

特种光纤 产品手册

SPECIAL OPTICAL FIBER PRODUCT MANUAL V2024

Polarization-maintaining Fiber

PANDA-type polarization-maintaining fiber for fiber optic gyroscope windings
Ultra-fine PANDA-type polarization-maintaining fiber for fiber optic gyroscope windings
Extremely fine PANDA-type polarization-maintaining fiber for fiber optic gyroscope windings
PANDA-type polarization-maintaining fiber for fiber optic gyroscope waveguides
PANDA-type polarization-maintaining fiber for communications
Elliptical core polarization-maintaining fiber
Bowtie polarization-maintaining fiber
Elliptical cladding polarization-maintaining fiber

Specialty single-mode fiber

Bend-insensitive single-mode fiber
Coupled single-mode fiber
Special cutoff wavelength single-mode fiber

Rare earth-doped fiber

Ytterbium-doped fiber
Erbium-doped fiber
Erbium-ytterbium co-doped fiber

Large-core fiber

Silica-clad large-core fiber
UV large-core fiber
Plastic-clad large-core fiber

Homogenized fiber

Square core fiber
Circular homogenized fiber
Shaped core fiber
Ring fiber

Passive matching fiber

Passive matching fiber

Multimode Fiber

Multimode Fiber (OM2)
Multimode Fiber (OM2+)
Multimode Fiber (OM3/OM4)
Bend-Insensitive Multimode Fiber (OM2)
Bend-Insensitive Multimode Fiber (OM2+)
Bend-Insensitive Multimode Fiber (OM3/OM4)

Photonic crystal fiber

Photonic crystal fiber
Hollow-core antiresonant fiber
Polarization-maintaining photonic crystal fiber
Hollow-core photonic bandgap fiber
Large-mode-area polarization-maintaining ytterbium-doped photonic crystal fiber

Specialty optical fibers for special environments

Radiation-resistant optical fibers
High-temperature-resistant optical fibers
Photosensitive optical fibers
Carbon-coated optical fibers

Customized fiber

Multi-core fiber
Circular fiber
Twisted multi-core fiber
3C fiber
Attenuated fiber
Coreless fiber
Customized fiber with special structure

Specialty Quartz Tubing

Fluorine-Doped Quartz Tubing
Quartz Capillary Tubing
Fluorine-Doped Quartz Capillary Tubing

Optical fiber preform products

Passive germanium-doped preforms
Boron-doped stress rods
Pure silicon core energy transfer preforms
Customized glass shaped preforms



Polarization-maintaining Fiber

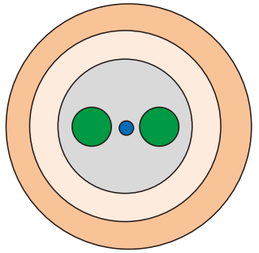
光纤陀螺绕环用熊猫型保偏光纤

PANDA-type polarization-maintaining fiber for fiber optic gyroscope windings

产品描述Product Description

Panda-type polarization-maintaining fiber for fiber optic gyroscope winding is mainly used in the sensitive ring of fiber optic gyroscopes. According to its application environment, it improves the mechanical reliability, temperature stability, environmental adaptability and radiation resistance of the fiber, optimizes the axial uniformity and batch consistency of the fiber, and uses independently developed coating materials for the inner and outer coating layers of the fiber, which has good full-temperature stability, environmental adaptability and mechanical reliability, and can be used in the temperature range of -50°C to +105°C.

光纤结构 Fiber structure



产品特点 Product Features

- High batch consistency
- Excellent radiation resistance
- Excellent bending resistance
- Wide operating temperature range and good full-temperature stability
- Excellent long-term reliability

产品应用Product Application

- Fiber optic gyroscope
- Fused-cone polarization-maintaining coupler
- Polarization-sensitive device
- Fiber optic polarization sensor

产品指标 Product Specifications

Item	Unit	Index			
Fiber model	/	PM13G-80-U13 PM13G-80-U16	PM13G-125-U25	PM15G-80-U13 PM15G-80-U16	PM15G-125-U25
Optical characteristics					
Working wavelength	nm	1310	1310	1550	1550
Cut-off wavelength	nm	1100 ~ 1290	1100 ~1290	1290 ~ 1520	1290 ~ 1520
Mode field diameter	μm	6.0 ± 0.5	6.0 ± 0.5	6.5 ± 0.5	6.5 ± 0.5
Attenuation	dB/km	≤ 0.6	≤ 0.6	≤ 0.5	≤ 0.5
Beat Length	mm	≤ 2.5	≤ 2.5	≤ 3.0	≤ 3.0
Typical Crosstalk	dB/km	≤ -30	≤ -30	≤ -30	≤ -30
Geometric characteristics					
Cladding Diameter	μm	80.0 ± 1.0	125.0 ± 1.0	80.0 ± 1.0	125.0 ± 1.0
Core Concentricity	μm	≤ 1.0	≤ 1.0	≤ 0.5	≤ 0.5
Cladding Out-of-Roundness	%	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Coating Type	/	Double Layer UVcuring acrylic resin			
Coating Diameter	μm	135.0 ± 1.0 168.0 ± 1.0	245.0 ±2.0	135.0 ± 1.0 168.0 ± 1.0	245.0 ±2.0
Environmental and mechanical characteristics					
Operation Temperature Range	℃	-50 ~ +105	-50 ~ +105	-50 ~ +105	-50 ~ +105
Screening Tension	kps	100	100	100	100

定制信息 Customized Information

- The diameter of optical fiber coating can be customized according to customer requirements, and the accuracy can be controlled within the central value of ± 1 μ m.
- According to customer requirements, we can provide customized polarization-maintaining fiber products or other types of polarization-maintaining fiber products.

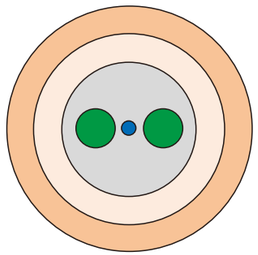
光纤陀螺绕环用超细径熊猫型保偏光纤

Ultra-fine PANDA-type polarization-maintaining fiber for fiber optic gyroscope windings

产品描述 Product Description

This ultra-fine Panda-type polarization-maintaining fiber for fiber optic gyroscope winding is primarily used in fiber optic gyroscopes. This 60-micron ultra-fine polarization-maintaining fiber is designed to improve the fiber's bending resistance. Its attenuation and crosstalk performance meet the requirements for winding various small-sized fiber rings. The inner and outer coating materials of this fiber offer excellent temperature stability, environmental adaptability, and mechanical reliability, and are suitable for use in temperatures ranging from -50°C to +105°C.

光纤结构 Fiber structure



产品特点 Product Features

- High batch consistency
- Excellent radiation resistance
- Excellent bending resistance
- Wide operating temperature range and good full-temperature stability
- Excellent long-term reliability

产品应用 Product Application

- Fiber optic gyroscope
- Fused-cone polarization-maintaining coupler
- Polarization-sensitive device
- Fiber optic polarization sensor

产品指标 Product Specifications

Item	Unit	Index	
Fiber model	/	PM13G-60-U10	PM15G-60-U10
Optical characteristics			
Working wavelength	nm	1310	1550
Cut-off wavelength	nm	1100 ~ 1290	1290 ~ 1520
Mode field diameter	μm	6.0 ± 0.5	6.5 ± 0.5
Attenuation	dB/km	⩽ 0.6	⩽ 0.5
Beat Length	mm	⩽ 2.5	⩽ 3.0
Typical Crosstalk	dB/km	⩽ -23	⩽ -23
Geometric characteristics			
Cladding Diameter	μm	60.0 ± 1.0	60.0 ± 1.0
Core Concentricity	μm	⩽ 1.0	⩽ 0.5
Cladding Out-of-Roundness	%	⩽ 1.0	⩽ 1.0
Coating Type	/	Double Layer UVcuring acrylic resin	
Coating Diameter	μm	102.0 ± 2.0	102.0 ± 2.0
Environmental and mechanical characteristics			
Operation Temperature Range	℃	-50 ~ +105	-50 ~ +105
Screening Tension	kpsi	100	100

定制信息 Customized Information

- The diameter of optical fiber coating can be customized according to customer requirements, and the accuracy can be controlled within the central value of ± 1 μ m.
- According to customer requirements, we can provide customized polarization-maintaining fiber products or other types of polarization-maintaining fiber products.

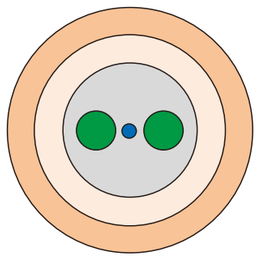
光纤陀螺绕环用极细径熊猫型保偏光纤

Extremely fine PANDA-type polarization-maintaining fiber for fiber optic gyroscope windings

产品描述

The ultra-fine diameter Panda-type polarization-maintaining fiber used for fiber optic gyroscope winding is mainly aimed at the high precision, miniaturization and low cost requirements of fiber optic gyroscopes. We have developed an ultra-fine diameter Panda-type polarization-maintaining fiber with an outer diameter of 80 microns to meet the winding requirements of various small-sized rings. In particular, the 50/80 size series polarization-maintaining fiber is compatible with the current mainstream fusion splicing equipment and can be normally connected with 60/100 waveguide fibers.

光纤结构



产品特点 Product Features

- High batch consistency
- Excellent radiation resistance
- Excellent bending resistance
- Wide operating temperature range and good full-temperature stability
- Excellent long-term reliability

产品应用 Product Application

- Fiber optic gyroscope
- Fused-cone polarization-maintaining coupler
- Polarization-sensitive device
- Fiber optic polarization sensor

产品指标 Product Specifications

Item	Unit	Index			
Fiber model	/	PM13G-40-U08	PM13G-50-U08	PM15G-40-U08	PM15G-50-U08
Optical characteristics					
Working wavelength	nm	1310	1310	1550	1550
Cut-off wavelength	nm	1100 ~ 1290	1100 ~ 1290	1290 ~ 1520	1290 ~ 1520
Mode field diameter	μm	5.5 ± 1.0	5.5 ± 1.0	6.0 ± 1.0	6.0 ± 1.0
Attenuation	dB/km	⩽ 1.0	⩽ 1.0	⩽ 1.0	⩽ 1.0
Beat Length	mm	⩽ 2.5	⩽ 2.5	⩽ 3.0	⩽ 3.0
Typical Crosstalk	dB	⩽ -23	⩽ -23	⩽ -23	⩽ -23
Geometric characteristics					
Cladding Diameter	μm	40.0 ± 1.0	50.0 ± 1.0	40.0 ± 1.0	50.0 ± 1.0
Core Concentricity	μm	⩽ 1.0	⩽ 0.5	⩽ 1.0	⩽ 0.5
Cladding Out-of-Roundness	%	⩽ 1.0	⩽ 1.0	⩽ 1.0	⩽ 1.0
Coating Type	/	Double Layer UVcuring acrylic resin			
Coating Diameter	μm	82.0 ± 3.0	82.0 ± 3.0	82.0 ± 3.0	82.0 ± 3.0
Environmental and mechanical characteristics					
Operation Temperature Range	℃	-50 ~ +105	-50 ~ +105	-50 ~ +105	-50 ~ +105
Screening Tension	kpsi	100	100	100	100

定制信息 Customized Information

- The diameter of optical fiber coating can be customized according to customer requirements, and the accuracy can be controlled within the central value of ± 1 μ m.
- According to customer requirements, we can provide customized polarization-maintaining fiber products or other types of polarization-maintaining fiber products.

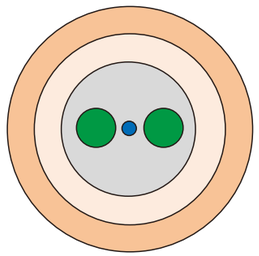
光纤陀螺波导用熊猫型保偏光纤

PANDA-type polarization-maintaining fiber for fiber optic gyroscope waveguides

产品描述 Product Description

Panda-type polarization-maintaining fiber for fiber optic gyroscope waveguides can be used in fiber optic gyroscopes and other polarization-related devices. This fiber is optimized for device requirements, focusing on geometric symmetry and grindability. While maintaining the fiber's polarization properties, it also offers grindability, making it a polarization-maintaining fiber that can be both looped and polished. The 60μm waveguide fiber addresses splice loss and reliability issues between 60μm and 80μm fibers, improving splice reliability, reducing splice loss, and enhancing fiber optic gyroscope system accuracy.

光纤结构 Fiber structure



产品特点 Product Features

- Excellent geometric uniformity and symmetry
- Excellent polishing performance
- Excellent mechanical and coating reliability
- Excellent long-term reliability

产品应用 Product Application

- Fiber optic rings
- Lithium niobate waveguide pigtails
- Polarization-sensitive devices
- Fiber optic polarization sensors

产品指标 Product Specifications

Item	Unit	Index					
Fiber model	/	PM13Y-60-U10	PM13Y-80-U13 PM13Y-80-U16	PM13Y-125-U25	PM15Y-60-U10	PM15Y-80-U13 PM15Y-80-U16	PM15Y-125-U25
Optical characteristics							
Working wavelength	nm	1310	1310	1310	1550	1550	1550
Cut-off wavelength	nm	1100 ~ 1290	1100 ~ 1290	1100 ~ 1290	1290 ~ 1520	1290 ~ 1520	1290 ~ 1520
Mode field diameter	μm	6.0 ± 0.5	6.0 ± 0.5	6.0 ± 0.5	6.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5
Attenuation	dB/km	≤ 0.6	≤ 0.6	≤ 0.6	≤ 0.6	≤ 0.6	≤ 0.6
Beat Length	mm	≤ 3.5	≤ 3.5	≤ 3.5	≤ 4.0	≤ 4.0	≤ 4.0
Typical Crosstalk	dB	≤ -25	≤ -30	≤ -30	≤ -25	≤ -30	≤ -30
Geometric characteristics							
Cladding Diameter	μm	60.0 ± 1.0	80.0 ± 1.0	125.0 ± 1.0	60.0 ± 1.0	80.0 ± 1.0	125.0 ± 1.0
Core Concentricity	μm	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Cladding Out-of-Roundness	%	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Coating Type	/	Double Layer UVcuring acrylic resin					
Coating Diameter	μm	100.0 ± 2.0	135.0 ± 2.0 168.0 ± 2.0	245.0 ±2.0	100.0 ± 2.0	135.0 ± 2.0 168.0 ± 2.0	245.0 ±2.0
Environmental and mechanical characteristics							
Operation Temperature	℃	-50 ~ +105	-50 ~ +105	-50 ~ +105	-50 ~ +105	-50 ~ +105	-50 ~ +105
Screening Tension	kps	100	100	100	100	100	100

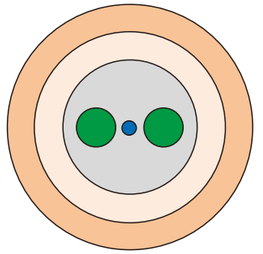
通信用熊猫型保偏光纤

PANDA-type polarization-maintaining fiber for communications

产品描述 Product Description

Panda-type polarization-maintaining optical fiber for communications can be used in the field of polarization-related communication devices. This optical fiber product is mainly optimized for the application environment. Its cross-section has good geometric symmetry and excellent attenuation performance. While maintaining the polarization performance of the optical fiber, it has good grinding and taper performance; and has good environmental adaptability and can be used in the temperature range of -45℃ to +85℃ .

光纤结构 Fiber structure



产品特点 Product Features

- Excellent polishing performance
- Excellent geometric uniformity and consistency
- Excellent attenuation and polarization-maintaining performance
- High temperature stability and mechanical reliability

产品应用 Product Application

- Polarization device pigtails
- Polarization-maintaining patch cords
- Polarization-sensitive devices
- Fused-cone polarization-maintaining couplers

产品指标（研磨型）Product Specifications(Grinding type)

Item	Unit	Index			
Fiber model	/	PM98T-125-U25	PM13T-125-U25	PM15T-125-U25	PM15T-125-U25-ML
Optical characteristics					
Working wavelength	nm	980	1310	1550	1550
Cut-off wavelength	nm	800 ~ 950	1100 ~ 1290	1290 ~ 1520	1290 ~ 1520
Mode field diameter	μm	6.5 ± 0.5	9.0 ± 0.5	10.0 ± 0.5	9.0 ± 0.5
Attenuation	dB/km	≤ 2.5	≤ 0.5	≤ 0.5	≤ 0.5
Beat Length	mm	≤ 3.0	≤ 4.0	≤ 5.0	≤ 5.0
4m Typical Crosstalk	dB	≤ -40	≤ -40	≤ -40	≤ -40
Typical Crosstalk(100m)	dB	≤ -30	≤ -30	≤ -30	≤ -30
Geometric characteristics					
Cladding Diameter	μm	124.5 ± 1.0	124.5 ± 1.0	124.5 ± 1.0	124.5 ± 1.0
Core Concentricity	μm	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Cladding Out-of-Roundness	%	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Coating Type	/	Double Layer UVcuring acrylic resin			
Coating Diameter	μm	245.0 ± 2.0	245.0 ± 2.0	245.0 ± 2.0	245.0 ± 2.0
Environmental and mechanical characteristics					
Operation Temperature	℃	-45 ~ +85	-45 ~ +85	-45 ~ +85	-45 ~ +85
Screening Tension	kpsi	100	100	100	100

产品指标（拉锥型）Product Specifications(Taper type)

Item	Unit	Index		
Fiber model	/	PM98T-125-U25-PH	PM13T-125-U25-PH	PM15T-125-U25-PH
Optical characteristics				
Working wavelength	nm	980	1310	1550
Cut-off wavelength	nm	800 ~ 950	1100 ~ 1290	1290 ~ 1520
Mode field diameter	μm	6.5 ± 0.5	9.0 ± 0.5	10.0 ± 0.5
Attenuation	dB/km	⩽ 2.5	⩽ 0.5	⩽ 0.5
Beat Length	mm	⩽ 5.0	⩽ 6.0	⩽ 8.0
4m Typical Crosstalk	dB	⩽ -30	⩽ -30	⩽ -30
Typical Crosstalk(100m)	dB	⩽ -25	⩽ -25	⩽ -25
Geometric characteristics				
Cladding Diameter	μm	124.5 ± 1.0	124.5 ± 1.0	124.5 ± 1.0
Core Concentricity	μm	⩽ 0.5	⩽ 0.5	⩽ 0.5
Cladding Out-of-Roundness	%	⩽ 1.0	⩽ 1.0	⩽ 1.0
Coating Type	/	Double Layer UVcuring acrylic resin		
Coating Diameter	μm	245.0 ± 2.0	245.0 ± 2.0	245.0 ± 2.0
Environmental and mechanical characteristics				
Operation Temperature	℃	-45 ~ +85	-45 ~ +85	-45 ~ +85
Screening Tension	kpsi	100	100	100

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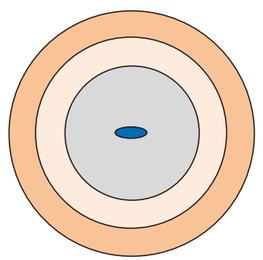
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

椭圆芯保偏光纤 Elliptical Core Polarization-Maintaining Fiber

产品描述 Product Description

Elliptical core polarization-maintaining fiber offers excellent temperature stability and birefringence performance, making it widely used in fiber optic gyroscopes, current transformers, and other polarization-dependent devices.Fibercloud's circular core fiber optimizes the core and cladding structure to improve fiber uniformity and birefringence performance. Elliptical core polarization-maintaining fiber is a geometrically birefringent type of polarization-maintaining fiber, less affected by ambient temperature and offering improved temperature stability.

