘结 PE 外护套

应用范围: 适用于长途通信和局间通信

敷设方式: 管道、架空、进局、槽道、电缆沟

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式, 使光缆具有优良的机械性能和环境性能;
- 光缆结构紧凑, 采用 SZ 层绞结构, 确保光缆在恶劣的环境下, 光纤不受到应力;
- 加强件外和缆芯内充满阻水缆膏, 确保了光缆防潮、阻水效果。
- 光缆柔韧性和抗弯曲能力优良;
- 涂塑铝带纵包缆芯使光缆防潮效果更为优良。

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~30	9.8	130	120	240	1500	600	1000	300
32~60	11.2	150	130	260	1500	600	1000	300
62~72	11.6	170	140	280	1500	600	1000	300
74~96	12.9	240	170	340	1500	600	1000	300
98~144	16.1	310	190	380	1500	600	1000	300

Type: GYTA

- Optic fiber in loose tube
- Metallic central strength member
- Filling compound for SZ stranded cable cores
- Plastics coated Al tape & PE sheath bound together

Application Range: for long distance & local communications

Mounting Ways: in pipe, for aerial mounting or in cable furrow, etc.

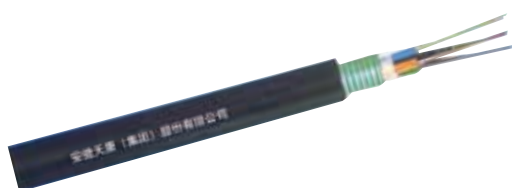
Application Temperature: -40°C ~+60°C

Features:

- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- with better pliability
- It could ensure much better moisture-proof performance with corrugated plastics-coated Al tape wrapping.

2-144 芯阻燃松套管层绞式光缆 (钢带铠装)

2~144 Cores Flame-retardant Loose Tubes Stranded FOC (Steel Tape Armored)



产品型号: GYTZS

- 光纤松套管
- 金属中心加强件
- SZ 层绞缆芯内填充油膏
- 双面涂塑钢带粘结 PE 外护套

应用范围: 适用于长途通信和局间通信

敷设方式: 进局、隧道、架空

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式, 使光缆具有优良的机械性能和环境性能;
- 光缆结构紧凑, 采用 SZ 层绞结构, 确保光缆在恶劣的环境下, 光纤不受到应力;
- 加强件外和缆芯内充满阻水缆膏, 确保了光缆防潮、阻水效果;
- 光缆柔韧性和抗弯曲能力优良;
- 钢带纵包缆芯使光缆挡潮效果更为优良。

Type: GYTZS

- Optic fiber in loose tube
- Metallic central strength member
- Filling compound for SZ stranded cable cores
- Plastics -coated steel tape & PE sheath bound together

Application Range: for long distance & local communications

Mounting Ways: in tunnel, for aerial mounting, etc.

Application Temperature: -40°C ~+60°C

Features:

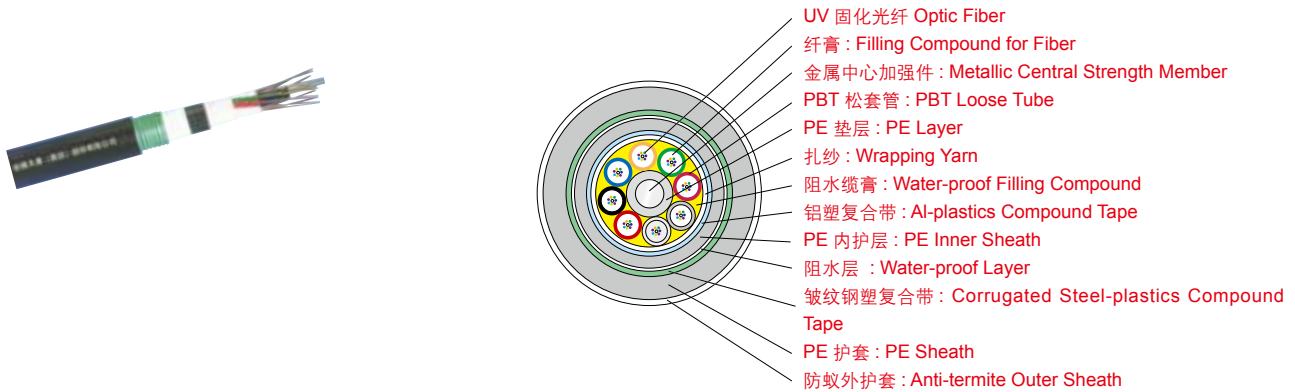
- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- with better pliability
- It could ensure much better moisture-proof performance of FOC with corrugated steel tape wrapping.

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~30	10.0	150	120	240	1500	600	1000	300
32~60	11.3	170	130	260	1500	600	1000	300
62~72	12.0	190	140	280	1500	600	1000	300
74~96	13.3	280	170	340	1500	600	1000	300
98~144	16.6	360	190	380	1500	600	1000	300

2-144 芯防蚁直埋松套管层绞式光缆

2~144 Cores Anti-termite Loose Tubes Stranded FOC for Direct Burial



产品型号: GYTA54

- 光纤松套管
- 金属中心加强件
- SZ 层绞缆芯内填充油膏
- 铝塑复合带粘结 PE 内护套
- 皱纹钢塑复合带粘结 PE 防蚁外护套

应用范围: 适用于长途通信和局间通信

敷设方式: 直埋

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式, 使光缆具有优良的机械性能和环境性能;
- 光缆结构紧凑, 采用 SZ 层绞结构, 确保光缆在恶劣的环境下, 光纤不受到应力;
- 加强件外和缆芯内充满阻水纤膏, 确保了光缆防潮、阻水效果。
- 光缆柔韧性和抗弯曲能力优良;
- 双层金属带纵包, 三层护套抗拉、抗侧压能力强。
- 最外层护套采用尼龙, 防白蚁破坏能力优良。

Type: GYTA54

- Optic fiber in loose tube
- Metallic central strength member
- Filling compound for SZ stranded cable cores
- Plastics- coated steel tape & PE sheath bound together
- Corrugated steel-plastics compound tape & anti-termite PE outer sheath bound together

Application Range: for long distance & local communications

Mounting Ways: for direct burial

Application Temperature: -40°C ~+60°C

Features:

