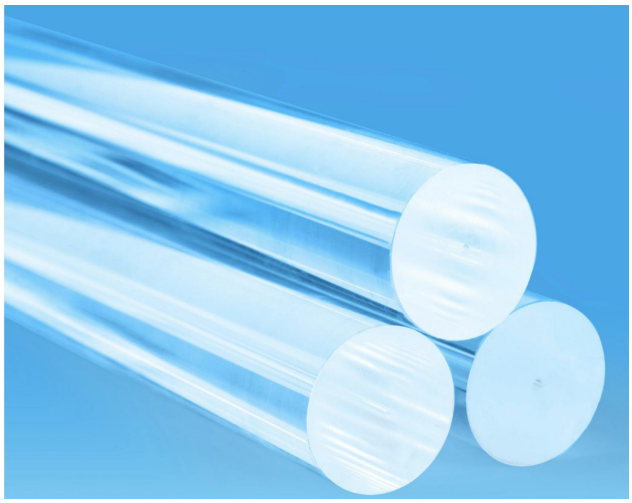
Low Hydroxyl Pure Silicon Core Rod

Product Introduction

The pure silicon core rod with low hydroxyl is made of high purity synthetic quartz material. It is prepared by advanced chemical vapor deposition process and strict dehydration technology to ensure the content of hydroxyl (OH^-) in the core layer is as low as below 0.1ppm,significantly reducing the absorption loss of optical signals in near infrared and visible optical bands. It is specially designed for high power transmission and ultra-low attenuation scenarios.



Product Features

- Ultra-low hydroxyl content: The concentration of hydroxyl is less than 0.1ppm, which greatly reduces the absorption peaks at wavelengths such as 1380nm and 950nm and widens the available spectral range.
- Extreme purity: 99.999% high purity silica substrate with extremely low impurity content, significantly reducing Rayleigh scattering and nonlinear effects.
- High power tolerance: High temperature resistance, high laser damage threshold and support for stable transmission of kilowatt-level laser .
- Precision structure: Uniform refractive index distribution, suitable for single-mode or multi-mode fiber drawing, and strong process compatibility.

Product Applications

- High power fiber laser: Core energy-transmitting components of industrial cutting,welding and medical laser equipment.
- Special communication fiber: ultraviolet to infrared wide - spectrum sensing, and space laser communication system.
- Scientific research and national defense: High intensity laser transmission, high energy physics experiments and optical fiber detection in extreme environments.

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Core Rod Parameters		
Characteristics	Data	Unit
Silicon dioxide content	99.999	%
Hydroxyl content	＜10，＜1，＜0.1	ppm
Core rod diameter	＞25	[mm]
Concentricity	＜0.15	[mm]
Non-circularity of the core rod	≤0.5	[%]
Bow	＜1	[mm/m]