光纤结构 Fiber structure



产品特点 Product Features

- Low loss and high bending performance
- Good geometric uniformity
- High operational stability and reliability
- Temperature insensitivity

产品应用 Product Application

- Fiber optic gyroscope
- Fiber optic current transformer
- Fiber laser and amplifier

产品指标 Product Specifications

Item	Unit	Index			
Fiber model	/	ECF13-125-U25	ECF13-80-U16	ECF15-80-U13	ECF15-80-U16
Optical characteristics					
Working wavelength	nm	1310	1310	1550	1550
Cut-off wavelength	nm	1100 ~ 1290	1100 ~ 1290	1290 ~ 1520	1290 ~ 1520
Mode field diameter	μm	6.0 ± 1.0	6.0 ± 1.0	6.5 ± 1.0	6.5 ± 1.0
Attenuation	dB/km	⩽ 1.0	⩽ 1.0	⩽ 1.0	⩽ 1.0
Beat Length	mm	3.0 ~ 20.0	⩽ 3.0	⩽ 4.0	⩽ 4.0
Typical Crosstalk	dB	⩽ -25(100m)	⩽ -25(1000m)	⩽ -25(1000m)	⩽ -25(1000m)
Geometric characteristics					
Cladding Diameter	μm	125.0 ± 1.0	80.0 ± 1.0	80.0 ± 1.0	80.0 ± 1.0
Core Concentricity	μm	⩽ 1.0	⩽ 1.0	⩽ 1.0	⩽ 1.0
Cladding Out-of-Roundness	%	⩽ 2.0	⩽ 2.0	⩽ 2.0	⩽ 2.0
Coating Type	/	Double Layer UVcuring acrylic resin			
Coating Diameter	μm	245.0 ± 3.0	168.0 ± 3.0	135.0 ± 3.0	168.0 ± 3.0
Environmental and mechanical characteristics					
Operation Temperature	℃	-45 ~ +85	-45 ~ +85	-45 ~ +85	-45 ~ +85
Screening Tension	kps	100	100	100	100

定制信息 Customized Messages

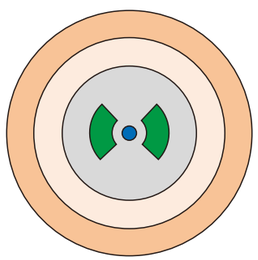
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

领结型保偏光纤 Bowtie polarization-maintaining fiber

产品描述 Product Description

Bowtie polarization-maintaining fiber is a specially designed stress-type polarization-maintaining fiber with excellent polarization-maintaining performance due to its structural characteristics. Fibercloud's bowtie polarization-maintaining fiber optimizes axial uniformity and batch consistency, and exhibits excellent temperature stability and birefringence performance. It can be widely used in fiber optic gyroscopes, current transformers, and other polarization-dependent devices.

光纤结构 Fiber structure



产品特点 Product Features

- High birefringence performance
- Small beat length
- High operational stability and reliability

产品应用 Product Application

- Fiber optic gyroscope
- Fiber optic current transformer
- Polarization-maintaining coupler
- High-speed modulator pigtail

产品指标 Product Specifications

Item	Unit	Index			
Fiber model	/	BTF13-80-U16	BTF13-125-U25	BTF15-80-U16	BTF15-125-U25
Optical characteristics					
Working wavelength	nm	1310	1310	1550	1550
Cut-off wavelength	nm	1100 ~ 1290	1100 ~ 1290	1290 ~ 1520	1290 ~ 1520
Mode field diameter	μm	6.0 ± 1.0	6.0 ± 1.0	6.5 ± 1.0	6.5 ± 1.0
Attenuation	dB/km	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5
Beat Length	mm	≤ 2.5	≤ 2.5	≤ 3.0	≤ 3.0
Typical Crosstalk	dB	≤ -25	≤ -25	≤ -25	≤ -25
Geometric characteristics					
Cladding Diameter	μm	80.0 ± 1.0	125.0 ± 1.0	80.0 ± 1.0	125.0 ± 1.0
Core Concentricity	μm	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Cladding Out-of-Roundness	%	≤ 2.0	≤ 2.0	≤ 2.0	≤ 2.0
Coating Type	/	Double Layer UVcuring acrylic resin			
Coating Diameter	μm	168.0 ± 3.0	245.0 ± 3.0	168.0 ± 3.0	245.0 ± 3.0
Environmental and mechanical characteristics					
Operation Temperature	℃	-45 ~ +85	-45 ~ +85	-45 ~ +85	-45 ~ +85
Screening Tension	kps	100	100	100	100

定制信息 Customized Messages

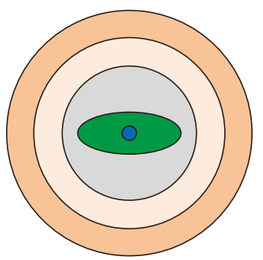
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

椭圆包层型保偏光纤 Elliptically clad polarization-maintaining fiber

产品描述 Product Description

Elliptically clad polarization-maintaining fiber is a specially designed, stress-type polarization-maintaining fiber. Its structural characteristics provide excellent polarization-maintaining performance. Furthermore, compared to bowtie-type polarization-maintaining fiber, it reduces the manufacturing process complexity and maintains good geometric consistency. Fibercloud's elliptically clad polarization-maintaining fiber optimizes the fiber's axial uniformity. By utilizing proprietary internal and external coating materials, it exhibits excellent temperature stability and birefringence performance, making it widely applicable in fiber optic gyroscopes, current transformers, and other polarization-dependent devices.

光纤结构 Fiber structure



产品特点 Product Features

- High birefringence performance
- Excellent bending resistance
- High operational stability and reliability

产品应用 Product Application

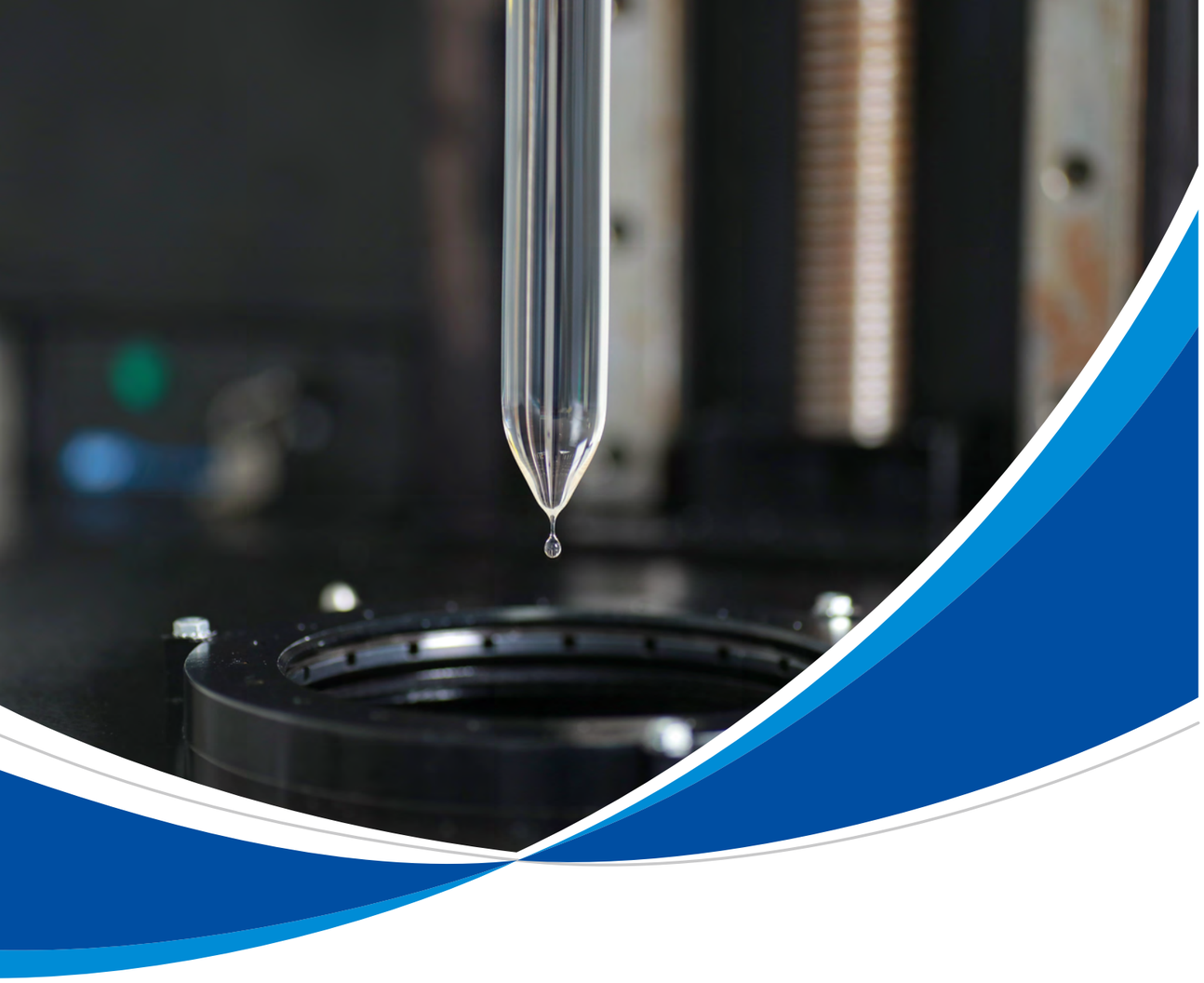
- Fiber optic gyroscope
- Fiber optic current transformer
- Polarization-maintaining components

产品指标 Product Specifications

Item	Unit	Index			
Fiber model	/	EPM13-80-U13	EPM13-80-U16	EPM15-80-U13	EPM15-80-U16
Optical characteristics					
Working wavelength	nm	1310	1310	1550	1550
Cut-off wavelength	nm	1100 ~ 1290	1100 ~ 1290	1290 ~ 1520	1290 ~ 1520
Mode field diameter	μm	6.0 ± 1.0	6.0 ± 1.0	6.5 ± 1.0	6.5 ± 1.0
Attenuation	dB/km	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5
Beat Length	mm	≤ 2.5	≤ 2.5	≤ 3.0	≤ 3.0
Typical Crosstalk	dB	≤ -25	≤ -25	≤ -25	≤ -25
Geometric characteristics					
Cladding Diameter	μm	80.0 ± 1.0	80.0 ± 1.0	80.0 ± 1.0	80.0 ± 1.0
Core Concentricity	μm	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Cladding Out-of-Roundness	%	≤ 2.0	≤ 2.0	≤ 2.0	≤ 2.0
Coating Type	/	Double Layer UVcuring acrylic resin			
Coating Diameter	μm	135.0 ± 3.0	168.0 ± 3.0	135.0 ± 3.0	168.0 ± 3.0
Environmental and mechanical characteristics					
Operation Temperature	℃	-45 ~ +85	-45 ~ +85	-45 ~ +85	-45 ~ +85
Screening Tension	kps	100	100	100	100

定制信息 Customized Messages

- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.



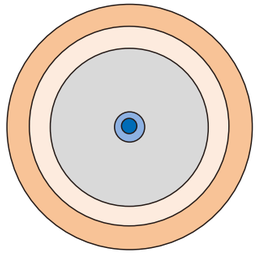
Special single-mode optical fiber

弯曲不敏感单模光纤 Bend-insensitive single-mode fiber

产品描述 Product Description

Bend-insensitive single-mode optical fiber features small geometry and bend insensitivity, maintaining excellent optical performance even under tight bend radii. This fiber meets the requirements of small-sized optical cables and optical devices and is widely used in industries such as fiber-optic hydrophones. This fiber can be custom-designed to meet user requirements for mode field diameter, cutoff wavelength, and bend sensitivity. This series of optical fiber preforms utilizes an in-tube chemical vapor deposition process and exhibits advantages such as low hydroxyl groups, high numerical aperture, and excellent optical uniformity. The fiber's double-layer UV-curable acrylic resin coating, specifically designed for optical devices with small bend radii, reduces bend-induced attenuation and exhibits excellent optical performance. It also possesses high tensilestrength and long-term fatigue resistance.

光纤结构 Fiber structure



产品特点 Product Features

- Low additional bending attenuation
- Excellent geometric uniformity and low attenuation
- High reliability under bending conditions
- Network-layer UV coating structure

产品应用 Product Application

- Fiber optic hydrophones
- Device and cable with demanding bend radius requirements
- Sensor components
- Data signal transmission

产品指标Product Specifications

Item	Unit	Index					
Fiber model	/	BI 15-60-U10	BI 15-80-U13 BI 15-80-U16	BI 15-125-U25	BI 13-60-U10	BI 13-80-U13 BI 13-80-U16	BI 13-125-U25
Optical characteristics							
Working wavelength	nm	1550	1550	1550	1310	1310	1310
Cut-off wavelength	nm	1450 ± 70	1450 ± 70	1450 ± 70	1200 ± 70	1200 ± 70	1200 ± 70
Attenuation	dB/km	≤ 0.8	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Mode field diameter	μm	4.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5	6.0 ± 0.5	6.0 ± 0.5	6.0 ± 0.5
Macrobend attenuation	dB/km	≤ 0.1 (10mm Diameter @200 circle)					
Geometric characteristics							
Cladding Diameter	μm	60.0 ± 1.0	80.0 ± 1.0	124.5 ± 1.0	60.0 ± 1.0	80.0 ± 1.0	124.5 ± 1.0
Core Concentricity	μm	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Cladding Out-of-Roundness	%	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Coating Diameter	μm	100.0 ± 3.0	135.0 ± 3.0 165.0 ± 3.0	245.0 ± 3.0	100.0 ± 3.0	135.0 ± 3.0 165.0 ± 3.0	245.0 ± 3.0
Environmental and mechanical characteristics							
Operation Temperature	℃	-55 ~ +105	-55 ~ +105	-55 ~ +105	-55 ~ +105	-55 ~ +105	-55 ~ +105
Screening Tension	kps	200	200	200	200	200	200

定制信息 Customized Messages

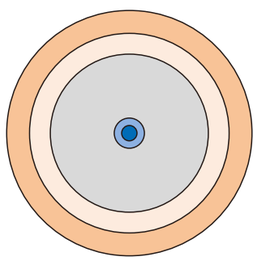
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.
- Coloring of optical fibers possible.

耦合单模光纤 Coupled single-mode fiber

产品描述 Product Description

Coupled single-mode optical fiber is a specialized single-mode fiber designed and developed specifically for optical device applications. This series of fiber preforms utilizes an in-tube chemical vapor deposition process. Combined with a well-designed waveguide design, the fibers exhibit low hydroxyl content, excellent bend resistance, and superior optical uniformity. A double-layer UV-curable acrylate coating imparts high tensile strength and long-term fatigue resistance. These fibers are widely used in optical fiber communications and sensor devices.

光纤结构 Fiber structure



产品特点Product Features

- Low fiber splicing attenuation
- Low fused tapered attenuation
- Low coupling-added attenuation
- Low bending-added attenuation
- Excellent geometric uniformity
- Excellent mechanical properties

产品应用 Product Application

- Fiber couplers, optical splitters, and optical combiners
- Fiber lasers and amplifiers
- Fiber sensors and fiber gyroscopes
- Light source pigtails
- Fiber Bragg gratings

产品指标 Product Specifications

Item	Unit	Index			
Fiber model	/	CF98-80-U16A	CF98-80-U16B	CF98-125-U25A	CF98-125-U25B
Optical characteristics					
Working wavelength	nm	≥980	≥980	≥980	≥980
Cut-off wavelength	nm	900±50	900±50	900±50	900±50
Attenuation	dB/km	≤ 2.5 @980nm	≤ 2.5@980nm	≤ 2.5 @980nm	≤ 2.5 @980nm
		≤ 1.5 @1550nm	≤ 1.0 @1550nm	≤ 1.5 @1550nm	≤ 1.0 @1550nm
Mode field diameter	μm	6.0 ± 0.5 @980nm	4.0 ± 0.3 @980nm	6.0 ± 0.5 @980nm	4.0 ± 0.3 @980nm
		6.3 ± 0.5 @1060nm	6.3 ± 0.3 @1550nm	6.3 ± 0.5 @1060nm	6.3 ± 0.3 @1550nm
Geometric characteristics					
Cladding Diameter	μm	80.0 ± 1.0	80.0 ± 1.0	124.5 ± 1.0	124.5 ± 1.0
Core Concentricity	μm	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3
Cladding Out-of-Roundness	%	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Coating Diameter	μm	165.0 ± 2.0	165.0 ± 2.0	245.0 ± 2.0	245.0 ± 2.0
Environmental and mechanical characteristics					
Operation Temperature	℃	−55 ~ +105	−55 ~ +105	−55 ~ +105	−55 ~ +105
Screening Tension	kpsi	100	100	100	100

定制信息 Customized Messages

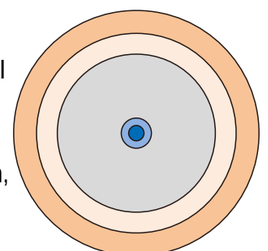
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.
- Coloring of optical fibers possible.

特殊截止波长单模光纤 Special cutoff wavelength single-mode fiber

产品描述 Product Description

Special cutoff wavelength single-mode optical fiber is operating in various specialized wavelength bands. This series of optical operating in various specialized wavelength bands. This series of optical fiber preforms utilizes an in-tube chemical vapor deposition process, resulting in low hydroxyl content, precise geometric parameters, excellent optical uniformity, and superior bend resistance. This fiber is widely used in specialized wavelength-band optical signal transmission, optical fiber sensors, optical fiber amplifiers, and optical fiber lasers.