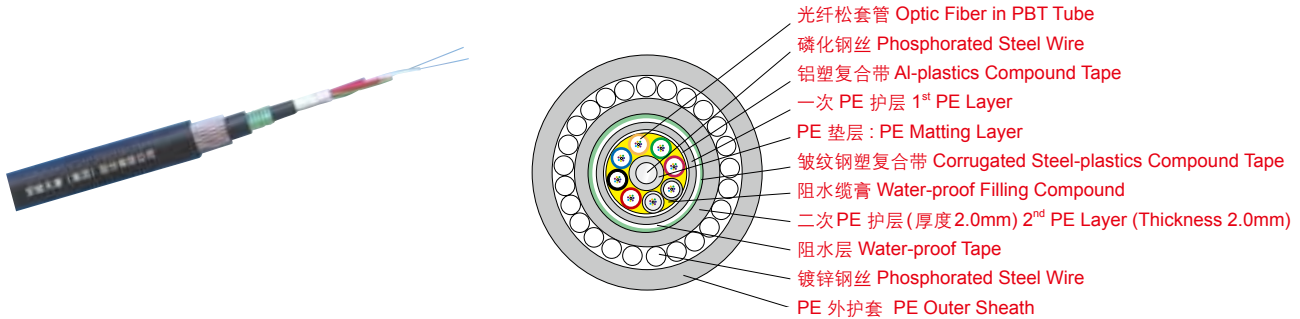
- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- with better pliability
- It could ensure better performance of FOC of resisting tension & side press, and termite with double layers of corrugated metallic tape wrapping & 3 layers of sheath, and nylon outer sheath respectively.

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~36	17.1	260	170	340	3000	1000	3000	1000
38~72	18.3	300	190	380	3000	1000	3000	1000
74~144	23.5	495	240	480	3000	1000	3000	1000

2-144 芯松套管层绞式水线光缆

2~144 Cores Loose Tubes Stranded FOC underwater



产品型号: GYSTA53+33

- 光纤松套管
- 金属中心加强件
- SZ 层绞缆芯内填充油膏
- 铝塑复合带粘结 PE 内护层
- 皱纹钢塑复合带粘结 PE 外护套
- 镀锌钢丝铠装
- 聚乙烯外护套

应用范围: 适用于长途通信和局间通信

敷设方式: 水下

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式, 使光缆具有优良的机械性能和环境性能;
- 光缆结构紧凑, 采用 SZ 层绞结构, 确保光缆在恶劣的环境下, 光纤不受到应力;
- 加强件外和缆芯内充满阻水缆膏, 确保了光缆防潮、阻水效果;
- 钢带纵包缆芯使光缆挡潮效果更为优, 且有防弹能力;
- 钢丝铠装抗高强度的侧压和拉伸。

Type: GYSTA53+33

- Optic fiber in loose tube
- Metallic central strength member
- Filling compound for SZ stranded cable cores
- Al-plastics compound tape & PE inner layer bound together
- Corrugated Steel-plastics compound tape & PE outer sheath bound together
- Galvanized steel armor
- PE outer sheath

Application Range: for long distance & local communications

Mounting Ways: underwater

Application Temperature: -40°C ~+60°C

Features:

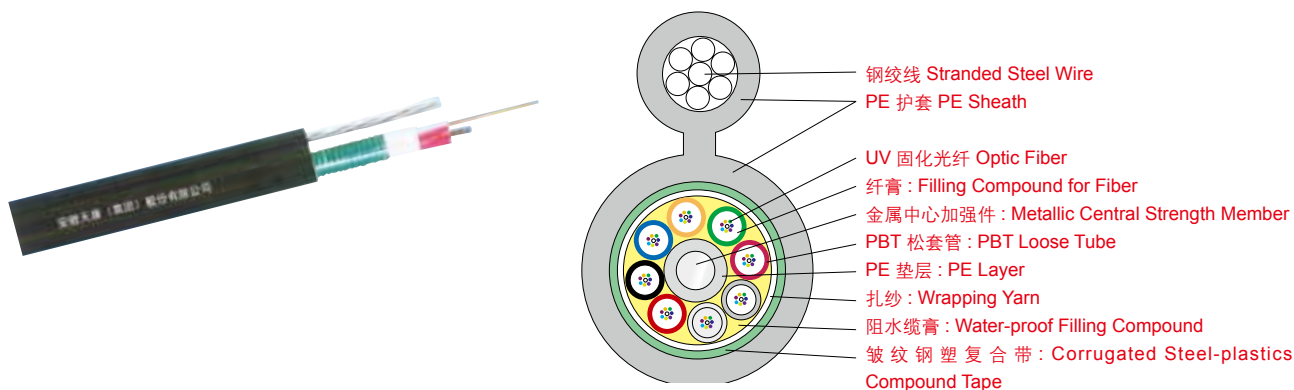
- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- It could ensure much better moisture & shooting-proof performance of FOC with corrugated steel tape wrapping.
- It could ensure better performance of resisting strong side press and tension.

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm)	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~30	17.0	150	500	750	5000	3000	20000	10000
32~60	18.4	170	530	790	5000	3000	20000	10000
62~72	18.9	190	540	810	5000	3000	20000	10000
74~96	20.5	280	600	880	5000	3000	20000	10000
98~144	23.4	360	640	960	5000	3000	20000	10000

8 字型自承式光缆

8-shape Self Supporting FOC



产品型号: GYSTCS

- 光纤松套管
- 金属中心加强件
- SZ 层绞缆芯内填充油膏
- 双面涂塑钢带粘结 PE 护套
- 钢绞线作自承

应用范围: 适用于长途通信和局间通信

敷设方式: 架空

适用温度: -40°C ~+60°C

Type: GYSTCS

- Optic fiber in loose tube
- Metallic central strength member
- Filling compound for SZ stranded cable cores
- Plastics- coated steel tape & PE sheath bound together
- Stranded steel wire for self supporting unit

Application Range: for long distance & local communications

Mounting Ways: aerial

Application Temperature: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式, 使光缆具有优良的机械性能和环境性能;
- 光缆结构紧凑, 采用 SZ 层绞结构, 确保光缆在恶劣的环境下, 光纤不受到应力;
- 加强件外和缆芯内充满阻水缆膏, 确保了光缆防潮、阻水效果;
- 钢带纵包缆芯使光缆防潮效果更为优良, 且有防弹能力;
- 钢绞线作自承件满足极高的抗拉强度。

Features:

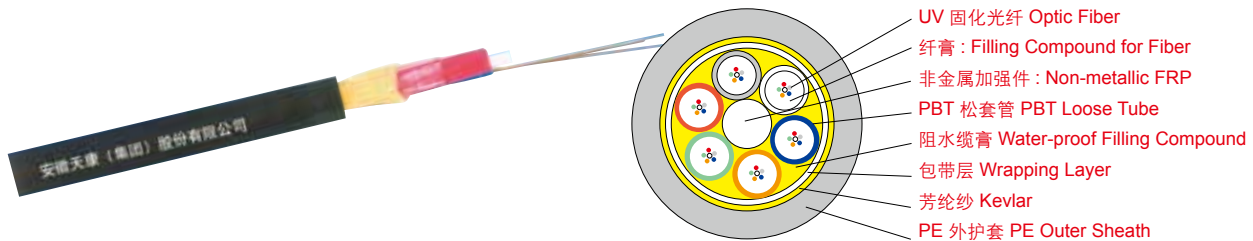
- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- It could ensure much better moisture & shooting-resistant performance of FOC with corrugated steel tape wrapping.
- It could ensure high tensile strength with stranded steel wire as self-supporting unit.

