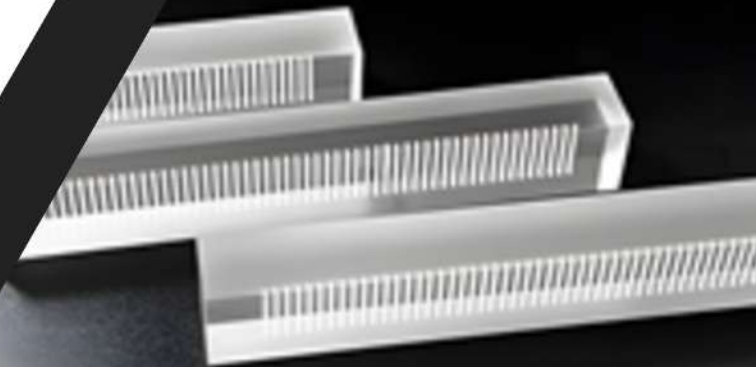




TOQUARTZ
Tech Specifications

TOQUARTZ® Fused Quartz Groove Rod Product Catalog

Integrated Engineering & Agile Production
for Demanded Specifications



TOQUARTZ® FUSED QUARTZ GROOVE ROD

TOQUARTZ® is a specialized manufacturer of high-purity quartz products based in China, serving global B2B clients in laboratory instrumentation, biomedical research, and environmental monitoring. With in-house engineering support and flexible production capabilities, we offer both standard and custom TOQUARTZ® Fused Quartz Rod with fast delivery and consistent quality.



Product Overview



TOQUARTZ® Custom fused quartz groove bars with 99.99% SiO₂ purity, designed for optical fiber support, laser equipment components, and high-temperature applications. These precision-engineered quartz components feature customizable groove dimensions with tolerances down to $\pm 0.05\text{mm}$, delivering exceptional thermal stability, optical transparency, and corrosion resistance.

TOQUARTZ® FUSED QUARTZ GROOVE ROD



Key Features

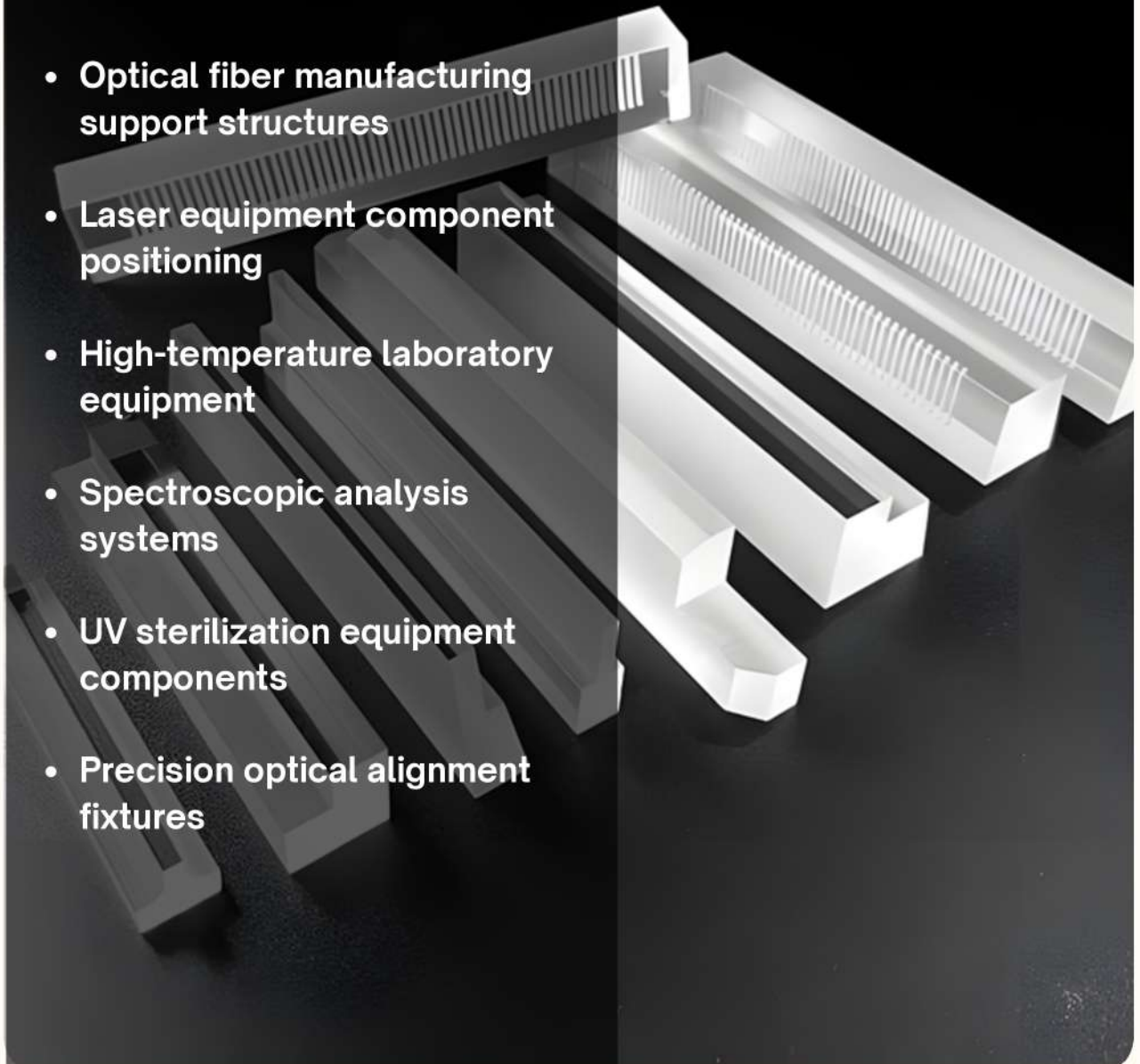
- 99.99% High Purity Material: Superior grade fused quartz with minimal impurities
- Exceptional Thermal Properties: Operating temperature up to 1100°C continuous, 1450°C short-term
- Precision Machined Grooves: Dimensional tolerances as precise as $\pm 0.05\text{mm}$
- Superior Optical Clarity: Transmission $>90\%$ across 200-2500nm spectrum
- Excellent Chemical Resistance: Stable against acids, bases, salts, and fluorinated gases
- Custom Manufacturing: Produced to your exact specifications