光纤结构 Fiber structure



产品特点Product Features

- Low fiber splicing attenuation
- Low bending-induced attenuation
- Excellent geometric uniformity
- Excellent mechanical properties

产品应用 Product Application

- Specialized light source devices
- Fiber lasers, fiber amplifiers
- Fiber sensor devices
- Pump pigtails

产品指标 Product Specifications

Item	Unit	Index		
Fiber model	/	SC63-125-U25	SC78-125-U25	SC85-125-U25
Optical characteristics				
Working wavelength	nm	630	780	850
Cut-off wavelength	nm	550±70	700±70	750±70
Attenuation	dB/km	≤ 12.0	≤ 5.0	≤ 4.0
Mode field diameter	μm	4.0 ± 0.5	4.5 ± 0.5	5.0 ± 0.5
Geometric characteristics				
Cladding Diameter	μm	124.5 ± 1.0	124.5 ± 1.0	124.5 ± 1.0
Core Concentricity	μm	≤ 0.5	≤ 0.5	≤ 0.5
Cladding Out-of-Roundness	%	≤ 1.0	≤ 1.0	≤ 1.0
Coating Diameter	μm	245.0 ± 2.0	245.0 ± 2.0	245.0 ± 2.0
Environmental and mechanical characteristics				
Operation Temperature	℃	−55 ~ +105	−55 ~ +105	−55 ~ +105
Screening Tension	kpsi	100	100	100

定制信息 Customized Messages

- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.
- Coloring of optical fibers possible.



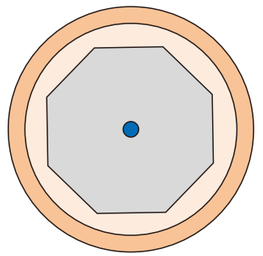
Rare earth-doped optical fiber

掺镱光纤 Ytterbium-doped fiber

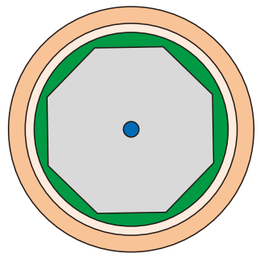
产品描述 Product Description

Ytterbium-doped fiber is a double-clad or triple-clad active fiber that can output high-power laser light in the 1μm band. It is primarily used in ytterbium-doped fiber lasers and amplifiers, and its high output beam quality and excellent stability are widely used in military, industrial, medical, and scientific research fields. By adjusting the fiber parameters, Fibercloud can provide mirror-doped fibers of different sizes and shapes to meet various application requirements.

光纤结构 Fiber structure



Double-clad Ytterbium-doped Fiber



Triple-clad Ytterbium-doped Fiber

产品特点 Product Features

- High doping concentration
- Large mode area
- High energy conversion efficiency
- Low photodarkening performance
- Stable storage in extreme environments

产品应用 Product Application

- Continuous lasers, pulsed lasers
- Defense, medical, scientific research
- Material processing

产品指标(一) Product Specifications

Item	Unit	Index		
Product Model	/	YDF14/250	YDF20/400	YDF25/400
Geometric characteristics				
Core Diameter	μm	14.0±1.0	20.0±2.0	25.0±1.5
Inner Cladding Side-to-Side Distance	μm	250.0±3.0	400.0±15.0	400.0±10.0
Coating Diameter	μm	400.0±15.0	550.0±20.0	550.0±15.0
Inner Cladding Shape	/	Octagon	Octagon	Octagon
Optical characteristics				
Operating Wavelength	nm	1060~1115	1060~1115	1060~1115
Core Attenuation @1200nm	dB/km	≤15	≤20	≤20
Cladding Attenuation @1095nm	dB/km	≤15	≤15	≤20
Cladding Pump Absorption @915nm	dB/m	0.7±0.10	0.4±0.05	0.6±0.10
Core Numerical Aperture	/	0.07±0.01	0.06±0.01	0.06±0.005
Inner Cladding Numerical Aperture	/	≥0.46	≥0.46	≥0.46
Screening Strength	kpsi	100	100	100
Coating Material	/	Low refractive index polymers		

产品指标（二）Product Specifications

Item	Unit	Index
Product Model	/	YTF34/460/530
Core Attenuation @ 1200nm	dB/km	≤15
First Cladding Pump Absorption @ 915nm	dB/m	1±0.15
First Cladding Pump Absorption @ 976nm	dB/m	4.3
Second Cladding Pump Absorption @ 915nm	dB/m	0.75
Core Numerical Aperture	/	0.10±0.01
First Cladding Numerical Aperture	/	0.22±0.02
Second Cladding Numerical Aperture	/	≥0.46
Core Diameter	μm	34±2.5
First Cladding Diameter (F-F)	μm	460±15
Second Cladding Diameter	μm	530±10
Core-Cladding Concentricity	μm	≤3.0
Coating Diameter	μm	650±15
Screening Strength	kpsi	110±10
Operating Wavelength	nm	1065±50

定制信息 Customized Messages

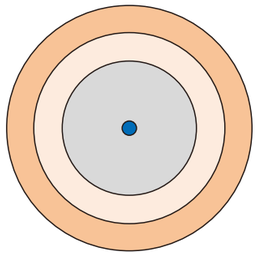
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

掺铒光纤 Erbium-doped fiber

产品描述 Product Description

Fibercloud offers a series of erbium-doped active optical fibers, primarily used in erbium-doped lasers and amplifiers. By introducing a pump source to achieve positive feedback, laser oscillation is generated and the output is amplified. Its primary pump wavelengths include 1480nm and 980nm, achieving high energy conversion efficiency with relatively low pump power, meeting the needs of C-band and L-band optical amplification in communications applications. Erbium-doped fibers, with their low coupling loss and noise levels, are widely used in high-capacity, long-distance optical communications and fiber-optic sensing.

光纤结构 Fiber structure



产品特点 Product Features

- Uniform output spectrum
- High core-clad concentricity, low splice loss
- High energy conversion efficiency
- High geometric uniformity
- Low dispersion

产品应用 Product Application

- DWDM amplifier
- ASE light source
- Aerospace and defense
- Erbium-doped fiber laser
- Distributed sensing

产品指标 Product Specifications

Item	Unit	Index					
Model		EDFC6/125-21	EDFC5/125-24	EDFC5/125-23	EDFL4/125-26	EDFL5/125-26	EDFL4/80-26
Optical characteristics							
Operating Wavelength	nm	1530 ~ 1565	1530 ~ 1565	1530 ~ 1565	1565 ~ 1625	1565 ~ 1625	1565 ~ 1625
Cut-off Wavelength	nm	≤960	≤1270	≤1270	≤1230	≤1230	≤1230
Core Absorption @ 1530nm	dB/m	7.0± 1.0	14.0±1.5	21.0±2.0	30.0±3.0	37.0±3.0	30.0±3.0
Mode Field Diameter	μm	6.2±0.7	5.2±0.7	5.2±0.7	4.9±0.7	5.0±0.7	4.9±0.7
Attenuation @ 1200nm	dB/km	≤5.0	≤10.0	≤10.0	≤5.0	≤10.0	≤10.0
Core Numerical Aperture	/	0.21±0.02	0.24±0.02	0.23±0.02	0.26±0.02	0.26±0.02	0.26±0.02
Cladding Numerical Aperture	/	0.46 ± 0.02	0.46 ± 0.02	0.46 ± 0.02	0.46 ± 0.02	0.46 ± 0.02	0.46 ± 0.02
Geometric characteristics							
Cladding Diameter	μm	125.0±1.0	125.0±1.0	125.0±1.0	125.0±1.0	125.0±1.0	80.0±1.0
Core-Cladding Concentricity	μm	≤0.3	≤0.3	≤0.3	≤0.3	≤0.3	≤0.3
Coating Type	/	Double Layer UVcuring acrylic resin					
Coating Diameter	μm	245.0±5.0	245.0±5.0	245.0±5.0	245.0 ± 10.0	245.0±5.0	165.0±2.0
Environmental and mechanical characteristics							
Operating Temperature	°C	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85
Screening Strength	kpsi	200	200	200	200	200	200

定制信息 Customized Messages

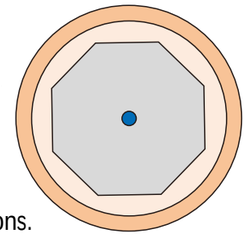
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

铒镱共掺光纤 Erbium-Ytterbium Co-Doped Fiber

产品描述 Product Description

Erbium-ytterbium co-doped fiber is a single-mode active laser fiber. Its core is co-doped with erbium and ytterbium ions, its inner cladding is pure quartz, and its outer cladding is a low-refractive-index coating, forming a double-clad fiber structure. Fibercloud's erbium-mirror co-doped fiber offers high energy conversion efficiency, lowthreshold power, high output power, and excellent beam quality, making it suitable for fiber lasers and optical amplifiers. It meets the high-power output requirements of fiber lasers and amplifiers in long-distance optical communication networks, military, medical, and scientific research applications.

光纤结构 Fiber structure



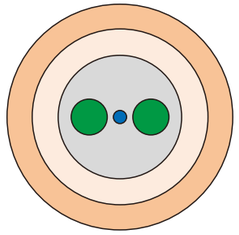
Erbium mirror co-doped fiber

产品特点 Product Features

- High energy conversion efficiency
- Low splice loss
- High mechanical strength

产品应用 Product Application

- Fiber lasers
- Fiber amplifiers
- Optical communication networks



Polarization-maintaining erbium-ytterbium co-doped fiber

产品指标 Product Specifications

Item	Unit	Index	
Fiber model	/	EYDF-6-125SM	EYDF-6-125PM
Optical characteristics			
Working wavelength	nm	1530 ~ 1625	1530 ~ 1625
Cut-off wavelength	nm	1420 ~1520	1360 ~ 1520
Mode field diameter	μm	6.1 ± 0.5	6.8 ± 0.8
Cladding Absorption @ 915nm	dB/m	1.0 ± 0.25	0.75 ± 0.15
Core Absorption @ 1535nm	dB/m	45.0 ± 12.0	40.0 ± 10
Core Numerical Aperture	/	0.21 ± 0.02	0.18 ± 0.02
Cladding Numerical Aperture	/	0.46 ± 0.02	0.46 ± 0.02
Crosstalk @ 1300nm (1km)	dB	/	⩽ -25.0
Geometric characteristics			
Cladding Diameter	μm	5.5 ± 0.1	6.0 ± 0.1
Core Concentricity	μm	125.0 ± 2.0	125.0 ± 1.0
Cladding Out-of-Roundness	μm	⩽ 1.0	⩽ 1.0
Coating Type	/	Double Layer UVcuring acrylic resin	
Coating Diameter	μm	245.0 ± 15.0	245.0 ± 15.0
Environmental and mechanical characteristics			
Screening Tension	kps	100	100

定制信息 Customized Messages

- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.



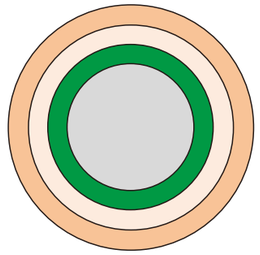
Large core fiber

石英包层大芯径光纤 Silica-Clad Large-Core Fiber

产品描述 Product Description

Quartz-clad large-core fiber can be used in laser energy transmission, data communications, and other communications-related applications. This fiber exhibits excellent coupling performance. Fibercloud utilizes an in-tube chemical vapor deposition process to produce this quartz glass-clad large-core multimode fiber, which features excellent geometric symmetry and longitudinal uniformity.

光纤结构 Fiber structure



产品特点 Product Features

- High coupling efficiency
- Excellent long-term reliability
- Supports high-power energy transmission

产品应用 Product Application

- Fiber optic sensing
- Laser energy transmission
- Optical devices and connectors
- Data communications, cable television, and local area networks

产品指标(一) Product Specifications

Item	Unit	Index			
Model	/	SI 105/125-22/250	SI 200/220-22/400	SI 400/440-22/650	SI 1000/1050-22/1250
Optical characteristics					
Numerical Aperture	/	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02
Attenuation @ 915nm	dB/km	≤ 5.0	≤ 5.0	--	--
Geometric characteristics					
Core Diameter	μm	105.0 ± 2.0	200.0 ±5.0	400.0 ± 8.0	1000.0 ± 15.0
Cladding Diameter	μm	125.0 ± 1.0	220.0 ±5.0	440.0 ± 8.0	1050.0 ± 15.0
Coating Diameter	μm	250.0 ± 10.0	400.0 ± 20.0	650.0 ± 30.0	1250.0 ± 30.0
Core-Clad Concentricity	μm	≤ 1.0	≤ 3.0	≤ 3.0	≤ 3.0
Core Non-Circularity	%	≤ 3.0	≤ 3.0	≤ 3.0	≤ 3.0
Cladding Non-Circularity	%	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Mechanical properties					
Screening Strength	kpsi	100	100	100	75
Material description					
Core Material	/	Pure quartz glass			
Cladding Material	/	Fluorine-doped quartz glass			
Coating Material	/	Acrylic resin			

产品指标(二) Product Specifications

Item	Unit	Index			
Model	/	SI 105/125-22/250-D	SI 135/155-22/320-D	SI 200/220-22/320-D	SI 400/480-22/650-D
Optical characteristics					
Numerical Aperture	/	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02
Clad Numerical Aperture	/	≥ 0.46	≥ 0.46	≥ 0.46	≥ 0.46
Attenuation @ 915nm	dB/km	≤ 5.0	≤ 5.0	≤ 5.0	/
Geometric characteristics					
Core Diameter	μm	105.0 ± 2.0	135.0 ± 1.5	200.0 ± 3.0	400.0 ± 8.0
Cladding Diameter	μm	125.0 ± 1.0	155.0 ± 1.0	220.0 ± 4.0	480.0 ± 8.0
Coating Diameter	μm	250.0 ± 10.0	320.0 ± 15.0	320.0 ± 15.0	650.0 ± 10.0
Core-Clad Concentricity	μm	≤ 1.0	≤ 1.0	≤ 3.0	≤ 3.0
Mechanical properties					
Screening Strength	kpsi	100	100	100	100
Material description					
Core Material	/	High-purity quartz glass			
Inner Coating Material	/	Low-refractive index coating			
Outer Coating Material	/	Acrylic resin			

定制信息 Customized Messages

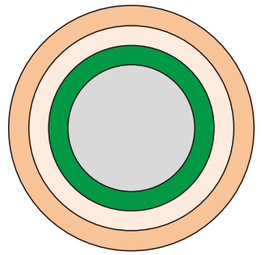
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

紫外大芯径光纤 UV Large-Core Fiber

产品描述 Product Description

UV Large-Core Fiber utilizes a high-hydroxyl silica core structure. Compared to low-hydroxyl fibers, it exhibits lower attenuation in the UV and near-UV ranges. Therefore, this fiber is primarily used in the 200-500nm wavelength range. It offers excellent coupling performance, geometric symmetry, and longitudinal uniformity.

光纤结构 Fiber structure



产品特点 Product Features

- High coupling efficiency
- Excellent long-term reliability
- Low attenuation in the UV band
- Customizable core and cladding dimensions

产品应用 Product Application

- Laser energy transmission
- Suitable for UV and near-UV wavelengths
- UV curing
- Optical devices and connectors
- Medical

产品指标 Product Specifications

Item	Unit	Index			
Model	/	SIUV 50/125-22/250	SIUV 105/125-22/250	SIUV 200/220-22/400	SIUV 400/440-22/650
Optical characteristics					
Numerical Aperture	/	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02
Geometric characteristics					
Core Diameter	μm	50.0 ± 2.5	105.0 ± 3.0	200.0 ±3.0	400.0 ± 8.0
Cladding Diameter	μm	125.0 ± 1.0	125.0 ± 1.0	220.0 ±4.0	440.0 ± 8.0
Coating Diameter	μm	245.0 ±5.0	245.0 ±5.0	400.0 ± 20.0	650.0 ± 30.0
Core-Clad Concentricity	μm	≤ 1.0	≤ 1.0	≤ 3.0	≤ 3.0
Core Non-Circularity	%	≤ 3.0	≤ 3.0	≤ 3.0	≤ 3.0
Cladding Non-Circularity	%	≤ 1.0	≤1.0	≤1.0	≤ 1.0
Mechanical properties					
Screening Strength	kpsi	100	100	100	75
Material description					
Core Material	/	High-hydroxy quartz glass			
Cladding Material	/	Fluorine-doped quartz glass			
Coating Material	/	Acrylic resin			

定制信息 Customized Messages

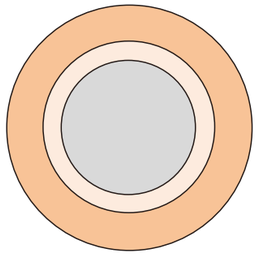
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

塑料包层大芯径光纤 Plastic-clad Large-Core Fiber

产品描述 Product Description

Plastic-clad large-core fiber products are suitable for optical systems and devices operating at industrial wavelengths such as 650nm, 850nm, and 915nm. Their large core, hard polymer cladding, and tight outer jacket design provide excellent coupling performance, superior mechanical properties, and moisture resistance.

光纤结构 Fiber structure



产品特点 Product Features

- Excellent tensile strength
- Excellent moisture resistance and temperature adaptability
- High coupling efficiency
- Strong radiation resistance

产品应用 Product Application

- Power signal transmission
- High-energy laser transmission
- Short- to medium-distance communications
- Laser medical treatment
- Fiber optic lighting

产品指标 Product Specifications

Item	Unit	Index			
Product Model	/	HP 200/230-37/500	HP 300/330-46/450	HP 400/440-46/550	HP 1000/1100-46/1250
Optical characteristics					
Numerical Aperture	/	0.37 ± 0.02	0.46 ± 0.02	0.46 ± 0.02	0.46 ± 0.02
Attenuation @ 850nm	dB/km	⩽ 8.0	⩽ 8.0	⩽ 8.0	⩽ 8.0
Fiber Refractive Index Structure	/	Step type	Step type	Step type	Step type
Geometric characteristics					
Core Diameter	μm	200.0 ± 3.0	300.0 ± 6.0	400.0 ± 8.0	1000.0 ± 20.0
Cladding Diameter	μm	230.0 +0/−8.0	330.0 +5.0/−10.0	440.0 +5.0/−10.0	1100.0 +10.0/−30.0
Thin-Bushing Diameter	μm	500.0 ± 30.0	450.0 ± 30.0	550.0 ± 50.0	1250.0 ± 50.0
Core-Clad Concentricity	μm	⩽ 5.0	⩽ 6.0	⩽ 8.0	⩽ 10.0
Mechanical properties					
Short-Term Bend Radius	mm	⩾ 10.0	⩾ 16.0	⩾ 29.0	⩾ 73.0
Long-Term Bend Radius	mm	⩾ 16.0	⩾ 24.0	⩾ 47.0	⩾ 118.0
Operating Temperature	℃	−65 ~ +85	−65 ~ +85	−65 ~ +85	−65 ~ +85
Screening Strength	kpsi	100	100	100	75
Material description					
Core Material	/	Pure quartz glass			
Cladding Material	/	Acrylic resin			
Thin-Bushing Material	/	ETFE or acrylic resin			

定制信息 Customized Messages

- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.