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~30	17.0	150	120	240	8000	6000	3000	1000
32~60	18.4	170	120	240	8000	6000	3000	1000
62~72	18.9	190	140	280	8000	6000	3000	1000

2-144 芯非金属松套管层绞式光缆

2~144 Cores Non-metallic Loose Tube Stranded FOC



产品型号: GYFTY

- 光纤松套管
- 非金属中心加强件 (FRP)
- SZ 层绞缆芯内填充油膏
- PE 外护套
- 芳纶纱加强

应用范围: 适用于长途通信和局间通信和强电磁场所

敷设方式: 架空、管道、进局、槽道、电缆沟

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低;
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式, 使光缆具有优良的机械性能和环境性能;
- 光缆结构紧凑, 采用 SZ 层绞结构, 确保光缆在恶劣的环境下, 光纤不受到应力;
- 加强件外和缆芯内充满阻水缆膏, 确保了光缆防潮、阻水效果。
- 光缆柔韧性和抗弯曲能力优良;
- 光缆全为非金属结构, 重量轻, 敷设方便, 抗电磁能力优良。

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~30	9.0	98	110	220	1500	600	1000	300
32~60	10.0	130	130	260	1500	600	1000	300
62~72	10.5	130	130	260	1500	600	1000	300

Type: GYFTY

- Optic fiber in loose tube
- Non-metallic FRP
- Filling compound for SZ stranded cable cores
- PE outer sheath
- Kevlar reinforcement

Application Range: for long distance & local communications with strong electromagnetic field effect

Mounting Ways: for aerial mounting, or in pipe, tunnel, cable furrow, etc.

Application Temperature: -40°C ~+60°C

Features:

- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- with better pliability
- The cable is of non-metallic structure, light and convenient for mounting, with better performance against electromagnetic effect.

2-144 芯阻燃非金属松套管层绞式光缆

2~144 Cores Flame-retardant, Non-metallic Loose Tube Stranded FOC



产品型号: GYFTZY

- 光纤松套管
- 非金属中心加强件 (FRP)
- SZ 层绞缆芯内填充油膏
- 低烟无卤阻燃护套

应用范围: 适用于长途通信和局间通信和强电磁场所

敷设方式: 架空、进局、隧道

适用温度: -40°C ~+60°C

产品特点

- 光纤传输损耗小、色散低。
- 合理的设计及精确的控制松套管中光纤的余长及成缆方式，使光缆具有优良的机械性能和环境性能。
- 光缆结构紧凑，采用 SZ 层绞结构，确保光缆在恶劣的环境下，光纤不受到应力。
- 加强件外和缆芯内充满阻水缆膏，确保了光缆防潮、阻水效果。
- 光缆柔韧性和抗弯曲能力优良；
- 光缆全为非金属结构，重量轻，敷设方便，抗电磁能力优良。
- 阻燃效果好。

技术参数 Technical Parameters

光缆芯数 FOC Core(s)	外径参考值 (mm) FOC Outer Diameter	重量参考值 (kg/km) FOC Weight	最小弯曲半径 (mm) Min. Bending Radius		允许拉伸力最小值 (N) Min. Tension Allowed		允许压扁力最小值 (N/100mm) Min. Flattening Force Allowed	
			静态 Static	动态 Dynamic	短期 Short Term	长期 Long Term	短期 Short Term	长期 Long Term
2~30	9.0	126	110	220	1500	600	1000	300
32~60	10.0	155	130	260	1500	600	1000	300
62~72	10.5	160	130	260	1500	600	1000	300

Type: GYFTZY

- Optic fiber in loose tube
- Non-metallic FRP
- Filling compound for SZ stranded cable cores
- Flame-retardant, low smoke & halogen-free sheath

Application Range: for long distance & local communications with strong electromagnetic field effect.

Mounting Ways: for direct mounting, or in tunnel, etc.

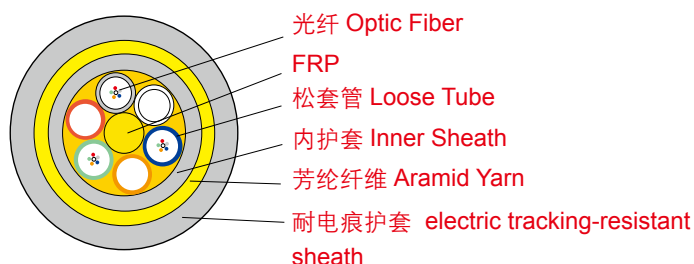
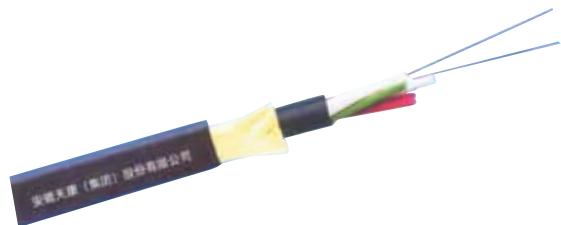
Application Temperature: -40°C ~+60°C

Features:

- with low transmission loss and dispersion
- The reasonable design and precision control on fiber length in loose tube ensures better mechanical performance and adaptability to environment of FOC.
- The close structure of SZ layer stranding prevents optic fiber from stress under bad environment.
- It could ensure moisture & water resistant performance of FOC with filling compound filled outside strength member and inside cable core.
- with better pliability
- The cable is of non-metallic structure, light and convenient for mounting, with better performance against electromagnetic effect.
- with better flame-retardant performance.

全介质自承式光缆 (ADSS)

All Dielectric Self-Supporting FOC (ADSS)



产品型号: ADSS

- 非金属加强件
- PE 内护套
- 松套管绞填充式
- 芳纶纤维加强
- 高强度、耐电痕护套

应用范围: 可与高压电力线路同塔架设, 也可用于电信系统跨大江大河、崇山峻岭等地形复杂地带。

敷设方式: 架空

适用温度: -40°C ~+70°C

产品特点:

- 抗拉强度大, 最大跨距可达 1000 米以上;
- 无金属材料, 绝缘性能好;
- 特种外护套, 抗电腐蚀性强, 能与 110kV 及以上高压线路同塔架设;
- 芳纶纤维加强, 抗冲击性能好, 可防弹;
- 重量轻;
- 施工维护方便 (一般不需停电)。

Type: ADSS

- Non-metallic FRP
- PE inner sheath
- Loose tube stranded filled with jelly
- Aramid yarn reinforcement
- High strength, electric tracking-resistant sheath

Application Range It could be installed on the same tower for high voltage power line, or used for telecom system lines spanning rivers and mountains.

