



TOQUARTZ
Tech Specifications

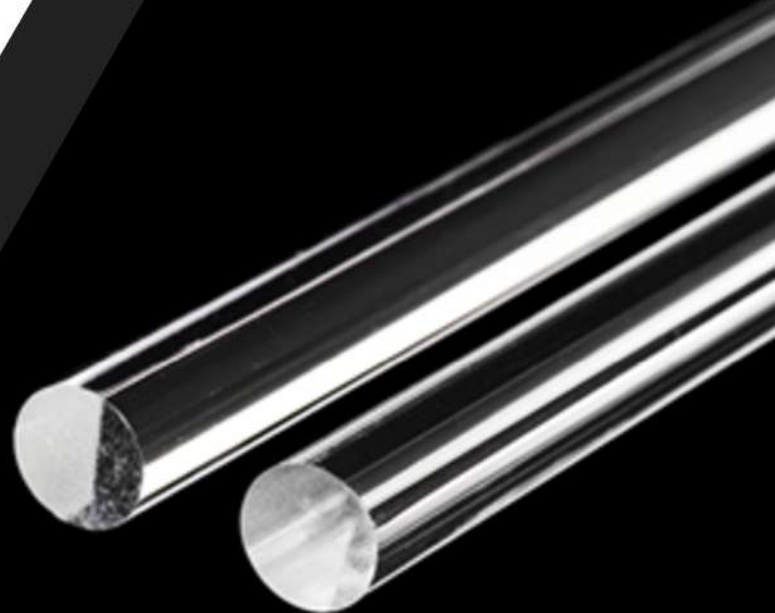
TOQUARTZ®

Clear Fused Quartz

Solid Cylinder Rod

Product Catalog

Integrated Engineering & Agile Production
for Demanded Specifications




TOQUARTZ® CLEAR FUSED QUARTZ SOLID CYLINDER 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® Clear Fused Quartz Rod with fast delivery and consistent quality.



Product Overview



TOQUARTZ® cylindrical transparent fused quartz rods are high-purity silicon dioxide (SiO_2) products manufactured for applications requiring exceptional thermal stability, superior optical properties, and chemical resistance. With purity levels up to 99.98%+, these precision-engineered rods deliver consistent performance in demanding laboratory, optical, and industrial environments.

TOQUARTZ® CLEAR FUSED QUARTZ SOLID CYLINDER ROD



TOQUARTZ

Key Features & Benefits

- **High Temperature Resistance:** Softening point of approximately 1730°C, allowing sustained use at 1100°C and short-term operation up to 1450°C
- **Superior Light Transmission:** Excellent transmission across a wide spectral range from 120nm to 4500nm without absorption peaks
- **Chemical Resistance:** Exceptional resistance to acids, bases, and chemical reagents
- **Dimensional Precision:** Manufactured to tight tolerances with diameter precision up to $\pm 0.1\text{mm}$
- **Electrical Insulation:** Excellent electrical insulation properties even at high temperatures (specific resistance: $7 \times 10^7 \Omega \cdot \text{cm}$)
- **Low Thermal Expansion:** Thermal expansion coefficient of $5.5 \times 10^{-7}/^\circ\text{C}$ for dimensional stability across temperature variations

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Applications

- **Laboratory Equipment:** High-temperature furnaces, reaction vessels, analytical instruments
- **UV Light Systems:** Water treatment, medical sterilization, UV curing applications
- **Optical Instruments:** Spectrometers, laser systems, analytical instruments
- **Industrial Heating:** Infrared heating elements, thermal processing equipment
- **Chemical Processing:** Catalyst supports, reaction vessels, flow monitoring





TECHNICAL SPECIFICATIONS

Physical & Thermal Properties

Property	Value	Unit
Density	2.2	g/cm ³
Flexture Strength	48	MPa
Elastic Modulus	72	GPa
Poisson's Ratio	0.14-0.17	-
Compressive Strength	1100	MPa
Bending Strength	67	MPa
Moh's Hardness	5.5-6.5	-



TECHNICAL SPECIFICATIONS

Physical & Thermal Properties

Property	Value	Unit
Maximum Working Temperature (long-term)	1100	°C
Maximum Working Temperature (short-term)	1350	°C
Thermal Conductivity	1.4	W/m·K
Thermal Expansion Coefficient	5.5×10^{-7}	/°C
Specific Resistance	7×10^7	$\Omega \cdot \text{cm}$



SIZE CHART

Model	Diameter (mm)	Length (mm)	Purity
AT-QTZ-G001	1.8	30	99%-99.98%
AT-QTZ-G002	2	50	99%-99.98%
AT-QTZ-G003	2.5	200	99%-99.98%
AT-QTZ-G004	3	300	99%-99.98%
AT-QTZ-G005	4.5	150	99%-99.98%
AT-QTZ-G006	5	600	99%-99.98%
AT-QTZ-G007	6	700	99%-99.98%
AT-QTZ-G008	7	400	99%-99.98%



SIZE CHART

Model	Diameter (mm)	Length (mm)	Purity
AT-QTZ-G009	8	635	99%-99.98%
AT-QTZ-G010	9	720	99%-99.98%
AT-QTZ-G011	10	55	99%-99.98%
AT-QTZ-G012	20	102	99%-99.98%
AT-QTZ-G013	30	50-1400	99%-99.98%
AT-QTZ-G014	40	50-1400	99%-99.98%
AT-QTZ-G015	50	50-1400	99%-99.98%
AT-QTZ-G016	60	50-1400	99%-99.98%
AT-QTZ-G017	1.8-350	20-2000	99%-99.98%



CUSTOMIZATION OPTIONS

TOQUARTZ® provides extensive customization capabilities for cylindrical transparent fused quartz rods:

- **Precision Dimensions:** Custom diameters from 1.8mm to 350mm with lengths up to 2000mm
- **Surface Finishing:** Fire-polished, mechanically polished, or ground finishes
- **Material Purity Selection:** Purity levels from 99% to 99.98%
- **End Processing:** Flat, beveled, rounded, or specially shaped ends



USAGE GUIDELINES

Handling & Storage

- Handle with clean gloves to prevent contamination
- Store in clean, dry conditions with protective packaging
- Avoid sudden mechanical shocks or impacts

Temperature Management

1. Implement gradual heating/cooling rates ($\leq 5^{\circ}\text{C}/\text{min}$)
2. Ensure appropriate clearance for thermal expansion
3. Do not exceed maximum operating temperatures

Chemical Compatibility

- Avoid prolonged exposure to hydrofluoric acid and hot concentrated phosphoric acid
- At high temperatures, prevent contact with alkali metals and alkaline earth oxides



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.