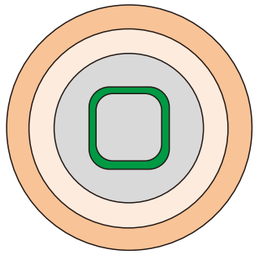
Homogenized fiber

方形芯光纤 Square-core Fiber

产品描述 Product Description

Square-core fiber is a specially designed, large-core laser power transmission fiber primarily used in high-power laser transmission, homogenization, imaging, spectroscopy, and other fields. Its structure consists of a square, high-purity synthetic quartz core, a fluorine-doped quartz cladding, and a coating. Typical NA values for the core and cladding are 0.12 and 0.22, respectively. Square-core fiber significantly improves coupling efficiency with semiconductor lasers and offers excellent spot homogenization and shaping capabilities, making it particularly advantageous in laser cleaning and beam shaping.

光纤结构 Fiber structure



产品特点 Product Features

- Excellent geometric uniformity
- High damage threshold
- Uniform mode field intensity distribution

产品应用 Product Application

- Laser coupling
- Laser cleaning
- Beam homogenization
- Laser beam combining components

产品指标(一) Product Specifications

Item	Unit	Index				
Product Model	/	SCF50-12-250L	SCF100-12-500L	SCF200-12-400L	SCF400-12-740L	SCF600-12-1100L
Optical characteristics						
Numerical Aperture	/	0.12±0.02	0.12±0.02	0.12±0.02	0.12±0.02	0.12±0.02
Attenuation @ 1064nm	dB/km	≤17.0	≤17.0	≤17.0	≤17.0	≤17.0
Refractive Index Structure	/	Step-index type				
Geometric characteristics						
Core Side Length	μm	50.0±3.0	100.0±5.0	200.0±6.0	400.0±8.0	600.0±10.0
Cladding Diameter	μm	250.0±5.0	500.0±10.0	400.0±10.0	740.0±10.0	1100.0±20.0
Coating Diameter	μm	400.0±10.0	630.0±10.0	540.0±10.0	910.0±10.0	1300.0±30.0
Core Material	/	Pure quartz				
Inner Coating Material	/	Low-refractive index coating				
Outer Coating Material	/	Acrylic resin				
Mechanical properties						
Screening Strength	kpsi	100	100	100	100	100

产品指标(二)Product Specifications

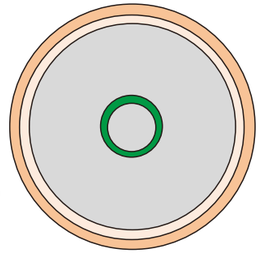
Item	Unit	Index				
Product Model	/	SCF50-22-250L	SCF100-22-500L	SCF200-22-400L	SCF400-22-740L	SCF600-22-1100L
Optical characteristics						
Numerical Aperture	/	0.22±0.02	0.22±0.02	0.22±0.02	0.22±0.02	0.22±0.02
Attenuation @ 1064nm	dB/km	≤17.0	≤17.0	≤17.0	≤17.0	≤17.0
Refractive Index Structure	/	Step-index type				
Geometric characteristics						
Core Side Length	μm	50.0±3.0	100.0±5.0	200.0±6.0	400.0±8.0	600.0±10.0
Cladding Diameter	μm	250.0±5.0	500.0±10.0	400.0±10.0	740.0±10.0	1100.0±20.0
Coating Diameter	μm	400.0±10.0	630.0±10.0	540.0±10.0	910.0±10.0	1300.0±30.0
Core Material	/	Pure quartz				
Inner Coating Material	/	Low-refractive index coating				
Outer Coating Material	/	Acrylic resin				
Mechanical properties						
Screening Strength	kpsi	100	100	100	100	100

定制信息 Customized Messages

- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

圆形匀化光纤 Circular Homogenized Fiber

光纤结构 Fiber structure



产品描述 Product Description

Circular homogenized fiber features a unique structure that modulates the beam propagation mode within the fiber core, transforming the input beam into a uniform flat-top beam profile. Circular homogenized fiber can be efficiently coupled with existing laser systems and is widely used in laser cladding, laser cleaning, laser welding, uniform illumination, spectroscopy, power supply, and medical applications.

产品特点 Product Features

- Excellent geometric uniformity
- High damage threshold
- Uniform mode field intensity distribution

产品应用 Product Application

- Laser coupling
- Beam homogenization
- Laser cleaning

产品指标(一) Product Specifications

Item	Unit	Index		
Product Model	/	SI 50/70/360-22/540	SI 100/120/360-22/540	SI 200/220/360-22/540
Optical characteristics				
Numerical Aperture	/	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02
Clad Numerical Aperture	/	⩾ 0.46	⩾ 0.46	⩾ 0.46
Geometric characteristics				
Core Diameter	μm	50.0 ± 2.0	102.0 ± 2.0	200.0 ± 4.0
Inner Cladding Diameter	μm	70.0 ± 3.0	123.0 ± 3.0	220.0 ± 3.0
Outer Cladding Diameter	μm	365.0 ± 5.0	365.0 ± 5.0	365.0 ± 5.0
Coating Diameter	μm	540.0 ± 15.0	540.0 ± 15.0	540.0 ± 15.0
Core-Cladding Concentricity	μm	⩽ 2.0	⩽ 2.0	⩽ 2.0
Core Out-of-Circularity	%	⩽ 2.0	⩽ 2.0	⩽ 2.0
Mechanical properties				
Screening Strength	kpsi	100	100	100
Material description				
Core Material	/	High-purity quartz glass		
Inner Coating Material	/	Low-refractive index coating		
Outer Coating Material	/	Acrylic resin		

产品指标(二) Product Specifications

Item	Unit	Index	
Product Model	/	HF 105/125-22/250	HF 200/220-22/320
Optical characteristics			
Clad Numerical Aperture	/	0.22 ± 0.02	0.22 ± 0.02
Geometric and mechanical properties			
Core Diameter	μm	105.0±4.0	200.0±4.0
Cladding Diameter	μm	125.0±3.0	220.0±3.0
Coating Diameter	μm	250.0±15.0	320.0±15.0
Core-Clad Concentricity	μm	≤3.0	≤2.0
Cladding Non-Circularity	%	≤2.0	≤1.0
Screening Strength	kpsi	⩾ 100	⩾ 100
Coating Material	/	Acrylic resin	

定制信息 Customized Messages

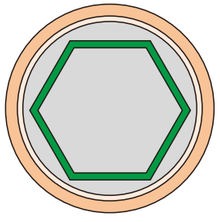
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

异形芯结构光纤 Shaped Core Fiber

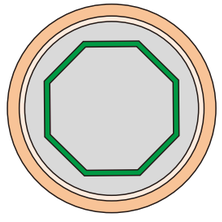
产品描述 Product Description

Fibercloud is dedicated to the design, process development, and application testing of shaped core fiber. We offer customizable square, rectangular, or polygonal fiber configurations. We can tailor fiber size, numerical aperture, and material to meet the specific requirements of laser customers' applications.

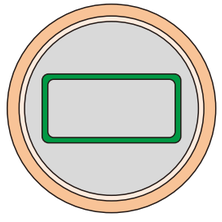
光纤结构 Fiber structure



Hexagonal Core Fiber



Octagonal Core Fiber



Rectangular Core Fiber

产品指标(一) Product Specifications

Item	Unit	Index
Product Model	/	Hexagonal Core Fiber
Core Size	μm	50-600mm (Edge-to-Edge)
Numerical Aperture	/	0.1210.22
Cladding Diameter	μm	250-1200
Coating Type	/	Double-Clad (NA 0.46)

产品指标(二) Product Specifications

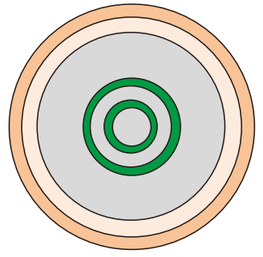
Item	Unit	Index
Product Model	/	Octagonal Core Fiber
Core Size	μm	50-600mm (Edge-to-Edge)
Numerical Aperture	/	0.1210.22
Cladding Diameter	μm	250-1200
Coating Type	/	Single/Double-Clad (NA 0.46)

产品指标(三) Product Specifications

Item	Unit	Index
Product Model	/	Rectangular Core Fiber
Core Size	μm	100x75mm (Aspect Ratio 1:1-3:1)
Numerical Aperture	/	0.1210.22
Cladding Diameter	μm	250-1200
Coating Type	/	Double-Clad (NA 0.46)

环形光纤 Ring Fiber

光纤结构 Fiber structure



产品描述 Product Description

Fibercloud's ring fiber features a unique optical fiber structure, primarily used in high-power ring lasers and high-power tunable beam lasers. While conventional lasers have a single-peak Gaussian energy distribution, coupling and shaping through the ring fiber creates a Gaussian core distribution and a circular laser beam surrounding the core, effectively addressing the spatter issue associated with high-power laser welding.

产品特点 Product Features

- Excellent geometric uniformity
- High damage threshold
- Uniform mode field intensity distribution

产品应用 Product Application

- Laser coupling
- OBH patch cord
- Laser cutting and welding

产品指标 Product Specifications

Item	Unit	Index	
Product Model		SI 50/70-22/150/170-22/360/540	SI 100/130-22/300/360-22/460/650
Geometric characteristics			
Numerical Aperture of Cladding 1	/	0.22 ± 0.02	0.22 ± 0.02
Numerical Aperture of Cladding 3	/	0.22 ± 0.02	0.22 ± 0.02
Numerical Aperture of Cladding 5	/	≥0.46	≥0.46
Optical characteristics			
Core Diameter	μm	50.0 ± 2.0	100.0 ± 2.0
Cladding 1 Diameter	μm	70.0 ± 3.0	130.0 ± 4.0
Cladding 2 Diameter	μm	150.0 ± 5.0	300.0 ± 5.0
Cladding 3 Diameter	μm	170.0 ± 5.0	360.0 ± 5.0
Cladding 4 Diameter	μm	360.0 ± 5.0	460.0 ± 5.0
Coating Diameter	μm	540.0 ± 15.0	650.0 ± 20.0
Core-Clad Concentricity	μm	≤ 2.0	≤ 2.0
Core Out-of-Circularity	%	≤ 2.0	≤ 2.0
Mechanical properties			
Screening Strength	kpsi	100	100
Material description			
Core Material	/	High-purity quartz glass	
Inner Coating Material	/	Low-refractive index coating	
Outer Coating Material	/	Acrylic resin	

定制信息 Customized Messages

- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.



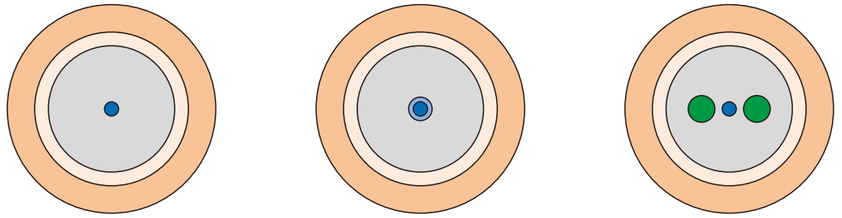
Passive matching fiber

无源匹配光纤 Passive matching fiber

产品描述 Product Description

Fibercloud manufactures a series of passive matching optical fibers with a germanium-doped quartz core and high-purity quartz cladding. These fibers are manufactured through precise geometric design and process control to create a corresponding passive matching fiber product line. Designed to match rare-earth-doped active optical fibers, these fibers offer low splicing losses and excellent laser output stability. They are widely used in industrial processing, scientific research, medical treatment, national defense, and other fields, fully meeting the application needs of various fiber laser users.

光纤结构 Fiber structure



Single- and double-clad passive matching fibers

Triple-clad passive matching fibers

Polarization-maintaining passive matching fibers

产品特点 Product Features

- Excellent geometric uniformity
- Low numerical aperture, large mode area
- Long-term stability
- Lower splice loss

产品应用 Product Application

- Pulsed and continuous fiber lasers
- Fiber amplifiers
- Material processing, scientific research, and medical
- Output pigtails

定制信息 Customized Messages

- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material,screening intensity and other indicators can be customized according to customer requirements.

产品指标(一) Product Specifications

Item	Unit	Index							
Model	/	GDF 10/130-D	GDF 14/250-D	GDF 20/125-D	GDF 20/400-D	GDF 25/125-D	GDF 25/250-D	GDF 25/400-D	GDF 30/250-D
Geometric characteristics									
Core Numerical Aperture	/	0.075±0.005	0.070±0.005	0.075±0.005	0.065±0.005	0.10±0.01	0.11±0.01	0.11±0.01	0.06±0.005
Cladding Numerical Aperture	/	≥0.46	≥0.46	≥0.46	≥0.46	≥0.46	≥0.46	≥0.46	≥0.46
Core Attenuation @ 1200nm	dB/km	≤20.0	≤20.0	≤20.0	≤20.0	≤10.0	≤10.0	≤10.0	≤20.0
Cladding Attenuation @ 1095nm	dB/km	≤15.0	≤15.0	≤15.0	≤15.0	≤15.0	≤15.0	≤15.0	≤15.0
Optical characteristics									
Core Diameter	μm	10.5±1.0	14.0±1.0	20.0±1.5	20.0±1.5	25.0 ± 2.0	25.0 ± 2.0	25.0 ±2.0	30.0 ± 2.0
Cladding Diameter	μm	125.0±1.0	250.0±3.0	125.0±1.0	400.0±5.0	125.0 ± 1.0	250.0 ± 3.0	400.0 ± 5.0	250.0 ± 3.0
Coating Diameter	μm	245.0±10.0	400.0±15.0	245.0±10.0	550.0±20.0	245.0 ± 10.0	400.0 ± 15.0	550.0 ± 15.0	400.0 ± 15.0
Core-Clad Concentricity	μm	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0
Coating Material	/	Low-refractive index coating							
Mechanical properties									
Screening Strength	kpsi	100	100	100	100	100	100	100	100

产品指标(二)Product Specifications

Item	Unit	Index			
Product Model	/	GDF 34/250-D	GDF 50/250-D	GDF 50/400-D	GDF 100/400-D
Geometric characteristics					
Core Numerical Aperture	/	0.11±0.01	0.11±0.01	0.12±0.01	0.12±0.01
Cladding Numerical Aperture	/	≥0.46	≥0.46	≥0.46	≥0.46
Core Attenuation @ 1200nm	dB/km	≤20.0	≤20.0	≤20.0	≤20.0
Cladding Attenuation @ 1095nm	dB/km	≤15.0	≤15.0	≤15.0	≤15.0
Optical characteristics					
Core Diameter	μm	34.0±2.0	50.0±5.0	50.0±5.0	100.0±5.0
Cladding Diameter	μm	250.0±3.0	250.0±3.0	400.0±5.0	400.0±5.0
Coating Diameter	μm	400.0±15.0	400.0±15.0	550.0±15.0	550.0±15.0
Core-Cladding Concentricity	μm	≤2.0	≤2.0	≤2.0	≤2.0
Coating Material	/	Low-refractive index coating			
Mechanical properties					
Screening Strength	kps	100	100	100	100

产品指标(三)Product Specifications

Item	Unit	Index			
Product Model	/	GDF 15/125-S	GDF 25/125 S	GDF 30/125 S	GDF 34/70/250 T
Geometric characteristics					
Core Numerical Aperture	/	0.275±0.015	0.275±0.015	0.275±0.015	0.12±0.01
Inner Cladding Numerical Aperture	/	/	/	/	0.22±0.02
Outer Cladding Numerical Aperture	/	/	/	/	≥0.46
Optical characteristics					
Core Diameter	μm	15.0±1.0	25.0±2.0	30.0±2.0	34.0±1.0
Inner Cladding Diameter	μm	/	/	/	70.0±2.0
Outer Cladding Diameter	μm	125.0±1.0	125.0±1.0	125.0±1.0	250.0±3.0
Coating Diameter	μm	245.0±10.0	245.0±10.0	245.0±10.0	400.0±15.0
Core-Cladding Concentricity	μm	≤2.0	≤2.0	≤2.0	≤2.0
Coating Material	/	High-refractive index coating			Low-refractive index coating
Mechanical properties					
Screening Strength	kps	100	100	100	100

产品指标(四)Product Specifications

Item	Unit	Index			
Product Model	/	GDF 6/125-PM	GDF 10/125-PM	GDF 25/250-PM	GDF 20/400-PM
Geometric characteristics					
Core Numerical Aperture	/	0.14±0.01	0.075±0.005	0.065±0.005	0.065±0.005
Cladding Numerical Aperture	/	≥0.46	≥0.46	≥0.46	≥0.46
Core Attenuation @ 1200nm	dB/km	≤10.0	≤10.0	≤20.0	≤20.0
Cladding Attenuation @ 1095nm	dB/km	≤15.0	≤15.0	≤15.0	≤15.0
Birefringence	$*10^{-4}$	2.5±0.5	3.0±0.5	2.5±0.5	4.0±0.5
Optical characteristics					
Core Diameter	μm	5.5±1.0	11.0±1.0	25.0±2.0	20.0±2.0
Cladding Diameter	μm	125.0±1.0	125.0±1.0	250.0±3.0	400.0±5.0
Coating Diameter	μm	245.0±10.0	245.0±10.0	400.0±15.0	550.0±15.0
Core-Cladding Concentricity	μm	≤2.0	≤2.0	≤2.0	≤2.0
Coating Material	/	Low-refractive index coating			
Mechanical properties					
Screening Strength	kps	100	100	100	100



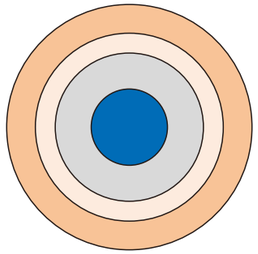
Multimode fiber

多模光纤（OM2） Multimode fiber(OM2)

产品描述 Product Description

Fibercloud's OM2 (50/125μm) multimode optical fiber meets or exceeds the IEC60793-2-10-A1-OM2 specification. Its optical profile is stable and repeatable, allowing it to be used with LED light sources for transmission in lower bit rate systems. It is compatible with all optical cable types. This series of optical fiber preforms utilizes an in-tube chemical vapor deposition process, resulting in low hydroxyl content and excellent optical uniformity. The fiber's double-layer UV-cured acrylic resin coating provides low bending loss, high tensile strength, and long-term fatigue resistance.