Mounting Ways for aerial mounting

Application Temperature -40°C ~ +70°C

Features:

- With high tensile strength, installation span reaches more than 1000 meters to the maximum.
- Free from metallic material, with good insulation performance.
- Special outer sheath with strong resistance against electric corrosion. It could be laid on the same tower for high voltage line of 110KV or higher.
- Aramid yarn reinforcement with strong resistance against shock and bullet.
- With light weight
- Convenient for installation and maintenance (unnecessary for power supply stop)

跨距 (m) Span	最小破断力 (kN) Min. Breaking Force	最大安全运行张力 (kN) Max. Operation Tension	光缆模量 (10 ⁴ N/mm ²) Cable Module	光缆标称外径 (mm) Nominal Cable Outer Diameter	缆重 (kg/m) Cable Weight
100	14.1	6.6	0.4	14	0.17
200	22.3	10.5	0.6		
300	28.2	13.2	0.8		
400	44.7	17.6	1.2	15	0.19
500	50.2	19.8	1.4		
600	55.9	22.0	1.5		
700	61.4	24.2	1.7		
800	67.0	26.4	2.1	16	0.22
900	72.6	28.6	2.2		
参考气象条件 Weather Conditions for Reference		10m/s 风 wind, 5mm 冰 ice; 25m/s 风 wind, 0mm 冰 ice			

项目 Items	实验条件 Test Conditions	指标 Indices	附加衰减 Additional Attenuation	光纤应变 Optic Fiber Strain
拉伸张力 (N) Tension	短期 Short-term	W	≤ 0.05dB	≤ 1.5‰
	长期 Long-term	T	≤ 0.02dB	≤ 0.05‰
压扁 (N) Crush	短期 Short-term	≥ 4000	≤ 0.05dB	
	长期 Long-term	≥ 2000	≤ 0.02dB	
温度循环 Temperatuer Cycle	-40℃ ~ + 65℃	2 个循环 2cycles	≤ 0.10dB	
抗风力振动 Vibration Resistance	低频, 小振幅 Low frequency, small amplicture	≥ 1 亿次 ≥ one hundred million times	≤ 1.0dB	
渗水 Water Penetration	1m 缆 1m 水柱 24h 全截面 1m cable, 1m water depth, 24h, full cross section	无水渗出 No		
耐电痕 Electric Corrosion Resistance	4kV,3000SNaCL 溶液 + 0.1% 活性剂 >100 次喷射 More than 100 times spray of 3000S NaCL solution plus 0.1% activator under 4kV	护套无腐蚀痕迹 No		
允许弯曲半径 Allowed Bending Radius	敷设时 For installation	20 倍缆径 20 times of cable diameter		
	运行时 For operation	10 倍缆径 10 times of cable diameter		
允许侧压力 (N/100mm) Allowed Side Pressure	短期 Short-term	≥ 4000		
	长期 Long-term	≥ 2000		

注: W - 光缆使用地最恶劣气候条件下(覆冰、风力、高低温等)并考虑实际使用环境(弧垂、跨距、高差等)时的理论值; T- 光缆使用地年常见气候条件下(常见的覆冰、风力、高低温等)并考虑实际使用环境(弧垂、跨距、高差等)时的理论值;
W、T 值也可通过与用户协商后确定力值。

适用温度: -40℃ ~+70℃

在此温度范围内, 1310nm 和 1550nm 衰减系数变化不大于 0.05dB/km

电气及环境性能

光缆渗水性能: 全截面阻水(可接受 L 型水槽测试)

Remarks: W- ideal value for cable used under worst wether condition (covering ice, wind, extreme temperature, etc.) considering actual circumstances (drop, span,height difference, etc.); T- ideal value for cable used under common weather conditions (common covering ice, wind, extreme temperature, etc.) considering actual circumstances (drop, span, height difference,etc.)
W,T value could be confirmed through discussion with customers.

Application Temperature: - 40℃ ~+70℃ ;

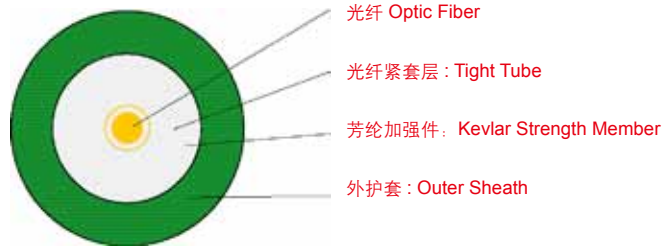
Attenuation coefficient change at 1310nm and 1550nm remains no more than 0.05dB/km within the range.

Electric & Environmental Performance

Water Penetration Performance: water block for whole cross section(tested in L-shaped water rough)

通信用室（局）内软光缆

Soft Indoor FOC



产品型号: **GJFJV**

Type:**GJFJV**

应用范围: 适用于尾纤及跳线, 也可作为通信系统的光传输线。

Application Range:

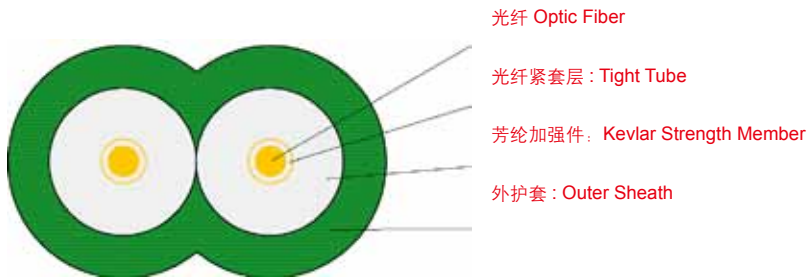
It is suitable with pigtail and connector, or used as optic rtransmission media of communication system.

技术参数 Technical Parameters

光缆芯数 Cable Core(s)	光缆外径 (mm) Outer Diameter	短暂拉伸 (N) Short timeTension	长期拉伸 (N) Long-term Tension	短暂压扁 (N/10cm) Short-time Flattening Press	长期压扁 (N/10cm) Long-term Flattening Press	动态弯曲 半径 Dynamic Bending Radius	静态弯曲 半径 Static Bending Radius
1	2.0~2.8	150	80	500	100	20D	10D

注: D 表示光缆外径

Remarks: D refers to outer diameter of FOC.



产品型号: **GJFVV**

Type:**GJFVV**

应用范围:

适用于尾纤及跳线, 也可作为通信系统的光传输线。

Application Range:

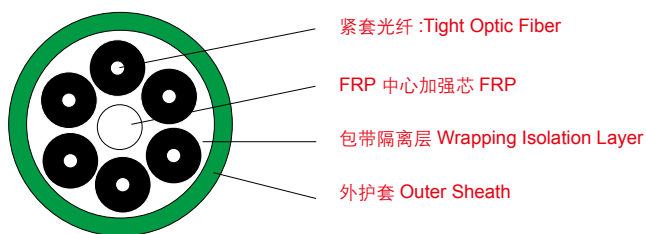
It is suitable with pigtail and connector, or used as optic rtransmission media of communication system.

