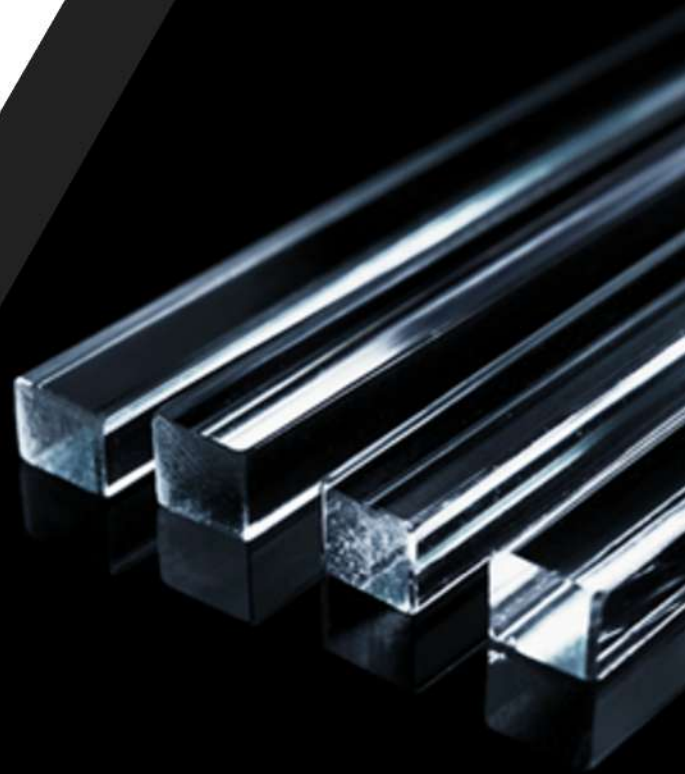




TOQUARTZ  
Tech Specifications

# TOQUARTZ® Square Clear Fused Silica Rod Product Catalog

Integrated Engineering & Agile Production  
**for Demanded Specifications**



# TOQUARTZ® SQUARE CLEAR FUSED SILICA 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® High-precision Square Clear Fused Silica Rods** manufactured with 99-99.98% purity for optical instruments, UV/IR light sources, and high-temperature applications. Our square quartz rods feature excellent thermal stability, superior corrosion resistance, and exceptional optical transmission properties.



# TOQUARTZ® SQUARE CLEAR FUSED SILICA ROD



## Key Features

- High Purity: 99-99.98% SiO<sub>2</sub> content
- Superior Optical Properties: Transmission range from 120nm to 4500nm with no absorption peaks
- Exceptional Thermal Stability: Long-term use at 1100°C, short-term up to 1450°C
- High Chemical Resistance: Resistant to acids, bases, molten salts, and fluorinated gases
- Precision Dimensional Control: Standard tolerance of  $\pm 0.1\text{mm}$
- Customization Available: Custom dimensions, surface treatments, and edge profiles

# TOQUARTZ® SQUARE CLEAR FUSED SILICA ROD



## Applications

- Optical instruments for beam shaping and collimation
- UV/IR light source components and encapsulation
- High-temperature structural components in industrial furnaces
- Laboratory equipment and experimental setups
- Raw material for custom quartz component fabrication



# TECHNICAL SPECIFICATIONS

## I Physical Properties

Parameter	Value / Range	Notes
Density	2.20 g/cm <sup>3</sup>	ISO 1183
Fracture Modulus	≥ 350 MPa	ASTM C1161
Thermal Conductivity	120–160 W/m·K	At 20°C
Thermal Expansion Coefficient	$5.5 \times 10^{-7}$ /°C	20–1000°C
Softening Point	~1730°C	ISO 7884
Working Temperature (Continuous)	≤1100°C	Long-term
Working Temperature (Short-term)	≤1450°C	≤1 hour
Surface Finish	Polished / Ground / Chamfered	Customizable
Dimensional Tolerance	±0.1 mm (standard)	±0.05 mm on request



# TECHNICAL SPECIFICATIONS

## II Chemical Properties

Parameter	Value / Range	Notes
SiO <sub>2</sub> Purity	99.00% – 99.98%	Synthetic fused silica
Acid Resistance	Excellent	HF excluded
Alkali Resistance	Excellent	NaOH, KOH
Fluoride Gas Resistance	Stable	Up to 1000°C
Moisture Absorption	None	Hydrophobic surface





# TECHNICAL SPECIFICATIONS

## III Optical Properties

Parameter	Value / Range	Notes
Transmission Range	120 nm – 4500 nm	UV to IR
UV Transmission (at 254 nm)	$\geq 85\%$	10 mm thickness
Refractive Index (at 589 nm)	1.4585	ISO 489
Absorption Peaks	None	Smooth spectrum
Birefringence	None	Isotropic material



# SIZE CHART

Model	Side 1 (mm)	Side 2 (mm)	Length (mm)	Purity
AT-QTZ-G018	3	3	50-1400	99%-99.98%
AT-QTZ-G019	3	5	50-1400	99%-99.98%
AT-QTZ-G020	6	6	50-1400	99%-99.98%
AT-QTZ-G021	6	4	50-1400	99%-99.98%
AT-QTZ-G022	7	3	50-1400	99%-99.98%
AT-QTZ-G023	7	7	50-1400	99%-99.98%
AT-QTZ-G024	8	6	50-1400	99%-99.98%
AT-QTZ-G025	8.7	6.3	50-1400	99%-99.98%
AT-QTZ-G026	9.5	9.5	50-1400	99%-99.98%
AT-QTZ-G027	10	10	50-1400	99%-99.98%
AT-QTZ-G028	11	8	50-1400	99%-99.98%





# SIZE CHART

Model	Side 1 (mm)	Side 2 (mm)	Length (mm)	Purity
AT-QTZ-G029	13	10	50-1400	99%-99.98%
AT-QTZ-G030	15	15	50-1400	99%-99.98%
AT-QTZ-G031	16.5	16.5	50-1400	99%-99.98%
AT-QTZ-G032	23	16	50-1400	99%-99.98%
AT-QTZ-G033	25	25	50-1400	99%-99.98%
AT-QTZ-G034	32	27	50-1400	99%-99.98%
AT-QTZ-G035	36	30	50-1400	99%-99.98%
AT-QTZ-G036	40	30	50-1400	99%-99.98%



## CUSTOMIZATION OPTIONS

### **TOQUARTZ® provides extensive customization capabilities for Square Clear Fused Silica Rods:**

- **Custom Dimensions:** Side lengths from 3mm to 40mm
- **Non-square Cross-sections:** Rectangular profiles available
- **Surface Treatments:** Fire-polished, precision ground, acid-etched
- **Edge Treatments:** Chamfered, rounded, or square edges
- **Special Purity Grades:** Available upon request



# 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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Website: [www.toquartz.com](http://www.toquartz.com)

TOQUARTZ® - Precision Quartz Solutions for Industry and Research

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