光纤结构 Fiber structure



产品特点Product Features

- Excellent fiber profile stability

产品应用Product Application

- Low bit rate transmission network
- Various optical cable types

产品指标Product Specifications

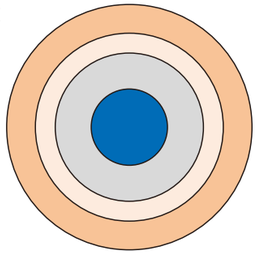
Item	Unit		Index
Geometric characteristics			
Attenuation	dB/km	850nm	≤2.5
	dB/km	1300nm	≤0.8
Full injection bandwidth	MHz · km	850nm	≥500
	MHz · km	1300nm	≥500
Numerical aperture	/	/	0.20±0.015
Effective group refractive index (Neft)	/	850nm	1.4573
	/	1300nm	1.4571
Zero dispersion wavelength (λ0)	nm	/	1295~1340
Zero dispersion slope (S0)	ps/(nm².km)	1295≤λ0≤1310nm	≤0.105
	ps/(nm².km)	1310≤λ0≤1340nm	≤0.000375（1590-λ0）
Local discontinuity	dB	1300nm	≤0.1
Optical characteristics			
Core diameter	μm	/	50.0±2.5
Core non-circularity	%	/	≤5.0
Cladding diameter	μm	/	125.0±1.0
Cladding non-circularity	%	/	≤1.0
Core/cladding concentricity	μm	/	≤1.5
Coating diameter	μm	/	245±7
Coating/cladding concentricity	μm	/	≤10.0
Fiber length	km/盘	/	1.1~8.8
Environmental characteristics(850nm&1300nm)			
Temperature cycling additional attenuation	dB/km	-60℃~+85℃	≤0.10
Water immersion additional attenuation	dB/km	23℃±2℃,30 days	≤0.10
Wet heat additional attenuation	dB/km	85℃，85%Relative humidity 30 days	≤0.10
Dry heat aging additional attenuation	dB/km	85℃，30 days	≤0.10
Mechanical properties			
Screening strength	kps	/	100
Macrobend 100 turns R 37.5mm	dB	850nm	≤0.50
	dB	1300nm	≤0.50
Macrobend 2 turns R 15mm	dB	850nm	≤0.50
	dB	1300nm	≤1.0
Coating peel strength	N	Average value	1.0-5.0
	N	Peak value	1.3-8.9
Dynamic fatigue parameters	/	/	≥20

多模光纤（OM2+） Multimode fiber(OM2+)

产品描述 Product Description

Fibercloud's OM2+ (50/125μm) multimode optical fiber meets or exceeds the IEC60793-2-10-A1-0M2 specification. Its cross-sectional structure is stable and repeatable, making it suitable for Gigabit Ethernet networks (1 & 10Gb/s Ethernet) and faster. Fibercloud's OM2+ multimode optical fiber features an optimized design for 850nm VCSELs, optimizing the fiber's bandwidth at the 850nm wavelength and ensuring excellent transmission performance when using VCSEL lasers. This series of optical fiber preforms utilizes an in-tube chemical vapor deposition process, resulting in low hydroxyl content and excellent optical uniformity. The fiber's double-layer UV-cured acrylic coating provides low bend loss, high tensile strength, and long-term fatigue resistance.

光纤结构Fiber structure



产品特点Product Features

- Optimized for 850nm VCSELs
- Compatible with conventional OM2 fiber

产品应用Product Application

- High-speed LAN
- Gigabit Ethernet and faster
- Various types of optical cables

产品指标Product Specifications

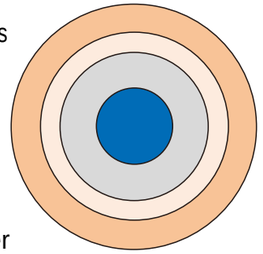
Item	Unit		Index
Geometric characteristics			
Attenuation	dB/km	850nm	≤2.5
	dB/km	1300nm	≤0.8
Full injection bandwidth	MHz · km	850nm	≥700
	MHz · km	1300nm	≥500
Effective mode bandwidth	MHz · km	850nm	≥950
Numerical aperture	/	/	0.20±0.015
Effective group refractive index (Neft)	/	850nm	1.4573
	/	1300nm	1.4571
Zero dispersion wavelength (λ0)	nm	/	1295~1340
Zero dispersion slope (S0)	ps/(nm².km)	1295≤λ0≤1310nm	≤0.105
	ps/(nm².km)	1310≤λ0≤1340nm	≤0.000375（1590-λ0）
Local discontinuity	dB	1300nm	≤0.1
Optical characteristics			
Core diameter	μm	/	50.0±2.5
Core non-circularity	%	/	≤5.0
Cladding diameter	μm	/	125.0±1.0
Cladding non-circularity	%	/	≤1.0
Core/cladding concentricity	μm	/	≤1.5
Coating diameter	μm	/	245±7
Coating/cladding concentricity	μm	/	≤10.0
Fiber length	km/盘	/	1.1~8.8
Environmental characteristics(850nm&1300nm)			
Temperature cycling additional attenuation	dB/km	-60℃~+85℃	≤0.10
Water immersion additional attenuation	dB/km	23℃±2℃,30 days	≤0.10
Wet heat additional attenuation	dB/km	85℃，85%Relative humidity 30 days	≤0.10
Dry heat aging additional attenuation	dB/km	85℃，30 days	≤0.10
Mechanical properties			
Screening strength	kpsi	/	100
Macrobend 100 turns R 37.5mm	dB	850nm	≤0.50
	dB	1300nm	≤0.50
Macrobend 2 turns R 15mm	dB	850nm	≤0.50
	dB	1300nm	≤1.0
Coating peel strength	N	Average value	1.0-5.0
	N	Peak value	1.3-8.9
Dynamic fatigue parameters	/	/	≥20

多模光纤（OM3/OM4） Multimode fiber(OM3/OM4)

产品描述 Product Description

Fibercloud's OM3/OM4 (50/125μm) multimode optical fiber meets or exceeds IEC60793-2-10 specifications. Its cross-sectional structure is stable and repeatable, making it specifically designed for high-speed local area networks (LANs) and suitable for Gigabit Ethernet networks (1, 10, 40, 100, and 400Gb/s). Fibercloud's OM3/OM4 multimode optical fiber is optimized for 850nm VCSELs, ensuring optimal bandwidth at the 850nm wavelength and superior transmission performance when using VCSEL lasers as a light source. This series of optical fiber preforms utilizes an in-tube chemical vapor deposition process, resulting in low hydroxyl content and excellent optical uniformity. The fiber's double-layer UV-curable acrylic coating provides low bending loss, high tensile strength, and long-term fatigue resistance.

光纤结构 Fiber structure



产品特点 Product Features

- Optimized for 850nm VCSELs
- High bandwidth, low differential mode delay
- Compatible with conventional OM2 and OM3 fiber

产品应用 Product Application

- Data centers
- 1, 10, 40, 100, and 400Gb/s Ethernet
- High-performance computing centers
- Various fiber cable types

产品指标 Product Specifications

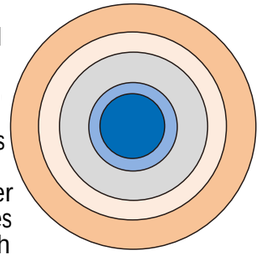
Item	Unit	Condition	Index
Geometric characteristics			
Attenuation	dB/km	850nm	≤2.5
	dB/km	1300nm	≤0.8
Full injection bandwidth	MHz · km	850nm	≥1500/≥3500
	MHz · km	1300nm	≥500/≥500
Effective mode bandwidth	MHz · km	850nm	≥2000/≥4700
Numerical aperture	/	/	0.20±0.015
DMD	Meets or exceeds IEC60793-2-10 specifications		
Effective group refractive index (Neff)	/	850nm	1.4573
	/	1300nm	1.4571
Zero dispersion wavelength (λ0)	nm	/	1295~1340
Zero dispersion slope (S0)	ps/(nm².km)	1295≤λ0≤1310nm	≤0.105
	ps/(nm².km)	1310≤λ0≤1340nm	≤0.000375（1590-λ0）
Local discontinuity	dB	1300nm	≤0.1
Optical characteristics			
Core diameter	μm	/	50.0±2.5
Core non-circularity	%	/	≤5.0
Cladding diameter	μm	/	125.0±1.0
Cladding non-circularity	%	/	≤1.0
Core/cladding concentricity	μm	/	≤1.5
Coating diameter	μm	/	245±7
Coating/cladding concentricity	μm	/	≤10.0
Fiber length	km/盘	/	1.1~8.8
Environmental characteristics(850nm&1300nm)			
Temperature cycling additional attenuation	dB/km	-60℃ ~ +85℃	≤0.10
Water immersion additional attenuation	dB/km	23℃±2℃, 30 days	≤0.10
Wet heat additional attenuation	dB/km	85℃, 85%Relative humidity 30 days	≤0.10
Dry heat aging additional attenuation	dB/km	85℃, 30 days	≤0.10
Mechanical properties			
Screening strength	kpsi	/	100
Macrobend 100 turns R 37.5mm	dB	850nm	≤0.50
	dB	1300nm	≤0.50
Macrobend 2 turns R 15mm	dB	850nm	≤0.50
	dB	1300nm	≤1.0
Coating peel strength	N	Average value	1.0~5.0
	N	Peak value	1.3~8.9
Dynamic fatigue parameters	/	/	≥20

弯曲不敏感多模光纤（OM2） Bend-insensitive multimode fiber (OM2)

产品描述 Product Description

Fibercloud's OM2 (50/125μm) bend-insensitive multimode fiber meets or exceeds the IEC60793-2-10-A1-OM2 specification. Its optical profile is stable and repeatable, allowing it to be used with LED light sources for transmission in lower bit-rate systems. It is bend-insensitive, maintaining excellent optical performance even at small bend radii, and is compatible with all optical cable types. This series of fiber preforms utilizes an in-tube chemical vapor deposition process, resulting in low hydroxyl content and excellent optical uniformity. The fiber's double-layer UV-curable acrylic coating reduces bend-added attenuation and provides excellent bending loss resistance at small bend radii. It also boasts high tensile strength and long-term fatigue resistance.

光纤结构 Fiber structure



产品特点 Product Features

- Low bend-added attenuation
- Excellent fiber profile stability

产品应用 Product Application

- Low bit-rate transmission network
- Various optical cable types

产品指标 Product Specifications

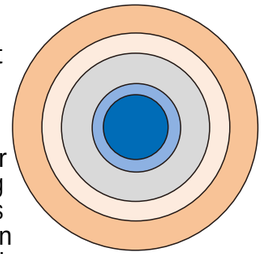
Item	Unit	Condition	Index
Geometric characteristics			
Attenuation	dB/km	850nm	≤2.5
	dB/km	1300nm	≤0.8
Full injection bandwidth	MHz · km	850nm	≥500
	MHz · km	1300nm	≥500
Numerical aperture	/	/	0.20±0.015
Effective group refractive index (Neff)	/	850nm	1.4573
	/	1300nm	1.4571
Zero dispersion wavelength (λ0)	nm	/	1295~1340
Zero dispersion slope (S0)	ps/(nm².km)	1295≤λ0≤1310nm	≤0.105
	ps/(nm².km)	1310≤λ0≤1340nm	≤0.000375（1590-λ0）
Local discontinuity	dB	1300nm	≤0.1
Optical characteristics			
Core diameter	μm	/	50.0±2.5
Core non-circularity	%	/	≤5.0
Cladding diameter	μm	/	125.0±1.0
Cladding non-circularity	%	/	≤1.0
Core/cladding concentricity	μm	/	≤1.5
Coating diameter	μm	/	245±7
Coating/cladding concentricity	μm	/	≤10.0
Fiber length	km/盘	/	1.1~8.8
Environmental characteristics(850nm&1300nm)			
Temperature cycling additional attenuation	dB/km	-60℃ ~ +85℃	≤0.10
Water immersion additional attenuation	dB/km	23℃±2℃, 30 days	≤0.10
Wet heat additional attenuation	dB/km	85℃, 85%Relative humidity 30 days	≤0.10
Dry heat aging additional attenuation	dB/km	85℃, 30 days	≤0.10
Mechanical properties			
Screening strength	kpsi	/	100
Macrobend 2 turns R 30mm	dB	850nm	≤0.10
	dB	1300nm	≤0.30
Macrobend 2 turns R 15mm	dB	850nm	≤0.20
	dB	1300nm	≤0.50
Coating peel strength	N	Average value	1.0~5.0
	N	Peak value	1.3~8.9
Dynamic fatigue parameters	/	/	≥20

弯曲不敏感多模光纤（OM2+） Bend-insensitive multimode fiber (OM2+)

产品描述 Product Description

Fibercloud's OM2+ (50/125μm) bend-insensitive multimode fiber meets or exceeds the IEC60793-2-10-A1-OM2 specification. Its fiber profile is stable and repeatable, making it suitable for Gigabit Ethernet networks (1 & 10Gb/s Ethernet) and faster. Fibercloud's OM2+ bend-insensitive multimode fiber features an 850nm VCSELS-optimized design, optimizing the fiber's bandwidth at 850nm, ensuring excellent transmission performance when using VCSEL lasers. This series of fiber preforms utilizes an in-tube chemical vapor deposition process, resulting in low hydroxyl content and excellent optical uniformity. The fiber's double-layer UV-cured acrylic coating reduces bend-added attenuation and provides excellent bending loss at small bend radii. It also boasts high tensile strength and long-term fatigue resistance.

光纤结构 Fiber structure



产品特点 Product Features

- Optimized for 850nm VCSELS
- Low bend-added attenuation
- Compatible with conventional OM2 fiber

产品应用 Product Application

- High-speed LAN
- Various fiber cable types
- Gigabit Ethernet and faster

产品指标 Product Specifications

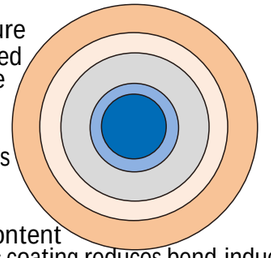
Item	Unit	Condition	Index
Geometric characteristics			
Attenuation	dB/km	850nm	≤2.5
	dB/km	1300nm	≤0.8
Full injection bandwidth	MHz · km	850nm	≥700
	MHz · km	1300nm	≥500
Effective mode bandwidth	MHz · km	850nm	≥950
Numerical aperture	/	/	0.20±0.015
DMD	Meets or exceeds IEC60793-2-10 specifications		
Effective group refractive index (Neff)	/	850nm	1.4573
	/	1300nm	1.4571
Zero dispersion wavelength (λ0)	nm	/	1295~1340
Zero dispersion slope (S0)	ps/(nm².km)	1295≤λ0≤1310nm	≤0.105
	ps/(nm².km)	1310≤λ0≤1340nm	≤0.000375（1590-λ0）
Local discontinuity	dB	1300nm	≤0.1
Optical characteristics			
Core diameter	μm	/	50.0±2.5
Core non-circularity	%	/	≤5.0
Cladding diameter	μm	/	125.0±1.0
Cladding non-circularity	%	/	≤1.0
Core/cladding concentricity	μm	/	≤1.5
Coating diameter	μm	/	245±7
Coating/cladding concentricity	μm	/	≤10.0
Fiber length	km/盘	/	1.1~8.8
Environmental characteristics(850nm&1300nm)			
Temperature cycling additional attenuation	dB/km	-60℃ ~ +85℃	≤0.10
Water immersion additional attenuation	dB/km	23℃±2℃, 30 days	≤0.10
Wet heat additional attenuation	dB/km	85℃, 85%Relative humidity 30 days	≤0.10
Dry heat aging additional attenuation	dB/km	85℃, 30 days	≤0.10
Mechanical properties			
Screening strength	kpsi	/	100
Macrobend 2 turns R 30mm	dB	850nm	≤0.10
	dB	1300nm	≤0.30
Macrobend 2 turns R 15mm	dB	850nm	≤0.20
	dB	1300nm	≤0.50
Coating peel strength	N	Average value	1.0~5.0
	N	Peak value	1.3~8.9
Dynamic fatigue parameters	/	/	≥20

弯曲不敏感多模光纤（OM3/OM4） Bend-insensitive multimode fiber (OM3/OM4)

产品描述 Product Description

Fibercloud's OM3/OM4 (50/125μm) bend-insensitive multimode optical fibers meet or exceed IEC 60793-2-10 specifications. They feature stable cross-sectional structure control and excellent repeatability. Designed specifically for high-speed local area networks (LANs), they are suitable for Gigabit Ethernet networks (1, 10, 40, 100, and 400Gb/s Ethernet). Fibercloud's OM3/OM4 bend-insensitive multimode optical fibers utilize an 850nm VCSEL (VCSEL) optimized design, optimizing the fiber's bandwidth at 850nm wavelength and ensuring excellent transmission performance when using VCSEL lasers. These fiber preforms utilize an in-tube chemical vapor deposition process, resulting in low hydroxyl content and excellent optical uniformity. The fiber's double-layer UV-curable acrylic coating reduces bend-induced attenuation and provides excellent bending loss resistanceat small bend radii. They also possess high tensile strength and long-term fatigue resistance.