技术参数 Technical Parameters

光缆芯数 Cable Core(s)	光缆外径 (mm) Outer Diameter	短暂拉伸 (N) Short timeTension	长期拉伸 (N) Long-term Tension	短暂压扁 (N/10cm) Short-time Flattening Press	长期压扁 (N/10cm) Long-term Flattening Press	动态弯曲 半径 Dynamic Bending Radius	静态弯曲 半径 Static Bending Radius
2	6.6~3.7	300	160	1000	200	20H	10H

注：H 表示光缆外径

Remarks: H refers to outer diameter of FOC.



产品型号：GJFJV

Type:GJFJV

应用范围：

适用于尾纤及跳线，也可作为通信系统的光传输线。

Application Range:

It is suitable with pigtail and connector, or used as optic ransmission media of communication system.

技术参数 Technical Parameters

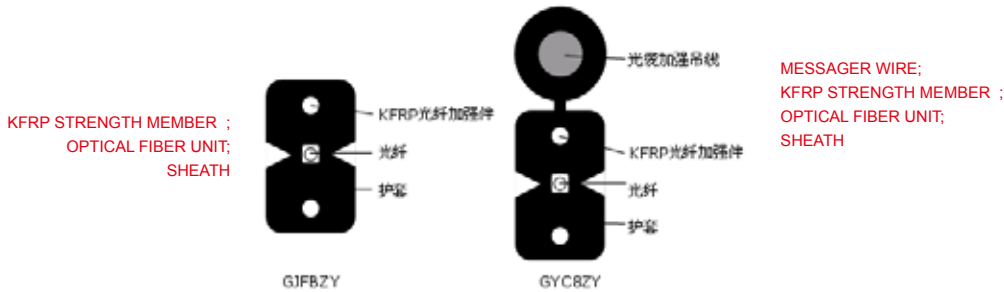
光缆芯数 Cable Core(s)	光缆外径 (mm) Outer Diameter	短暂拉伸 (N) Short timeTension	长期拉伸 (N) Long-term Tension	短暂压扁 (N/10cm) Short-time Flattening Press	长期压扁 (N/10cm) Long-term Flattening Press	动态弯曲 半径 Dynamic Bending Radius	静态弯曲 半径 Static Bending Radius
2~12	用户协定	600	300	1000	200	20D	10D

注：D 表示光缆外径

Remarks: D refers to outer diameter of FOC.

皮线光缆

FTTH Cable



产品描述:

皮线光缆的结构是将单模或多模光纤放置在两非金属加强件中间后挤包一层阻燃聚乙烯护套 (LSZH)。自承式引入皮线光缆的结构是增加金属吊线。

Description

The optical fiber unit (single or multi mode) is positioned in the centre. Two parallel Fiber Reinforced Plastics (FRP) are placed at the two sides. Then the cable is completed with LSZH sheath. Self-supporting FTTH cable is to add a steel wire as the additional strength.

产品特点 Characteristics

- 光缆外径小、重量轻、成本低、施工成本低
- 采用冷接技术，速度快、灵活快捷
- 光缆有很高的抗压扁力和抗张力，自承式结构能满足 50 米以下飞跨拉设
- 采用玻璃增强纤维 (G-FRP) 或芳纶增强纤维 (K-FRP) 加强材料，光缆柔软、弯曲性能好，确保光缆弯曲半径符合要求
- 采用低烟无卤阻燃材料，达到光缆在室内使用对阻燃性能的要求
- 光纤采用符合 ITU-T G657A 技术要求的抗弯曲光纤，最小弯曲半径达 15mm
- 自承式光缆加强件采用高碳钢丝，具有优越的抗拉性能

- small outer diameter, light weight, low cost, low construction cost
- adopt cold-jointing technique, fast, flexible
- excellent crush and tensile strength, self-supporting structure can allow 50m below span length
- Reinforced with G-FRP or K-FRP to make cable flexible, ensure good performance of bending, meet the requirement of bend radius.
- LSZH sheath can meet the requirement of flame retardant for indoor use
- To satisfy with low-bend-sensitivity fiber requirement of ITU-T G657A, the minimum bend radius of cable is 15mm
- Carbon steel wire as the additional strength member of self-supporting optical cable ensures good performance of tensile strength

产品型号

Type: GJFVV

应用范围:

适用于尾纤及跳线，也可作为通信系统的光传输线。

Application Range:

It is suitable with pigtail and connector, or used as optic transmission media of communication system.

编号 Item	规格型号 Type	说明 Notes	备注 Remark
1	GJFBZY-1B1	1 芯不带钢丝 1 core without steel wire	FTTH 光缆 FTTH FOC 抗弯曲光纤 Low bend sensitivity cable
2	GJFBZY-2B1	2 芯不带钢丝 2 cores without steel wire	进口芳纶棒 import aramid fiber 内无加强件 non-metallic FRP
3	GYC8ZY-1B1	1 芯带钢丝 1 core with steel wire	FTTH 光缆 FTTH FOC 抗弯曲光纤 Low bend sensitivity cable
4	GYC8ZY-2B1	2 芯带钢丝 2 cores with steel wire	进口芳纶棒 import aramid fiber 钢丝加强件 steel wire strength member

光缆技术参数

1. 光缆的机械性能

光缆的机械性能包括拉伸、压扁、冲击、弯曲项目，光缆经各项机械性能试验后符合下列要求

- A. 光缆全部光纤都不断裂
- B. 护套无目力可见的裂纹
- C. 护套内缆芯的各个元件无目力可见的损坏
- D. 试验后的光纤无残余附加衰减

光缆允许弯曲半径、拉力和压扁力符合下表的规定

光缆的允许弯曲半径、拉力和压扁力

型号 Type	芯数 Core Number	光缆外径 Outer Diameter (高 H*宽 W) mm	光缆重量 kg/km FOC Weight	最小弯曲单位 mm Min. Bending Radius	允许拉力 N Tension Allowed	允许压扁力 N/100mm Flattening Force Allowed
GJFBZY	1	3.1*2.0	9.6	15	70	1000
GYC8ZY	1	5.3*2.0	21.5	120	700	1000
GJFBZY	2	3.1*2.0	9.6	15	70	1000
GYC8ZY	2	5.3*2.0	21.5	120	700	1000

a. 光缆在经受上表中规定的允许拉力下，光缆中光纤应变不超过 0.3%，光纤附加衰减小于 0.10dB

b. 光缆在经受上表中规定的允许压扁力下，光纤附加衰减应小于 0.10dB

2. 光缆的环境性能

光缆在 -30℃、+70℃ 恒温 8 小时的衰减与 20℃ 的衰减变化不大于 0.1dB

Technical Parameters of FOC

Mechanical Performance

Mechanical performance includes tests of tensile strength, crush, bend radius, it should be in accord with following requirements:

- No fiber break
- No visible sheath damage
- No visible damage of each element
- No residual additional attenuation

Allowed bend radius, tension, crush should confirm to following table:

Under allowed tension of above table, optical fiber strain should be no more than 0.3%, additional attenuation should be no more than 0.1.dB.

