

高掺镱大直径石英玻璃棒

High concentration Yb³⁺ doped large diameter silica glass rod

产品描述 Product description

基于上海光机所创新研发的纳米粉体掺杂、烧结技术，成功制备大尺寸、高光学均匀性、低损耗稀土掺杂石英玻璃棒。可用作超大模场微结构光纤的纤芯、固体激光器增益介质等。在高功率连续激光及高能超短脉冲激光方面具有重要应用价值。

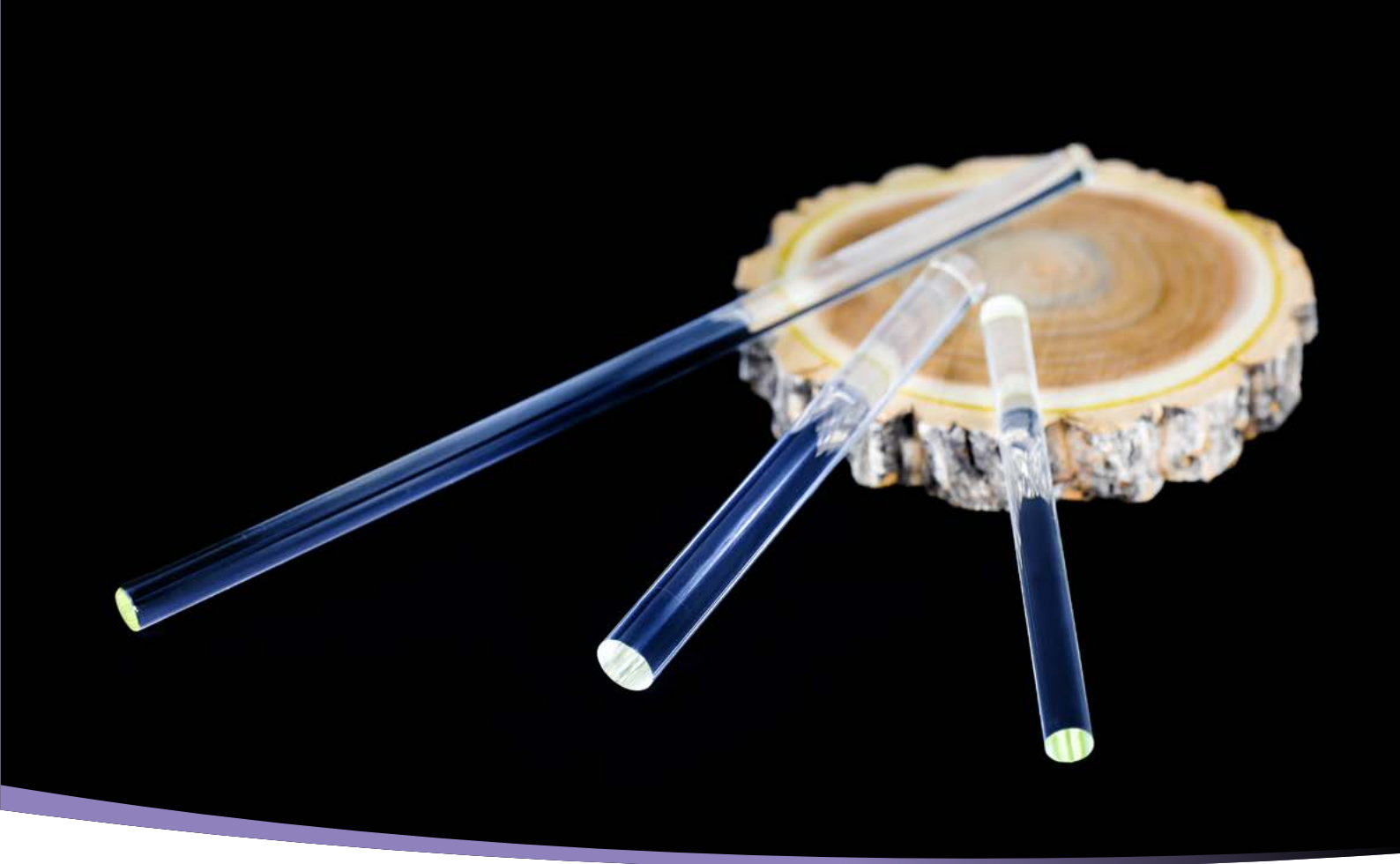
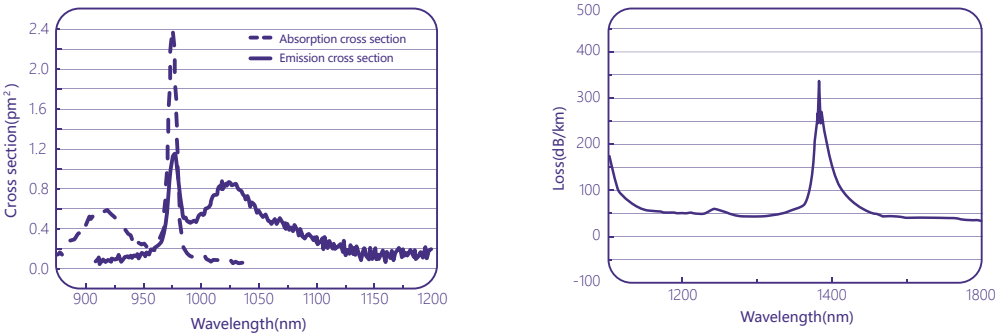
Based on the innovative nano-powder doping and high temperature sintering technology developed by SIOM, large size, high optical uniformity and low loss Ytterbium doped quartz glass rods have been successfully fabricated. It can be used as the core of ultra-large mode area micro-structured fibers and gain medium of solid-state lasers. They have important application value in high power CW laser and high energy ultra-short pulse laser.

产品特性 Product characteristics

- 高浓度掺杂 High doping concentration
- 高光学质量 High optical quality
- 大直径 Large diameter
- 低损耗 Low attenuation

产品应用 Product application

- 固体激光器增益介质 Solid state laser gain medium
- 大模场光纤制备 LMA fiber preform



Specifications	YS-Rod
Physical Optical Properties	
Refractive index fluctuations	≤ 1×10 ⁻⁴
Refractive index control range @1064nm	~ 1.45
Attenuation (dB/m @1200nm)	≤ 0.1
Linear expansion coefficient 10 ⁻⁷ /°C (20-100°C)	~ 6.5
Density (g/cm ³)	2.21
Glass transition temperature T _g (°C)	>1000
Spectroscopy Properties	
Doping concentration (ppm)	5000-20000
Fluorescence lifetime(μs)@1030nm	850
Absorption cross-section (pm ²) @915nm	~0.6
Emission cross section (pm ²) @1030nm	~0.9
Geometry Size	
Diameter(mm)	≥ 5
Length (mm)	≥ 100