光纤结构 Fiber structure



产品特点 Product Features

- Optimized for 850nm VCSELS
- High bandwidth, low differential mode delay
- Compatible with conventional OM2 and OM3 fiber
- Low bend-added attenuation

产品应用 Product Application

- Data Center
- 1, 10, 40, 100, and 400 Gb/s Ethernet
- High-Performance Computing Center
- Various fiber cable types

产品指标 Product Specifications

Item	Unit	Condition	Index
Geometric characteristics			
Attenuation	dB/km	850nm	≤2.5
	dB/km	1300nm	≤0.8
Full injection bandwidth	MHz · km	850nm	≥1500/≥3500
	MHz · km	1300nm	≥500/≥500
Effective mode bandwidth	MHz · km	850nm	≥2000/≥4700
Numerical aperture	/	/	0.20±0.015
DMD	Meets or exceeds IEC60793-2-10 specifications		
Effective group refractive index (Neff)	/	850nm	1.4573
	/	1300nm	1.4571
Zero dispersion wavelength (λ0)	nm	/	1295~1340
Zero dispersion slope (S0)	ps/(nm².km)	1295≤λ0≤1310nm	≤0.105
	ps/(nm².km)	1310≤λ0≤1340nm	≤0.000375（1590-λ0）
Local discontinuity	dB	1300nm	≤0 1
Optical characteristics			
Core diameter	μm	/	50.0±2.5
Core non-circularity	%	/	≤5.0
Cladding diameter	μm	/	125.0±1.0
Cladding non-circularity	%	/	≤1.0
Core/cladding concentricity	μm	/	≤1.5
Coating diameter	μm	/	245±7
Coating/cladding concentricity	μm	/	≤10.0
Fiber length	km/盘	/	1.1~8.8
Environmental characteristics(850nm&1300nm)			
Temperature cycling additional attenuation	dB/km	-60℃ ~ +85℃	≤0.10
Water immersion additional attenuation	dB/km	23℃±2℃, 30 days	≤0.10
Wet heat additional attenuation	dB/km	85℃, 85% Relative humidity 30 days	≤0.10
Dry heat aging additional attenuation	dB/km	85℃, 30 days	≤0.10
Mechanical properties			
Screening strength	kpsi	/	100
Macrobend 2 turns R 30mm	dB	850nm	≤0.10
	dB	1300nm	≤0.30
Macrobend 2 turns R 15mm	dB	850nm	≤0.20
	dB	1300nm	≤0.50
Coating peel strength	N	Average value	1.0~5.0
	N	Peak value	1.3~8.9
Dynamic fatigue parameters	/	/	≥20



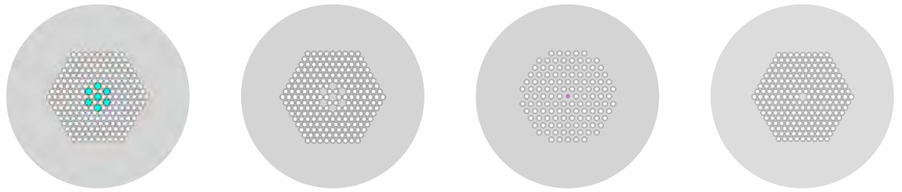
Photonic crystal fiber

光子晶体光纤 Photonic crystal fiber

产品描述 Product Description

Fibercloud is dedicated to the research and development of this series of optical fiber products. Based on synthetic raw materials and chemical vapor deposition processes, and through theoretical simulation and calculation, we have developed endless single-mode photonic crystal fibers, polarization-maintaining photonic crystal fibers, photosensitive photonic crystal fibers, highly nonlinear photonic crystal fibers, hollow-core antiresonant fibers, Bragg cladding fibers, and hollow-core photonic crystal fibers.

光纤结构 Fiber structure



Fluorine-doped core photonic crystal fibers

Multi-core photonic crystal fibers

Photosensitive photonic crystal fibers

Highly nonlinear photonic crystal fibers

产品特点 Product Features

- Excellent radiation resistance
- Flexible structural design
- Adjustable fiber dispersion
- Adjustable fiber nonlinear coefficient

产品应用 Product Application

- Broadband single-mode transmission
- Energy transmission
- Gas and liquid sensing
- Fiber optic communications

产品指标 Product Specifications

Item	Unit	Index			
Product Model	/	FDPCF-15-125-250	MCPCF-15-125-250	PSPCF-15-125-250	HNPCF-15-125-250
Optical characteristics					
Operating Wavelength	nm	1550	1550	1550	1550
Attenuation	dB/km	⩽ 10.0	⩽ 10.0	⩽ 0.6	⩽ 5.0
Geometric characteristics					
Core Diameter	μm	5.5	4.5	0.6	3.5
Cladding Diameter	μm	125.0 ± 2.0	125.0 ± 2.0	125.0 ± 2.0	125.0 ± 2.0
Cladding Hole Diameter	μm	4.5 ± 0.2	3.5 ± 0.2	3 ± 0.2	3 ± 0.2
Cladding Hole Spacing	μm	5.5 ± 0.2	4.5 ± 0.2	5 ± 0.2	3.5 ± 0.2
Characteristics	/	Fluorine doping concentration <2.2wt%	Number of fiber cores≤7	/	/

定制信息 Customization Information

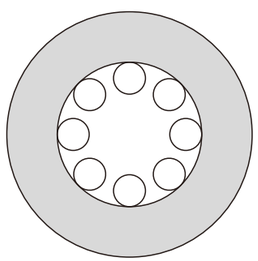
- Customizable core materials include high-purity silicon, low-hydroxyl, fluorine-doped, and germanium-doped materials.
- Capillary pores of any core size and duty cycle can be customized.

空芯反谐振光纤 Hollow-core antiresonant fiber

产品描述 Product Description

Fibercloud's hollow-core antiresonant fiber, constructed from multiple nodeless cladding tubes, features stable single-mode characteristics, ultra-low transmission loss, and a wide transmission bandwidth. Furthermore,this fiber exhibits excellent beam quality control, making it ideal for short-distance, high-power laser transmission. Furthermore, due to the unique light-guiding mechanism of hollow-core antiresonant fiber, which transmits optical signals through air, it exhibits low-dispersion transmission characteristics, showing great potential in high-speed optical communications.

光纤结构 Fiber structure



产品特点 Product Features

- Low transmission loss
- High damage threshold
- Low nonlinearity
- Low dispersion

产品应用 Product Application

- High-power laser energy transmission
- Fiber probe
- High-speed optical communications

产品指标 Product Specifications

Item	Unit	Index	
Product Model	/	ARF-10-S	ARF-15-S
Optical characteristics			
Operating Wavelength	nm	1064	1550
Transmission Bandwidth (<100 dB/km)	nm	900~1200	1450 ~ 1650
Attenuation	dB/km	⩽ 6	⩽ 5
Dispersion	ps/(nm · km)	1.5 ± 1	1.5 ± 1
Geometric characteristics			
Core Diameter	μm	40.0 ± 2.0	60.0 ± 5.0
Fiber Diameter	μm	330± 20	400± 20

定制信息 Customization Information

- Hollow-core antiresonant fibers with other operating wavelengths can be customized.
- Hollow-core antiresonant fibers with other geometries can be customized.

注意事项 Notes

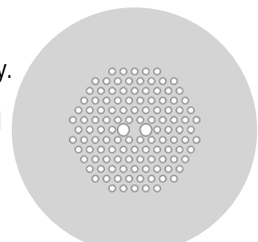
- To prevent moisture and dust from entering the air core during storage and affecting optical performance, both ends of the fiber must be sealed.

保偏光子晶体光纤 Polarization-maintaining photonic crystal fiber

产品描述 Product Description

Fibercloud's polarization-maintaining photonic crystal fiber (PMPCF) can be used in fiber gyros and polarization-related devices. It features radiation resistance, high birefringence, and excellent temperature stability. The large refractive index step between the air and glass of this fiber produces strong birefringence, resulting in a short beat length. Compared to traditional PM fiber, PMPCF can reduce bending-induced coupling between different polarization states and maintain a high extinction ratio.

光纤结构 Fiber structure



产品特点 Product Features

- Excellent radiation resistance
- Adjustable beat length
- High birefringence
- Excellent temperature performance

产品应用 Product Application

- Fiber gyros
- Polarization devices
- Lasers

产品指标 Product Specifications

Item	Unit	Index			
Product Model	/	PM-PCF15G-100-U13	PM-PCF15G-125-U25	PM-PCF15G-80-U16	PM-PCF15G-60-U10
Optical characteristics					
Operating Wavelength	μm	1550	1550	1550	1550
Mode Field Diameter	μm	4.1 ± 1.0	4.0 ± 1.0	4.0 ± 1.0	4.0 ± 1.0
Attenuation	dB/km	⩽ 2.0	⩽ 2.0	⩽ 2.0	⩽ 2.0
Beat Length	mm	⩽ 5.0	⩽ 3.0	⩽ 3.0	⩽ 3.0
Crosstalk	dB	⩽ -15	⩽ -30	⩽ -30	⩽ -15
Temperature Cycle	dB	⩽ 2.0	⩽ 3.0	⩽ 3.0	⩽ 3.0
Geometric characteristics					
Cladding Diameter	μm	100.0 ± 1.0	125.0 ± 1.0	80.0 ± 1.0	60.0 ± 1.0
Coating Diameter	μm	135.0 ± 5.0	250.0 ± 2.0	165.0 ± 2.0	100.0 ± 5.0
Cladding Non-Circularity	%	⩽ 1.0	⩽ 1.0	⩽ 1.0	⩽ 1.0

定制信息 Customization Information

- Polarization-maintaining photonic crystal fibers can be customized with specific beat lengths and wavelength bands.
- Polarization-maintaining photonic crystal fibers can be customized with specific cladding diameters and duty cycles.

注意事项 Notes

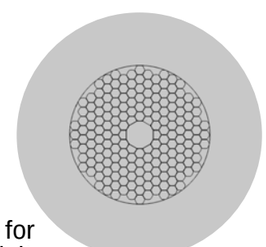
- To prevent moisture and dust from entering the hollow microtubes during storage and affecting subsequent performance, polarization-maintaining photonic crystal fibers must be sealed at both ends.

空芯光子带隙光纤 Hollow-core photonic bandgap fiber

产品描述 Product Description

Fibercloud's hollow-core photonic bandgap fiber (HCPBG) is composed of a periodic arrangement of two-dimensional photonic crystals, with the core consisting of a hollow air defect. Unlike traditional optical fibers, which guide light through total internal reflection, HCPBG fibers utilize the photonic bandgap effect to transmit light through air. The vast majority of the optical energy (over 95%) is transmitted within the air core, so light transmission is not affected by absorption by the fiber material. This fiber exhibits excellent radiation resistance and thermal stability, making it suitable for use in harsh environments. Its low nonlinearity and latency, along with its high damage threshold, make it particularly advantageous for flexible transmission of high-power and pulsed lasers. It can also serve as an efficient platform for studying light-matter interactions.

光纤结构 Fiber structure



产品特点 Product Features

- Low attenuation
- Controllable dispersion
- Low nonlinearity
- Excellent radiation resistance
- Excellent temperature performance
- High damage threshold

产品应用 Product Application

- Fiber optic gyroscope
- Laser transmission
- Fiber optic sensing
- Nonlinear optics
- Data communications

产品指标 Product Specifications

Item	Unit	Index			
Product Model	/	HCPBF-13	HCPBF-13-PM	HCPBF-15	HCPBF-15-PM
Optical characteristics					
Operating Wavelength	nm	1310	1310	1550	1550
Transmission Bandwidth (<100 dB/km)	nm	1290~1330	1290~1330	1500~1650	1500~1650
Attenuation	dB/km	⩽20	⩽20	⩽10	⩽10
Mode Field Diameter	μm	10 ± 4	10 ± 4	10 ± 4	10 ± 4
Birefringence	/	N/A	$\geqslant 1 \times 10^{-4}$	N/A	$\geqslant 1 \times 10^{-4}$
Geometric characteristics					
Cladding Diameter	μm	130± 10	130± 10	160± 10	160± 10
Fiber Diameter	μm	230± 20	230± 20	250± 20	250± 20

定制信息 Customization Information

- To prevent moisture and dust from entering the hollow microtube during storage and affecting subsequent performance, polarization-maintaining photonic crystal fibers must be sealed at both ends.

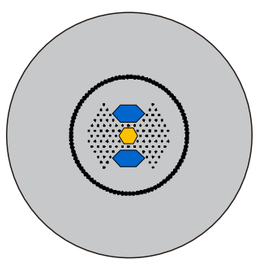
大模场保偏掺镱光子晶体光纤

Large mode-area polarization-maintaining ytterbium-doped photonic crystal fiber

产品描述 Product Description

Fibercloud's large-mode-area polarization-doped photonic crystal fiber (PMP-doped) boasts a large mode area, overcoming nonlinear effects and enabling optical transmission with high peak power and large pulse capabilities. By adjusting fiber parameters, Fibercloud can provide customized large-mode-area PM-doped photonic crystal fibers in various sizes and shapes to meet diverse application requirements.

光纤结构 Fiber structure



产品特点 Product Features

- Single-mode, large-mode-area
- Handles high pulse energy
- High power conversion efficiency

产品应用 Product Application

- Ultrafast lasers
- Defense, medical, and scientific research

产品指标 Product Specifications

Item	Unit	Index	
Product Model	/	PMYBPCF-14/135	PMYBPCF-40/200
Optical characteristics			
Mode Properties	/	Single mode	Single mode
Beam Quality, Typical @ 1064nm	/	$M^2 < 1.3$	$M^2 < 1.3$
Cladding Numerical Aperture	/	⩾0.5	0.55~0.65
Pump Absorption @ 915nm	dB/m	2.3±0.35	3.75±0.75
Pump Absorption @ 976nm	dB/m	≈7	≈12
Birefringence @ 1100nm	/	$\geqslant 1 \times 10^{-4}$	$\geqslant 1 \times 10^{-4}$
Geometric characteristics			
Core Diameter	μm	14	40
Cladding Type	/	Double cladding	Double cladding
Pump Cladding Diameter	μm	135±3	200±3
Outer Cladding Diameter	μm	275±8	450±20
Fiber Diameter	μm	360±15	540±30

定制信息 Customization Information

- To prevent moisture and dust from entering the hollow microtube during storage and affecting subsequent performance, polarization-maintaining photonic crystal fibers must be sealed at both ends.



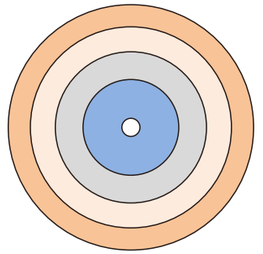
Special optical fibers for special environments

抗辐射光纤 Radiation Hard Fiber

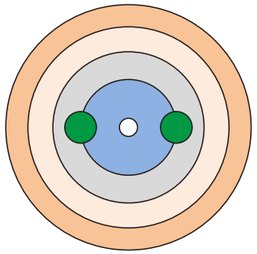
产品描述 Product Description

Radiation-hardened optical fiber is a specially designed fiber designed to provide stable and reliable optical signal transmission in radiation-resistant environments. Its unique materials and structural design provide it with radiation-resistant properties, effectively preventing the effects of long-term radiation exposure compared to conventional optical fibers. Fibercloud's radiation-hardened optical fiber utilizes an optimized structural design and proprietary internal and external coating materials, resulting in excellent radiation resistance and temperature stability, making it ideal for use in ionizing radiation environments such as space.

光纤结构Fiber structure



Radiation-hardened single-mode optical fiber



Radiation-hardened polarization-maintaining optical fiber

产品特点 Product Features

- Excellent radiation resistance
- High operational stability and reliability

产品应用Product Application

- Aerospace
- Medical equipment
- Nuclear power industry

产品指标（抗辐射单模光纤）Product Specifications

Item	Unit	Index	
Product Model	/	RSM13-125-U25	RSM15-125-U25
Optical characteristics			
Operating Wavelength	nm	1310	1550
Cutoff Wavelength	nm	1100 ~ 1290	1290 ~ 1520
Mode Field Diameter	μm	6.0 ± 1.0	6.5 ± 1.0
Attenuation	dB/km	⩽ 1.5	⩽ 1.5
Attenuation (100 krad irradiation dose)	dB/km	⩽3.0	⩽3.0
Geometric characteristics			
Cladding Diameter	μm	125.0 ± 1.0	125.0 ± 1.0
Coating Type	/	Double-layer UV-cured acrylic resin	
Coating Diameter	μm	245.0 ± 3.0	245.0 ± 3.0
Cladding Non-Circularity	%	⩽ 1.0	⩽ 1.0
Core-Clad Concentricity	μm	⩽ 1.0	⩽ 1.0
Environmental and mechanical characteristics			
Operating Temperature	℃	-45~+85	-45~+85
Screening Strength	kpsi	100	100

产品指标（抗辐射保偏光纤）Product Specifications

Item	Unit	Index	
Product Model	/	RPM 13-125-U25	RPM 15-125-U25
Optical characteristics			
Operating Wavelength	nm	1310	1550
Cutoff Wavelength	nm	1100 ~ 1290	1290 ~ 1520
Mode Field Diameter	μm	6.0 ± 1.0	6.5 ± 1.0
Attenuation	dB/km	≤ 1.5	≤ 1.5
Beat Length	mm	≤ 2.5	≤ 3.0
Typical Crosstalk	dB/km	≤ -25	≤ -25
Attenuation (100 krad irradiation dose)	dB/km	≤3.0	≤3.0
Geometric characteristics			
Cladding Diameter	μm	125.0 ± 1.0	125.0 ± 1.0
Coating Type	/	Double-layer UV-cured acrylic resin	
Coating Diameter	μm	245.0 ± 3.0	245.0 ± 3.0
Cladding Non-Circularity	%	≤ 1.0	≤ 1.0
Core-Clad Concentricity	μm	≤ 1.0	≤ 1.0
Environmental and mechanical characteristics			
Operating Temperature	℃	-45~+85	-45~+85
Screening Strength	kpsi	100	100

定制信息Customization Information

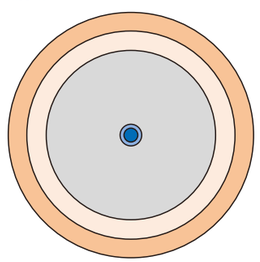
- The operating wavelength, mode field diameter, beat length, geometric dimensions, coating material, screening intensity and other indicators can be customized according to customer requirements

耐高温光纤 High temperature resistant optical fiber

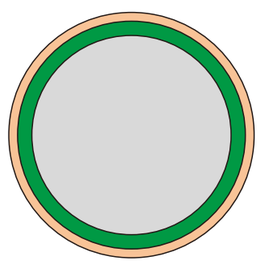
产品描述 Product Description

Fibercloud's high-temperature optical fiber is used in communications, sensing, laser, and medical applications, both in harsh high- and low-temperature environments. Its high-temperature acrylic and polyimide coatings ensure operation within temperatures up to 150°C and 300°C, respectively. Metal optical fiber can operate in high-temperature environments ranging from 400°C to 700°C.