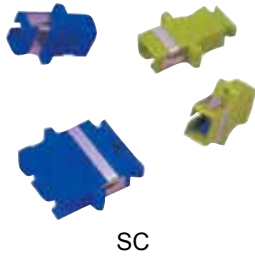
Under allowed crush of above table, additional attenuation of optical fiber should be no more than 0.1dB

Environmental Characteristics

FOC Attenuation should be no more than 0.1dB both at - 30℃ or +70℃ 8 hours of constant temperature and 20 ℃

适配器

Adapter



SC 适配器

颜色：PC 为蓝色，APC 为绿色。
可以在插座体上为客户制作标记。
插入损耗 < 0.3dB.



FC 适配器

可供圆形插座体。
原装日本瓷套管。
插入损耗 < 0.3dB.



SC Adapter

Color:blue for PC,green for APC
We may add mark designated by customer onto socket body.
Insert Loss < 0.3dB

FC Adapter

That with circular socket is also available.
Imported Japanese Ceramic Tube
Insert Loss < 0.3dB

ST 适配器

防尘帽以蓝色为基本色。
插入损耗 < 0.3dB.

ST Adapter

Blue for Ditt-proof Cap
Insert Length < 0.3dB

光纤连接器

Optic Fiber Connector

特性

- ◆ PC 球面研磨 /UPC 球面研磨 /APC 斜面研磨
- ◆ 插入损耗低
- ◆ 反射衰减高
- ◆ 标准金属件, 二氧化锆陶瓷插芯
- ◆ 光缆外径: 3.0mm,2.0mm,0.9mm

Characters

- ◆ PC Spherical Surface Polish/UPC Spherical Surface Polish/APC Spherical Surface Polish
- ◆ Low insert loss
- ◆ High reflection attenuation
- ◆ Standard metallic part,ZO₂ ceramic insert core
- ◆ FOC Outer diameter

特性

- ◆ 在 ODF 配线架实现分线
- ◆ 插入损耗低
- ◆ 反射衰减高
- ◆ 互换性好

Characters

- ◆ Splitting on ODF
- ◆ Low insert loss
- ◆ High reflection attenuation
- ◆ Better exchangeability

特性

- ◆ 插入损耗小
- ◆ 高回波损耗
- ◆ 高可靠性与稳定性

用途

- ◆ 通信网络
- ◆ 数据传输网
- ◆ 仪器仪表
- ◆ 计算机网络
- ◆ 室内布线

Application

- ◆ Communication network
- ◆ Data transmission network
- ◆ Optic instruments
- ◆ Computer network
- ◆ Wiring indoor

用途

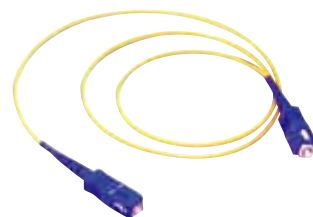
- ◆ 通信网络
- ◆ 数据传输网
- ◆ 仪器仪表
- ◆ 计算机网络

Application

- ◆ Communication network
- ◆ Data transmission network
- ◆ Optic instruments
- ◆ Computer network

用途

- ◆ 光纤通信系统
- ◆ 光纤数据传输
- ◆ 光纤接入网
- ◆ 局域网
- ◆ 光纤 CATV
- ◆ 测试设备
- ◆ 光纤传感



Characters

- ♦Low insert loss
- ♦High return wave loss
- ♦High reliability and stability

Application

- ♦Optic fiber communication system
- ♦Optic fiber data transmission
- ♦Optic fiber connection network
- ♦LAN
- ♦Optic fiber CATV
- ♦Testing devices
- ♦Optic fiber sensor

产品类型	Type	FC		SC	
		PC	APC	PC	APC
典型插入损耗 (dB)	Typical insert loss	0.1	0.15	0.1	0.15
最大插入损耗 (dB)	Max.Insert loss	0.25	0.3	0.25	0.3
典型插入损耗 (dB)	Typical insert loss	53	67	53	67
最小回波损耗 (dB)	Min.Return wave loss	48	63	48	63
工作温度 (°C)	Working Temperature	-40~+75			
存储温度 (°C)	Storage Temperature	-40~+85			

ST——弹性插口 FC——螺纹 SC——插拔式
 ST——Spring Insert FC——Screw SC——Plug

防水尾缆

Water-proof FOC Pigtail



特 性

可连接各种型号的连接器
采用耐用的防水接头，安装方便，可靠。
可根据需要选择不同的芯数。

Characters

It is suitable for various connectors.
The waterproof joint is stable and durable and convenient for installation
The pigtail of different cores is available ad demands.

技术指标

光纤连接器类型：FC、SC
插入损耗 <0.2dB.
回波损耗： PC>40dB
UPC>50dB
APC>60dB
工作温度： - 40°C ~ + 80°C
光缆芯数： 2、4、6、8 芯
光缆外径： ϕ 12mm
光缆长度： 5 米

Technical Indices

Connector Type:FC,SC
Insert loss:<0.2dB
Return Wave Loss: PC>40dB
UPC>50dB
APC>60dB.
Working Temperature:-40°C ~ + 80°C
Cable Cores:2,4,6,8 cores
FOC Outer Diameter:12mm
FOC Length:5 meters

应 用

有线电视光纤网络
电信光纤用户网
计算机局域网

Application

CATV Network
Telecommunication Network
Local Area Network

光缆型号的编制方法

Type Naming Method of FOC

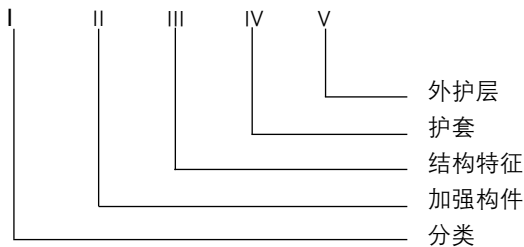
型号的构成

光缆型号由光缆型式的代号和规格的代号构成，用一空格分隔开。

型式

型式的构成

光缆型式由 5 个部分构成，如下所示，其中结构特征指缆芯结构和光缆派生特征。各部分均用代号表示。



分类的代号

GY 通信用室(野)外光缆
GJ 通信用室内光缆

加强构件的代号

(无符号)	金属加强构件
F	非金属加强构件
G	金属重型加强构件
H	非金属重型加强构件

注：加强构件指护套以内用于增强光缆抗拉能力的构件。如果同时有金属和非金属的加强构件，则表示为金属构件特征。

结构特征的代号

J	光纤紧套被覆结构
D	光纤带结构
s	光纤松套被覆结构，可省略
(无符号)	层绞式
x	中心束管式结构
G	骨架式结构
T	油膏填充式结构
C	自承式结构
Z	阻燃结构
E	护套椭圆截面（无符号为圆截面）

注：当光缆形式有几个特征需要注明时，其组合代号为相应的各代号依上列顺序排列。

Type Code Composition

FOC code consists of code of cable type and that of specification with space mark for separation.