TOQUARTZ® FUSED QUARTZ GROOVE ROD



Applications

- Optical fiber manufacturing support structures
- Laser equipment component positioning
- High-temperature laboratory equipment
- Spectroscopic analysis systems
- UV sterilization equipment components
- Precision optical alignment fixtures





TECHNICAL SPECIFICATIONS

I Physical Properties

Material	99.99% Pure Fused Quartz (SiO ₂)
Density	2.2×10 ³ kg/m ³
Hardness	5.5 - 6.5 Mohs' Scale (570 KHN 100)
Tensile Strength	4.8×10 ⁷ Pa (7,000 psi)
Compressive Strength	Greater than 1.1×10 ⁹ Pa (160,000 psi)
Bulk Modulus	3.7×10 ¹⁰ Pa (5.3×10 ⁶ psi)
Rigidity Modulus	3.1×10 ¹⁰ Pa (4.5×10 ⁶ psi)



TECHNICAL SPECIFICATIONS

II Thermal Properties

Softening Point	1730°C
Annealing Point	1215°C
Continuous Working Temperature	1100°C
Short-term Maximum Temperature	1450°C
Thermal Expansion Coefficient	$5.5 \times 10^{-7} / ^\circ\text{C}$ (20-1000°C)
Thermal Conductivity	1.4 W/m·K (20°C)



TECHNICAL SPECIFICATIONS

III Optical Properties

Transmission Range	200-2500 nm
UV Transmission (10mm thickness)	>80% at 200nm, >90% at 220nm
Visible Light Transmission	>93% (400-700nm)
Refractive Index	1.458 (589.3nm at 20°C)
Surface Quality	60/40 scratch-dig standard (higher available)



TECHNICAL SPECIFICATIONS

IV Optical Properties

Thickness Range	0.2-100mm
Length Range	10-300mm (longer available upon request)
Groove Width Range	0.5-10mm
Groove Depth Range	0.5-20mm
Dimensional Tolerance	$\pm 0.05\text{mm}$ standard ($\pm 0.1\text{mm}$ for larger dimensions)
Surface Treatment Options	Polished, ground, fire-polished, custom textured
Processing Services	Cutting, drilling, grinding, polishing, beveling, slotting



CUSTOMIZATION OPTIONS

TOQUARTZ® provides extensive customization capabilities for fused quartz groove rod:

- **Multiple groove patterns**
- **Surface treatments (polished, ground, fire-polished)**
- **Complex shapes and angles**
- **Special material grades for enhanced UV transmission**
- **Custom packaging for sensitive applications**



ABOUT TOQUARTZ®

TOQUARTZ® is a specialized manufacturer of high-quality quartz glass products for industrial, laboratory, and optical applications. Our factory-direct approach eliminates intermediaries, providing cost-effective solutions with responsive technical support. We welcome small batch orders and offer 24-hour shipping for standard items.

Contact Information

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TOQUARTZ® - Precision Quartz Solutions for Industry and Research

For technical specifications, custom requirements, or pricing information, please contact our sales team.