光纤结构Fiber structure



Acrylic-coated high-temperature optical fiber



Polyimide or metal-coated optical fiber

产品特点Product Features

- Excellent high-temperature resistance
- High stability and reliability
- Metal optical fiber is weldable

产品应用 Product Application

- Aerospace
- Medical equipment
- Petrochemical

产品指标（一）Product Specifications

Item	Unit	Index	
Product Model	/	HT 9/125-14/250	HT 9/125-14/155
Optical characteristics			
Mode Field Diameter @ 1310nm	μm	9.2±0.4	9.2±0.4
Mode Field Diameter @ 1550nm	μm	10.4±0.8	10.4±0.8
Fiber Cutoff Wavelength	nm	≤1290	≤1290
Attenuation @ 1310nm	dB/km	≤0.4	≤1.0
Attenuation @ 1550nm	dB/km	≤0.25	≤0.8
Geometric characteristics			
Cladding Diameter	μm	125.0±1.0	125.0±2.0
Coating Diameter	μm	245.0±5.0	155.0±5.0
Cladding Non-Circularity	%	≤1.0	≤1.0
Core/Clad Concentricity Error	μm	≤0.8	≤0.8
Coating/Clad Concentricity Deviation	μm	≤6.0	/
Environmental and mechanical characteristics			
Screening Strength	kpsi	100	100
Operating Temperature	℃	-65~+150	-65~+300
Coating Material	/	High-temperature resistant acrylic resin	Polyimide

产品指标(二) Product Specifications

Item	Unit	Index	
Product Model	/	HTG 50/125-20/250	HTG 50/125-20/155
Optical characteristics			
Attenuation @ 850nm	dB/km	≤3.0	≤4.0
Attenuation @ 1300nm	dB/km	≤1.0	≤2.0
Bandwidth @ 850nm	MHz · km	≥150	≥150
Bandwidth @ 1300nm	MHz · km	≥300	≥300
Numerical Aperture	/	0.200±0.015	0.200±0.015
Geometric characteristics			
Core Diameter	μm	50.0±2.5	50.0±3.0
Cladding Diameter	μm	125.0±1.0	125.0±2.0
Coating Diameter	μm	245.0±5.0	155.0±5.0
Cladding Non-Circularity	%	≤1.0	≤1.0
Core/Cladding Concentricity Error	μm	≤1.5	≤1.5
Coating/Cladding Concentricity Deviation	μm	≤6.0	/
Environmental and mechanical characteristics			
Screening Strength	kpsi	100	100
Operating Temperature Range	℃	-65~+150	-65~+300
Coating Material	/	High-temperature resistant acrylic resin	Polyimide

产品指标(三) Product Specifications

Item	Unit	Index			
Product Model	/	HTSI 105/125-22/250-150	HTSI 200/220-22/400-150	HTSI 400/440-22/650-150	HTSI 105/125-22/155-300
Optical characteristics					
Numerical Aperture	/	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02
Geometric characteristics					
Core Diameter	μm	105.0 ± 2.0	200.0 ±5.0	400.0 ± 8.0	105.0 ± 2.0
Cladding Diameter	μm	125.0 ± 1.0	220.0 ±5.0	440.0 ± 8.0	125.0 ± 2.0
Coating Diameter	μm	250.0 ± 10.0	400.0 ± 20.0	650.0 ± 30.0	155.0 ±5.0
Core-Clad Concentricity	μm	≤ 1.0	≤ 3.0	≤ 3.0	≤ 1.0
Core Non-Circularity	%	≤3.0	≤3.0	≤3.0	≤3.0
Cladding Non-Circularity	%	≤2.0	≤2.0	≤2.0	≤2.0
Environmental and mechanical characteristics					
Screening Strength	kpsi	100	100	100	100
Operating Temperature	℃	-65~+150	-65~+150	-65~+150	-65~+300
Material description					
Core Material	/	Pure quartz glass			
Cladding Material	/	Fluorine-doped quartz glass			
Coating Material	/	High-temperature resistant acrylic resin			Polyimide

产品指标(四) Product Specifications

Item	Unit	Index			
Product Model	/	HTSI 200/220-22/250-300	HTSI 400/440-22/480-300	HTSI 105/125-22/175-A	HTSI 200/220-22/280-A
Optical characteristics					
Numerical Aperture	/	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02
Geometric characteristics					
Core Diameter	μm	200.0±5.0	400.0± 8.0	105.0 ± 2.0	200.0 ±5.0
Cladding Diameter	μm	220.0±5.0	440.0±8.0	125.0 ± 1.0	220.0 ±5.0
Coating Diameter	μm	250.0±5.0	480.0± 10.0	175.0 ± 10.0	280.0 ± 20.0
Core-Clad Concentricity	μm	≤3.0	≤3.0	≤ 1.0	≤ 3.0
Core Non-Circularity	%	≤3.0	≤3.0	≤3.0	≤3.0
Cladding Non-Circularity	%	≤2.0	≤2.0	≤2.0	≤2.0
Environmental and mechanical characteristics					
Screening Strength	kpsi	100	100	100	100
Operating Temperature	℃	-65~+300	-65~+300	-269~+400	-269~+400
Material description					
Core Material	/	Pure quartz glass			
Cladding Material	/	Fluorine-doped quartz glass			
Coating Material	/	Polyimide		Aluminum	

产品指标(五) Product Specifications

Item	Unit	Index			
Product Model	/	HTSI 400/440-22/510-A	HTSI 105/125-22/175-G	HTSI 200/220-22/280-G	HTSI 400/440-22/510-G
Optical characteristics					
Numerical Aperture	/	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02
Geometric characteristics					
Core Diameter	μm	400.0 ± 8.0	105.0 ± 2.0	200.0 ±5.0	400.0 ± 8.0
Cladding Diameter	μm	440.0 ± 8.0	125.0 ± 2.0	220.0 ±5.0	440.0 ± 8.0
Coating Diameter	μm	510.0 ± 30.0	175.0 ±10.0	280.0 ±20.0	510.0 ± 30.0
Core-Clad Concentricity	μm	≤ 3.0	≤ 1.0	≤ 3.0	≤ 3.0
Core Non-Circularity	%	≤3.0	≤3.0	≤3.0	≤3.0
Cladding Non-Circularity	%	≤2.0	≤2.0	≤2.0	≤2.0
Environmental and mechanical characteristics					
Screening Strength	kpsi	100	100	100	100
Operating Temperature	℃	-269~+400	-269~+700	-269~+700	-269~+700
Material description					
Core Material	/	Pure quartz glass			
Cladding Material	/	Fluorine-doped quartz glass			
Coating Material	/	Aluminum	Gold		

定制信息 Customization Information

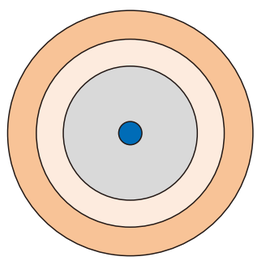
• Other types of high temperature resistant optical fiber products can be provided according to customer requirements

光敏光纤 Photosensitive Fiber

产品描述 Product Description

Fibercloud's photosensitive fiber utilizes an in-tube chemical vapor deposition process. The core is highly doped with germanium and co-doped with boron and germanium. Combined with a well-designed waveguide structure, this fiber exhibits strong photosensitivity. Gratings can be written into the fiber core without the need for hydrogen carriers, reducing grating writing time. This series of fibers is widely used in fiber optic sensing.

光纤结构 Fiber structure



产品特点 Product Features

- Enhanced photosensitivity
- Gratings can be written without the need for hydrogen carriers

产品应用 Product Application

- Fiber Bragg Gratings
- Wavelength Division Multiplexing
- Gain-flattening filtering

产品指标 Product Specifications

Item	Unit	Index		
Model	/	PSF-HNA-125	PSF-HNA-80	PSF-GeB-125
Optical characteristics				
Operating Wavelength	nm	1550	1550	1550
Cutoff Wavelength	nm	1320~1520	1320~1520	1250~1450
Mode Field Diameter	μm	4.2±0.5	4.2±0.5	10.5±1.0
Attenuation	dB/km	≤0.5	≤0.8	/
Numerical Aperture	/	0.3±0.02	0.3±0.02	0.14±0.02
Geometric characteristics				
Cladding Diameter	μm	124.5±1.0	80.0±1.0	124.5±1.0
Core-Cladding Concentricity	μm	≤0.5	≤0.5	≤0.5
Cladding Non-Circularity	%	≤1.0	≤1.0	≤1.0
Coating Diameter	μm	245.0±2.0	165.0±2.0	245.0±2.0
Environmental and mechanical characteristics				
Operating Temperature	℃	-45~+85	-45~+85	-45~+85
Screening Strength	kps	100	100	100

定制信息 Customization Information

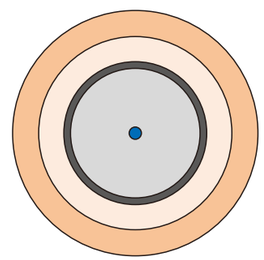
- The operating wavelength, mode field diameter, geometric dimensions, coating material, screening intensity and other indicators can be customized according to customer requirements

碳涂覆光纤 Carbon-Coated Fiber

产品描述Product Description

Fibercloud's carbon-coated fiber is a specialty optical fiber designed and developed for use in complex and harsh environments. A dense carbon coating is deposited on the fiber's cladding, effectively preventing moisture and hydrogen from damaging its mechanical and optical properties, thereby significantly extending its service life and mechanical reliability. This fiber is widely used in submarine cables, ocean exploration, and oil exploration.

光纤结构 Fiber structure



产品特点Product Features

- High mechanical strength
- Excellent high-temperature resistance
- Resistant to hydrogen damage
- Low attenuation

产品应用Product Application

- Submarine cables
- Ocean exploration
- Oil exploration

产品指标Product Specifications

Item	Unit	Index	
Model	/	CC15-125-U25	CC15-80-U16
Optical characteristics			
Operating Wavelength	nm	1550	1550
Cutoff Wavelength	nm	1450±70	1450±70
Attenuation	dB/km	≤0.5	≤0.5
Mode Field Diameter	μm	6.5±0.5	6.5±0.5
Geometric characteristics			
Cladding Diameter	μm	124.5±1.0	80.0±1.0
Core-Cladding Concentricity	μm	≤0.5	≤0.5
Cladding Non-Circularity	%	≤1.0	≤1.0
Coating Diameter	μm	245.0±2.0	165.0±2.0
Environmental and mechanical characteristics			
Operating Temperature	℃	-50~+150	-50~+150
Screening Strength	kps	200	200

定制信息Customization Information

- The operating wavelength, mode field diameter, geometric dimensions, coating material, screening intensity and other indicators can be customized according to customer requirements



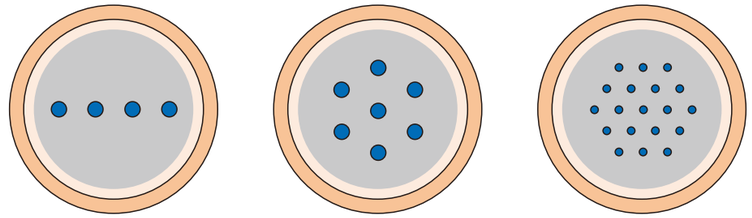
Special customized optical fiber

多芯光纤 Multi-core optical fiber

产品描述Product Description

Fibercloud's multi-core fiber is a new type of optical fiber designed with multiple independent cores within a common cladding region. Based on the core spacing, it can be categorized as either large-core-spacing multi-core fiber or small-core-spacing multi-core fiber. Large-core-spacing multi-core fiber avoids optical wave coupling, which increases the light transmission density per unit area of the transmission line. Small-core-spacing multi-core fiber, due to the close distance between the cores, enables optical wave coupling. Dual-core sensors or optical circuit devices developed using this principle can be used in the field of optical fiber sensing.

光纤结构Fiber structure



产品特点 Product Features

- Multiple physical channels in a single fiber
- Excellent optical fiber geometric consistency
- Low attenuation

产品应用 Product Application

- Ultra-high-capacity optical fiber communication system
- New high-capacity multi-service access network
- Distributed optical fiber sensing
- Medical equipment

产品指标Product Specifications

Item	Unit	Index
Optical characteristics		
Attenuation @ 1310nm	dB/km	⩽ 0.6
Attenuation @ 1550nm	dB/km	⩽ 0.5
Mode Field Diameter @ 1310nm	μm	8.5 ± 0.5
Mode Field Diameter @ 1550nm	μm	9.5 ± 0.5
Geometric characteristics		
Cladding Diameter	μm	124.5 ± 1.0
Coating Diameter	μm	245.0 ± 2.0
Coating Type	/	Double-layer UV-cured acrylic resin
Environmental and mechanical characteristics		
Operating Temperature	℃	−45 ~ +85
Screening Strength	kpsi	100
Short-Term Bend Radius	mm	⩾ 7.5
Long-Term Bend Radius	mm	⩾ 15.0

定制信息 Customization Information

- We can customize multi-core optical fibers with different core numbers and core distances according to customer needs and provide a full set of solutions

保圆光纤 Circularity-Preserving Fiber

产品描述 Product Description

Circularity-preserving fiber is primarily used in key sensitive components in systems such as fiber-optic current transformers (FCTs). It maintains circular polarization and is resistant to environmental disturbances.High-birefringence fiber preforms are used and rotated at high speed during the drawing process. This specialized process produces two eigenmodes of elliptically polarized light. Its inherent birefringence effectively resists stress induced by external conditions (such as humidity, bending, and vibration), thereby effectively maintaining circular polarization properties. Circularity-preserving fiber not only maintains circular polarization but also exhibits exceptional resistance to environmental disturbances, ensuring high operating accuracy despite temperature fluctuations and vibration.

光纤结构 Fiber structure



产品特点Product Features

- Excellent geometric and optical performance
- Minimal phase difference enables long-distance transmission with circular polarization state maintenance
- Insensitive to temperature and stress

产品应用Product Application

- Fiber-optic current transformers based on the Faraday effect
- Other DC/AC current sensing systems
- Switching equipment
- Other polarization sensing systems

产品指标Product Specifications

Item	Unit	Index	
Product Model	/	SHB13-125-A	SHB13-125-B
Structure Type	/	Oval core	Panda shape
Optical characteristics			
Operating Wavelength	nm	1310	1310
Cutoff Wavelength	nm	1100 ~ 1290	1100 ~ 1290
Mode Field Diameter	μm	6.5 ± 1.0	6.5 ± 1.0
Attenuation	dB/km	≤2.0	≤2.0
Helix Pitch	mm	2.0 ~ 5.0	2.0 ~ 5.0
Beat Length	mm	≤ 10.0 Before rotation	≤ 10.0 Before rotation
Geometric characteristics			
Cladding Diameter	μm	125.0 ± 1.0	125.0 ± 1.0
Coating Type	/	Double-layer UV-cured acrylic resin	
Coating Diameter	μm	245.0 ± 5.0	245.0 ± 5.0
Cladding Non-Circularity	%	≤ 2.0	≤ 2.0
Core-Clad Concentricity	μm	≤ 1.0	≤ 1.0
Fiber Twist	turns/m	≤ 1.0	≤ 1.0
Environmental and mechanical characteristics			
Operating Temperature	℃	-55 ~+85	-55 ~+85
Screening Strength	kpsi	100	100

定制信息Customization Information

- Fiber structure types can be customized according to customer requirements.
- Fiber helix pitch can be customized according to customer requirements.
- Low birefringence fiber can be customized according to customer requirements.

旋转多芯光纤 Rotated Multi-Core Fiber

产品描述 Product Description

Rotated multi-core fiber is primarily used in 3D sensing, demonstrating its unique three-dimensional sensing capabilities. This fiber utilizes a three-core structure, produced by rotating a preform rod through spinning. This fiber features a uniform structure, facilitates distributed sensing, and offers low crosstalk. It can be used in 3D shape sensing technologies, such as structural safety monitoring and smart healthcare.

光纤结构 Fiber structure



产品特点Product Features

- Excellent geometric and optical properties
- Excellent photosensitivity
- Minimal core crosstalk

产品应用 Product Application

- Distributed grating
- Structural safety monitoring
- Smart healthcare
- Other polarization sensing systems

产品指标Product Specifications

Item	Unit	Index
Model	/	SMCF 3/15-125
Structure Type	/	Three-core
Optical characteristics		
Operating Wavelength	nm	1550
Cut-off Wavelength	nm	≤1510
Mode Field Diameter	μm	9.5 ± 1.0
Attenuation	dB/km	≤1 0
Helix Pitch	mm	Customizable upon request
Geometric characteristics		
Cladding Diameter	μm	125.0 ± 1.0
Coating Type	/	Double-layer UV-cured acrylic resin
Coating Diameter	μm	245.0 ± 5.0
Environmental and mechanical characteristics		
Operating Temperature	℃	-55 ~ +85
Screening Strength	kpsi	100

定制信息 Customization Information

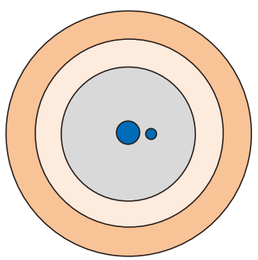
- Fiber core structure can be customized according to customer requirements.
- Fiber helix pitch can be customized according to customer requirements.

3C光纤 3C Fiber

产品描述Product Description

3C (Chirally-Coupled-Core) fiber is produced by drawing from an online rotating preform. Its quartz cladding contains two cores: an axially distributed central core with a large core diameter, typically exceeding 30 μm, used for signal light transmission. The other, off-axis, helically distributed side core, with a core diameter of only a dozen microns, is used to control the mode of the central core, coupling high-order modes into the side cores and inducing high loss (greater than 100 dB/m). This allows the fundamental mode in the central core to be transmitted with extremely low loss (less than 0.1 dB/m) without relying on any mode control techniques, while maintaining a large mode field area.

光纤结构 Fiber structure



产品特点Product Features

- Maintains stable single-mode output with minimal susceptibility to external influences
- Maintains stable polarization characteristics
- Effectively suppresses nonlinear effects during pulse amplification
- Enables high energy and high peak power

产品应用Product Application

- High-power fiber laser
- Ultrafast fiber laser
- High-energy and high-power pulse output
- Nonlinear coupler

产品指标Product Specifications

Item	Unit	Index
Product Model	/	3CGDF 33/3 250/400
Optical characteristics		
Central Core Diameter	μm	33±3.0
Side Core Diameter	μm	16±1.5
Cladding Diameter	μm	250±3.0
Core Side-to-Side Distance	μm	4.0±1.0
Helical Period	mm	8±2.0
Coating Diameter	μm	400±15
Geometric characteristics		
Central Core Numerical Aperture	/	0.065±0.006
Side Core Numerical Aperture	/	0.1±0.01
Cladding Numerical Aperture	/	≥0.46
Central Core Loss @ 1200nm	dB/km	≤100
Cladding Loss @ 1095nm	dB/km	≤80
Environmental and mechanical characteristics		
Operating Temperature	℃	-55 ~ +85
Screening Strength	kpsi	100
Coating Material	/	Low refractive index polymers

定制信息Customization Information

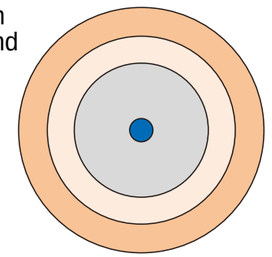
- Fiber core diameter, helical period, and side core offset can be customized according to customer requirements.
- Active 3C fiber can be customized according to customer requirements.

衰减光纤 Attenuating Fiber

产品描述Product Description

Attenuating fiber utilizes a metal-doping process, resulting in uniform attenuation. It can be used in the 1250-1620nm wavelength range and is widely used in attenuator devices.