Type

Type Composition

FOC type code consists of five parts as follows among which structural character refers to cable core structure and derived characters.

Outer Sheath
Sheath
Structural Character
Strength Member
Category

Category Code

GY Communication Field FOC
GJ Indoor FOC

Strength Member Code

(without mark)	Metallic Strength Member
F	Non-metallic Strength Member
G	Heavy Type Metallic Strength Member
H	Heavy Type Non-metallic Strength Member

Remarks:Strength member refers to that for improvement of tensile strength of FOC underneath sheath,Only metallic strength member is indicated with code if FOC has both metallic and non-metallic strength members.

Strength Character Code

J	Tight Tube Structure
D	Optic Fiber Ribbon Structure
S	Loose Tube Structure,omissible
(Without mark)	Tubes Stranded Structure
X	Central Tube Structure
G	Framework Structure
T	Filling Compound Filling Structrue
C	Self-supporting Structure
Z	Flame-retardant Structure
E	Sheath with Oval Cross Section(without E for that of circular cross section)

RemarksWhen certain codes are added to indicate characters of FOC,they should be arranged in code order above.

护套的代号

Y	聚乙烯护套
W	夹带钢丝钢聚乙烯粘结护层
A	铝聚乙烯粘结护套 (简称 A 护套)
S	钢聚乙烯粘结护套 (简称 S 护套)
G	钢护套
Q	铅护套
V	聚氯乙烯护套
L	铝护套
U	聚氨酯护套

Type Code Composition

PE Sheath
PE & Steel Wire Binding Layer
PE & Al Tape Binding Layer(abbreviated as Sheath A))
PE & Steel Tape Binding Layer(abbreviated as Sheath S)
Steel Sheath
Lead Sheath
PVC Sheath
AL Sheath
Polyurethane Sheath

外护层的代号

参照 GB T2952.1 中表 1 的规定，用数字表示。光缆常用代号
表 1 光缆常用外护层代号

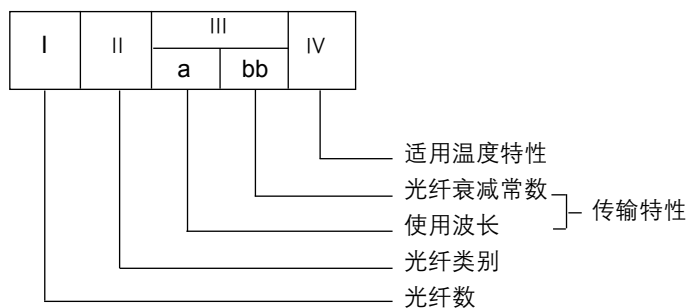
Outer Sheath Code

We adopt digits for outer sheath code in Form 1 with reference to GB T2952.1 standard.
Form 1 FOC Outer Sheath Codes

代号 code	铠装层 Armor Layer	外被层或外套 Outer Layer/Sheath
0	无铠装层 (有外被层或外套) No Armor(with Outer Layer/Sheath)	
1		纤维外被 Fiber Layer
2	绕包双钢带 Double wrapping Steel Tape	聚氯乙烯套 PVC Sheath
3	单细圆钢丝 Single Thin Circular Steel Wire	聚乙烯套 PE Sheath
33	双细圆钢丝 Double Thin Circular Steel Wire	聚乙烯套 PE Sheath
4	单粗圆钢丝 Single Thick Circular Steel Wire	聚乙烯套加聚尼龙套 PE Sheath & Nylon Sheath
44	双粗圆钢丝 Double Thick Circular Steel Wire	聚乙烯套加聚尼龙套 PE Sheath & Nylon Sheath
5	皱纹钢带 Corrugated steel Tape	聚乙烯保护套 PE Sheath

规格

规格的构成
光缆规格由四大部分构成，如下所示。各部分均用代号表示，相邻的各大部分的代号都是数字时，用规定符号把它们隔开



Specification

Composition
The specification code consists of four major parts as the following. If the digits of the code are neighboring, the stipulated symbol should be adopted for their separation

Application Temperature Character
Attenuation Constant
Application Wavelength } Transmission Character
Optic Fiber Category
Optic Fiber Number

光纤数的代号

用光缆中类别光纤的实际有效数目的数字表示。必要时，也可用松套管数和每管光纤数为基础的计算式并加圆括号来表示。

例如：18 可用 (3×6) 或 $(2 \times 8 + 1 \times 2)$ 等表示。

光纤类别的代号

光纤类别的代号

单模光纤类别就采用它的产品分类代号 B 表示，多模光纤采用产品分类号 A 表示，再以数字表示不同种类的光纤。

常用代号如下：

- B1.1 二氧化硅（普通）单模光纤（B1.1 可简称为 B1）
 - B1.2 二氧化硅系 1550nm 低损耗单模光纤
 - B2 二氧化硅系色散位移单模光纤
 - B4 二氧化硅系非零色散位移光纤
 - A1a 二氧化硅系 50/125 μ m 多模光纤
 - A1b 二氧化硅系 62.5/125 μ m 多模光纤
- 必要时在光纤类别代号后，可注明单模光纤模场直径标称值（ μ m），并用“/”与类别代号划开。

光纤传输特性的代号

单模光纤传输特性的代号由 a 及 bb 两组数字代号构成，放在圆括号内。其中：

a 表示使用波长的代号，是一位数。其数字代号规定如下：

2 使用波长在 1310nm 区域

3 使用波长在 1550nm 区域

bb 表示衰减系数的代号，是两位数。其数字依次为光缆中单模光纤的衰减系数（dB/km）分类数值的十分位和百分位数字。

例如：使用波长在 1310nm 区域，光缆中光纤衰减常数不大于 0.36dB/km 的单模光纤，传输特性代号为：(236)。同一光缆适用于两种及以上波长，并具有不同传输特性时，应同时列出各波长上的规格代号，并用“/”划开。例如：(236/322)

A3.5 适用温度特性的代号

适用温度特性的代号由表 1 所列温度范围代号 (A、B、C) 和一个数字代号组成，该数字代号为在此温度范围内光缆允许附加衰减值的分级号为 0，可省略。

例 1: 在 $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$ 温度范围内，光缆最大允许附加衰减值为 1 级 (0.10dB/2km)，则代号为 C1

例 2: 在 $-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$ 温度范围内，光缆无明显附加衰减，则代号为 A0，可省略为 A。

Optic Fiber Number Code

It is indicated with the actual figured of optic fiber in FOC. It is also indicated with the calculation formula in circular brackets as the example if neccessary. for example, (3×6) of $(2 \times 8 + 1 \times 2)$ for 18.

Optic Fiber Category Code

Code B means single-mode optic fiber, and code A means multi-mode optic fiber.

The digits as the following should be attached to the code to further indicate different category of optic fiber.

Common Code

SiO₂(Common)Single-mode Optic Fiber(or abbreviated as B1)

SiO₂1550nm Low Loss Single-mode Optic Fiber

SiO₂ Dispersion Shift Single-mode Optic Fiber

SiO₂ Non-zero Dispersion Shift Single-mode Optic Fiber

SiO₂ 50,125 μ m Multi-mode Optic Fiber

SiO₂ 62.5/125 μ m Multi-mode Optic Fiber

The nominal mode field diameter of optic fiber may be marked followingt he category code above with symbol“/” if necessary

Transmission Characters Code

The code of single-mode optic fiber consists of “a”,one-digit figure and “bb”,a twodigit figurei in circular brackets.

“a” represents wavelength in application as follows:

2 at wavelength 1310nm

3 at wavelength 1550nm

“bb” represents attenuation coefficient, and is 100 times of the actual attenuation coefficient value(dB/km).

for example:If the attenuation constant of optic fiber in FOC is no more than 0.36dB/km at wavelength 1310nm,the code“(236)” should be adopted.If the same FOC has different transmission characters at two or more kinds of wavelength,all codes at different wavelengths should be indicated and marked with “/” for their separation.

A3.5 Application Temperature Characcters Code

The code consists of a code of temperature range listed in Form 1(A,B,C)and a digit code.The digit code is omissible if the allowed additional attenuation grade within the temperature range is “0” .

Example 1:If the allowed additional attenuation grade within temperature range of $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$ is “1”,the code “C1” should be adopted.

Example 2:If the FOC has no obvious additional attenuation within temperature range of $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$,the code “A0” may be adopted or omitted as “A”

光缆运输、敷设及安装注意事项

Cautions in Transportation & Mounting of FOC

- 1、装有光缆的光缆盘应按盘侧板面所标示的方向进行滚动，滚动距离不宜过长，一般不宜超过 20 米，滚动时应注意防止障碍物损坏包装板。
 - 2、装卸光缆时应使用铲车等起重设备或特别台阶，严禁光缆盘从车上直接滚下或抛下。
 - 3、严禁装有光缆的光缆盘平放或叠放，在车厢内的光缆盘均需设防滑木块。
 - 4、光缆不宜多次倒盘，以免影响光缆内部结构的完好性，光缆敷设前应进行外观检查、核对规格型号、数量、测试长度和衰减等单盘检验和验收，每盘光缆在护板上附有产品出厂检验合格证书（应妥善保管，以便日后查询），拆卸光缆护板时谨防损坏光缆。
 - 5、在施工过程中应注意光缆的弯曲半径不得小于施工规定，光缆不允许出现过度弯曲。
 - 6、布放架空光缆应通过滑轮牵引，架空光缆应避免与建筑物、树木及其它设施磨擦，避免拖地或与其他擦而损伤光缆外皮，必要时应安装保锐硬磨护措施。严禁光缆跳出滑轮后强行牵引，以防光缆被压扁损坏。
 - 7、在光缆线路设计时应尽量避开易燃建筑物如无法避免，光缆应采取防火保护措施。
 - 8、在段长比较长的光缆布放施工中，如需倒盘，光缆必须遵循“8”字盘放。使其光缆完全处于无扭状态。
 - 9、光缆接头终端盒的选用必须符合 YD/T814-1996 和 YD/T925-1997 标准要求的合格接头终端盒，确保光纤在盒内的曲率半径不小于 37.5mm，光纤在盒内余留长度不小于 1.6 m，光缆的加强件牢固地固定在盒上，光缆与盒之间不会发生扭动，箱体密封性能优良，能够阻止水气的进入。
 - 10、在光缆连续时，接头衰减应以 OTDR 双向测试平均值为准。
 - 11、光缆敷设完成，如不能及时连续处理，应将光缆两端头密封，以防止水气侵害光纤。
 - 12、在光缆连续时，若多次连续不下来，建议剪掉一段后再接续（因施工时光缆端头有可能受到机械损伤）。
 - 13、光缆连接完成，宜在光缆接头盒两端预留适量的光缆，并且牢固的盘在余缆架上。
1. The user should roll cable from with FOC in the direction indicated on drum flange board within short distance of no more than 20 meters on alert against damage of barriers on more than 20 meters on alert against damage of barriers on package wooden board.
 2. The user should adopt lifting machines such as fork lift of special steps for loading and unloading cable drum with FOC. Direct rolling or throwing of cable drum with FOC from the truck should be strictly forbidden.
 3. It should be strictly forbidden to lay down or pile up cable drum with FOC. The woodboard should be put under drum wheels to prevent drum from sliding in truck carriage.
 4. The user should avoid repeatedly reeling out FOC in order to keep cable inner structure intact. The user should check outer appearance, type & specification, quantity, length, and attenuation of FOC drum flange board. (The certificate should be kept well for further check later.) The user should keep alert against damage on FOC in dismantling protection package board.
 5. The user should avoid over bending FOC in mounting with paying attention to the bending radius of FOC, which should be no smaller than that stipulated for mounting.
 6. In mounting aerial FOC, the user should draw cable on pulley and avoid friction with building, tree, and other facilities and drawing cable on the ground or friction with sharp edged objects to keep cable from damage on its outer sheath. The protection measures should be taken if necessary. It is strictly forbidden to roughly draw cable after FOC slide out from pulley in order to keep cable from damage.
 7. The user should keep it from inflammable buildings as possible as you can in FOC line design. If it is unavoidable, the measures should be taken to keep FOC from fire.
 8. The user should lay down the cable in “8” shape to keep it from twisting for pieces of long FOC in installation.
 9. The user should adopt qualified connection and terminal boxes stipulated in YD/T814-1996 & YD/T925-1997 to ensure that bending radius of optic fiber in the boxes be no smaller than 37.5mm, remaining fiber length no smaller than 1.6m, and strength member of FOC strongly fixed to the box. The boxes should be moisture-proof with better sealing performance.
 10. The average tested value with OTDR in double direction should be adopted as connection attenuation value in FOC connection.
 11. After completion of laying FOC, if the user could not timely connect the cable, both ends of FOC should be sealed to keep cable from moisture.
 12. If the user fails many times in FOC connection, it is suggested to cut off a section of FOC for connection again. (There is possibility that FOC heads suffered mechanical damage during installation.)
 13. After connection completion, the user had better reserve suitably long FOC at both ends of connection box and fixed it strongly to the rack.