光纤结构 Fiber structure



产品特点Product Features

- Excellent mechanical strength
- Excellent attenuation uniformity
- Good batch consistency

产品应用Product Application

- Attenuator

产品指标Product Specifications

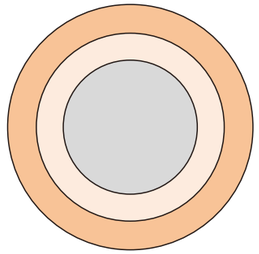
Item	Unit	Index	
Model	/	ATF7/125-13/125	ATF7/125-13/125-L
Optical characteristics			
Operating Wavelength	nm	1250~1620	1250~1620
Attenuation	dB/cm	0.4~15.0	0.005~0.4
Numerical Aperture	/	0.13±0.02	0.13±0.02
Reduction Tolerance	%	±7.5	±7.5
Geometric characteristics			
Core Diameter	μm	7.0±1.0	7.0±1.0
Cladding Diameter	μm	125.0±0.5	125.0±0.5
Core-Cladding Concentricity	μm	≤0.8	≤0.8
Cladding Non-Circularity	%	≤1.0	≤1.0
Coating Diameter	μm	245.0±10.0	245.0±10.0
Environmental and mechanical characteristics			
Screening Strength	kpsi	100	100

无芯光纤 Coreless Fiber

产品描述Product Description

Coreless fiber is drawn from high-purity quartz and coated with a two-layer acrylic resin structure. This fiber has no core, uniform geometric dimensions, and high mechanical strength, making it suitable for applications such as fiber end caps and fiber wrapping pads.

光纤结构 Fiber structure



产品特点Product Features

- Excellent mechanical strength
- Excellent geometric uniformity
- Good batch consistency
- Customizable sizes

产品应用Product Application

- Fiber end caps to prevent laser damage
- Fiber fusion taper
- Fiber wrapping pads

产品指标Product Specifications

Item	Unit	Index			
Product Model	/	S1R-100	S1R-135	S1R-165	S1R-250
Cladding Diameter	μm	60.0±2.0	80.0±2.0	80.0±2.0	125.0±2.0
Coating Diameter	μm	100.0±1.0	135.0±1.0	165.0±1.0	245.0±1.0
Screening Strength	kpsi	100	100	100	100

定制信息 Customization Information

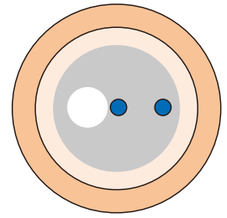
- Coreless fiber products with other geometric dimensions can be provided according to customer requirements

定制光纤 Customized Fiber

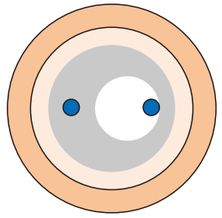
产品描述Product Description

We offer a comprehensive range of specialized fiber manufacturing platforms, including hot and cold glass processing technologies, preform preparation technologies with various processes, a comprehensive range of specialized fiber drawing technologies, fiber testing technologies for various application scenarios, and a diverse range of raw and auxiliary materials with varying performance characteristics, ensuring optimal fulfillment of customer needs for customized fiber.

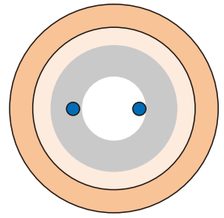
光纤结构Fiber structure



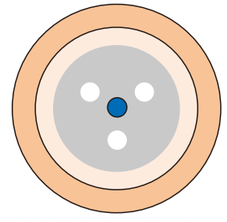
Dual-core Single Hole A



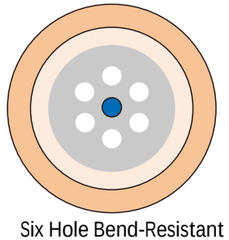
Dual-core Single Hole B



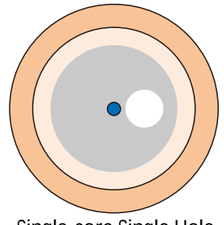
Dual-core Single Hole C



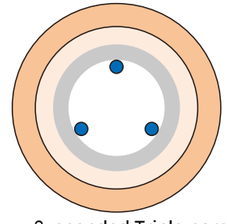
Triple Hole Bend-Resistant



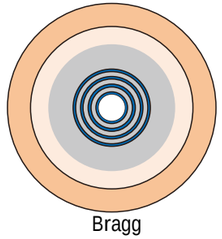
Six Hole Bend-Resistant



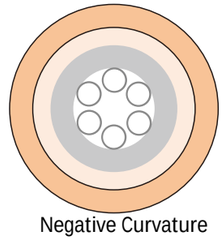
Single-core Single Hole



Suspended Triple-core



Bragg



Negative Curvature

产品特点Product Features

- Flexible Fiber Structures
- A Wide Range of Materials

产品应用Product Application

- Fiber Optic Sensing
- Fiber Optic Measurement
- Medical Devices
- Optoelectronic Devices

定制信息 Customization Information

- We can customize fiber optics with various structures, compositions, geometries, and materials to meet customer requirements, providing a complete solution suite.



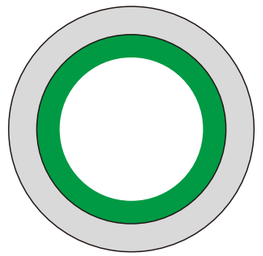
Special quartz tube

掺氟石英管 Fluorine-Doped Silica Tubing

产品描述Product Description

Fluorine-doped quartz tubing is a specialty quartz tubing product designed and developed specifically for laser fiber applications. Produced using an in-tube chemical vapor deposition process, this series of fluorine-doped quartz tubing features high fluorine concentration, low hydroxyl content, and excellent geometric uniformity. This series of products is widely used as a cladding material for laser fiber pumps.

产品结构 Fiber structure



产品特点Product Features

- High fluorine doping concentration
- Good geometric uniformity
- Low hydroxyl content

产品应用Product Application

- Laser fiber cladding material
- Fluorine-doped capillary
- Biomedical

产品指标Product Specifications

Item	Unit	Material properties	
Product Model	/	FDT 27/35-22	FDT 26/35-22
Numerical Aperture (NA)	/	0.22±0.02	0.22±0.02
Fluorine-Doped Tube Diameter	mm	35.5±0.5	35.5±0.5
Fluorine-Doped Layer Diameter	mm	31.0±0.5	31.0±0.5
Fluorine-Doped Tube Inner Diameter	mm	27.5±0.5	26.5±0.5
Fluorine-Doped Layer CSA	mm^2	175±15	195±15
Fluorine-Doped Tube Length	mm	800±50	800±50
Fluorine-Doped Tube Out-of-Circularity	%	≤1.0	≤1.0
Recommended Pure Silicon Core Preform Type	/	CCDR1.05-1.10 matches 25.0mm pure silicon core	CCDR1.15-1.20 matches 23.0mm pure silicon core

定制信息Customization Information

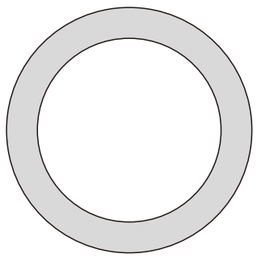
- Numerical aperture, fluorine-doped layer thickness and other indicators can be customized according to customer requirements

石英毛细管 Quartz Capillary Tubing

产品描述 Product Description

Quartz capillary tubing is made from high-purity quartz glass tubes, slowly fed through a high-temperature drawing furnace. Controlled by a high-precision micro-pressure control system and a high-precision pulling device,capillary glass tubes of various geometries can be produced.

产品结构 Fiber structure



产品特点 Product Features

- High Purity
- Excellent Geometric Uniformity
- Good Batch Consistency
- Customizable in Various Sizes

产品应用 Product Application

- Optical Communication Packaging Sleeves
- Glass Tubing for Laser Medical Applications
- Fiber Fusion Tapering
- Laser Medical Applications
- Insulation Structural Components
- Photonic Crystal Fiber

产品指标 Product Specifications

Item	Unit	Material properties	
Model	/	TB 290/1000	TB 950/1500
Inner Diameter	μm	290 ± 50	950+50/−0
Outer Diameter	μm	1000 ± 50	1500 ± 50
Inner Hole Out-of-Roundness	%	< 1.2	< 1.2
Wall Deviation	μm	15	15

定制信息 Customization Information

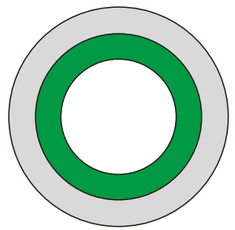
- Other quartz capillary geometries and dimensions are available upon request.

掺氟石英毛细管 Fluorine-Doped Silica Capillaries

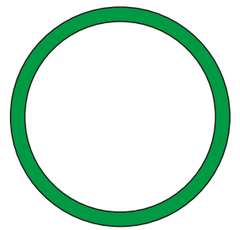
产品描述 Product Description

Fluorine-doped Silica Capillaries are produced using high-precision drawing towers and feature precise geometrical control. Length, wall thickness, and fluorine thickness to inner and outer diameter ratios can all be customized, meeting diverse applications in optics, medicine, and electronics.

产品结构 Fiber structure



Semi-Fluorine-Doped Capillaries



Fully Fluorine-Doped Capillaries

产品特点 Product Features

- Excellent Batch-to-Batch Consistency
- Customizable Length
- Customizable Fluorine Doping Concentration
- High-Precision Geometrical Control
- Customizable Fully Fluorine-Doped Capillaries

产品应用 Product Application

- Lasers
- Medical Probes
- Fiber Combiners
- Analytical Chemistry

半掺氟毛细管产品指标 Semi-doped fluorine capillary product specifications

Product Model	Inner Diameter (μm)	Outer Diameter (μm)	Fluorine-Doped Layer Diameter /Inner Diameter Ratio	NA
FDT 300/900-22	300 ± 20	900 ± 30	> 1.1	0.22 ± 0.02
FDT 200/760-22	200 ± 20	760 ± 30	> 1.1	0.22 ± 0.02
FDT 400/750-22	400 ± 30	750 ± 30	> 1.1	0.22 ± 0.02
FDT 850/1150-22	850 ± 30	1150 ± 30	> 1.1	0.22 ± 0.02
FDT 800/1500-22	800 ± 30	1500 ± 30	> 1.1	0.22 ± 0.02
FDT 500/1500-22	500 ± 30	1500 ± 30	> 1.1	0.22 ± 0.02
FDT 1000/1250-22	1000 ± 30	1250 ± 30	> 1.1	0.22 ± 0.02

全掺氟毛细管产品指标 Fully fluorine-doped capillary product specifications

Product Model	Inner Diameter (μm)	Outer Diameter (μm)	NA
FDTA 1000/1250-22	1000 ± 50	1250 ± 50	0.22 ± 0.02
FDTA 950/1100-22	950 ± 50	1100 ± 50	0.22 ± 0.02
FDTA 800/1500-22	800 ± 100	1500 ± 100	0.22 ± 0.02
FDTA 450/750-22	400+50/−0	750 ± 50	0.22 ± 0.02

定制信息 Customization Information

- Fluorine-doped quartz capillary geometries and dimensions are available upon request.



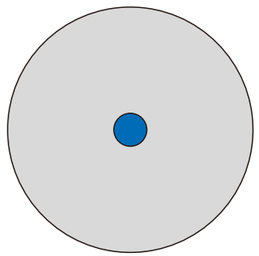
Preform products

无源掺锗预制棒 Passive Germanium-Doped Preform

产品描述Product Description

Passive Germanium-Doped Preform is a fiber preform designed and developed specifically for a range of specialty optical fibers. Produced using an in-tube chemical vapor deposition process, this preform exhibits excellent optical and geometric uniformity, low hydroxyl content, and high numerical aperture. This preform can be custom-designed to meet user requirements for numerical aperture, mode field diameter, cutoff wavelength, and bend sensitivity. It is widely used in fiber optic sensing, fiber lasers, and other fields.

产品结构 Fiber structure



产品特点Product Features

- Excellent geometric uniformity
- Excellent optical uniformity
- Selectable numerical aperture
- Low hydroxyl content

产品应用Product Application

- Sensing fiber
- Laser fiber
- Communication fiber

产品指标Product Specifications

Item	Unit	Index
		Optical properties
Core numerical aperture	/	0.06 ~ 0.28
		Geometric properties
Core diameter	mm	2.0 ~ 10.0
Cladding diameter	mm	20.0 ~ 50.0
Core non-circularity	%	⩽ 2.0
Cladding non-circularity	%	⩽ 0.5

定制信息Customization Information

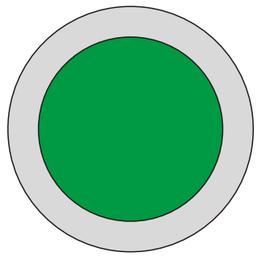
- We can provide optical fiber preform drilling, grinding and other processing services

掺硼应力棒 Boron-Doped Stress Rods

产品描述Product Description

Boron-doped stress rods are preforms designed and developed specifically for polarization-maintaining optical fibers. Produced using an in-tube chemical vapor deposition process, these stress rods offer advantages such as high boron doping concentration, excellent geometric uniformity, and a large stress zone. They are widely used as stress zone materials for stress-type polarization-maintaining optical fibers and active polarization-maintaining optical fibers.

产品结构Fiber structure



产品特点 Product Features

- High Boron Doping Concentration
- Large Stress Zone
- Excellent Geometric Uniformity

产品应用 Product Application

- Polarization-Maintaining Fiber
- Active Fiber
- Boron-Doped Capillary Rods

产品指标 Product Specifications

Item	Unit	Material properties
Molar concentration	mol%	10.0~30.0
Liner material	/	High-purity quartz liner
		Geometric properties
Stress rod length	mm	~500.0
Stress zone diameter	mm	~17.0
Stress zone out-of-roundness	%	≤2.0

定制信息Customization Information

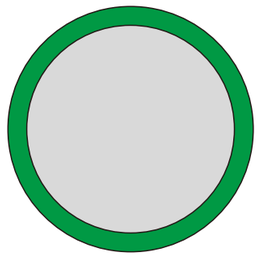
- Boron-doped capillary rod drawing services are available.
- Stress rod cylindrical grinding services are available.

纯硅芯传能预制棒 Pure Silica Core Energy Transfer Preform

产品描述Product Description

Pure silica core energy transfer preforms are made by melting and shrinking high-purity synthetic silica and fluorine-doped quartz tubes. They feature a step-index refractive index profile, offering excellent optical uniformity,geometric uniformity, and high numerical aperture. This series of preforms can be custom designed to meet user requirements for core ratio and numerical aperture. They are widely used in specialty fiber applications, such as energy transmission fibers for industrial lasers and medical fibers.

产品结构 Fiber structure



产品特点Product Features

- Excellent geometric uniformity
- Excellent optical uniformity
- Step-index refractive index profile
- High numerical aperture

产品应用Product Application

- Fiber lasers
- Medical aesthetics
- Signal transmission
- Fiber combiners

产品指标 Product Specifications

Item	Unit	Index			
Product Model	/	SIR 25/26-22	SIR 25/27-22	SIR 23/26-22	SIR 22/26-22
Cladding Material	/	Fluorine-Doped Silica Cladding			
Cladding Diameter	mm	25.72 ± 0.5	27.0 ± 0.5	26.4 ± 0.3	26.4 ± 0.3
Numerical Aperture	/	0.22 ± 0 02	0 22 ± 0 02	0 22 ± 0 02	0 22 ± 0 02
Core Material	/	Pure Silica Core			
Hydroxy Content	/	≤2.0or≥700	≤2.0or≥700	≤2.0or≥700	≤2.0or≥700
Core Diameter	mm	24.5 ± 0.5	24.5 ± 0.5	23.0 ± 0.3	22.0 ± 0.5
CCDR	/	1.05~1.06	1.09~1.11	1.14~1.16	1.19~1.21
Length	mm	750 ± 50	750 ± 50	750 ± 50	750 ± 50
Rod Out-of-Circularity	%	≤1.0	≤1.0	≤1.0	≤1.0
Bending	mm/m	≤1.0	≤1.0	≤1.0	≤1.0

定制信息 Customization Information

- Preforms with special cladding ratios and numerical apertures are available.
- Double-clad energy transfer preforms are available.

定制玻璃异型预制件 Customized Glass Preforms

产品描述Product Description

The company boasts a comprehensive suite of specialty optical fiber manufacturing platforms, offering processing services for a wide range of optical fiber preforms, ensuring maximum satisfaction and providing solutions to customers' technical needs.

The quartz glass preform processing technology platform primarily relies on four processing technologies, as follows:

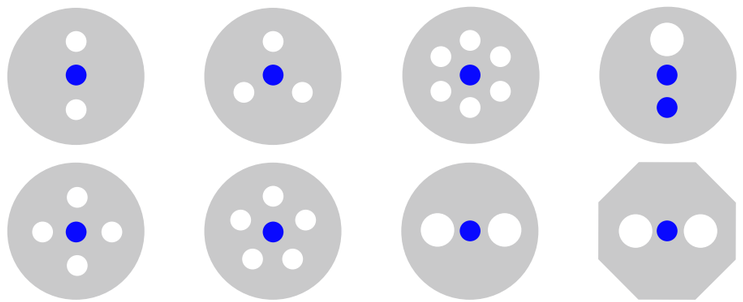
1、深孔钻磨技术 Deep Hole Drilling and Grinding Technology

技术指标Technical Specifications

- Material Shape Requirements: Round, square, rectangular, regular polygonal, etc.
- Drilling Diameter: 5-20 ± 0.05mm
- Drilling Depth:≤ 0.01mm
- Drilling Depth: 1-1000mm (Drilling depth varies depending on hole diameter)
- Minimum Hole Spacing: 1mm

应用领域 Applications

- Multi-core Fiber Preform
- Photonic Crystal Fiber Preform
- Microstructured Fiber Preform
- Polarization-Maintaining Fiber Preform



2、外圆研磨技术 External Cylindrical Grinding Technology

技术指标Technical Specifications

- Material Shape Requirements: Round Bar
- Processing Diameter: 10-120 ± 0.02mm
- Processing Length: 100-1000mm (Processing Length Varies Depending on Diameter)
- Surface Roughness: Ra≤ 0.10μm

应用领域 Applications

- Optical Fiber Preform External Cylindrical Processing
- Optical Fiber Preform External Cylindrical Repair

3、平面打磨技术Surface Polishing Technology

技术指标 Technical Specifications

- Material Shape Requirements: Unlimited
- Processing Diameter: 10-100 mm (0.01 mm)
- Processing Length: 1-1000 mm
- Number of Polygons: 1-16

应用领域 Applications

- Elliptical Core Fiber Preform
- Actively Doped Preform

4、特殊结构预制棒加工技术 Special Structure Preform Processing Technology

技术指标 Technical Specifications

- Material Shape Requirements: Round Tube
- Processing Diameter: 5-50 mm
- Processing Length: 1-1000 mm

应用领域 Applications

- Photonic Crystal Fiber Preform
- Microstructured Fiber Preform

