



TOQUARTZ®
Tech Specifications

Flanged Quartz Glass Tubes Product Catalog

Integrated Engineering & Agile Production
for Demanded Specifications



TOQUARTZ® FLANGED QUARTZ GLASS TUBES

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® Flanged Quartz Glass Tubes with fast delivery and consistent quality.



Product Overview

TOQUARTZ® flanged quartz glass tubes are high-purity fused quartz components featuring precision-formed flanges for secure connections in laboratory and industrial applications.

Manufactured from 99.99% SiO₂, these tubes provide exceptional thermal stability, chemical resistance, and optical clarity. Our flanged tubes are ideal for applications including CVD reactors, high-temperature furnaces, laboratory equipment, and chemical processing systems.

TOQUARTZ® FLANGED QUARTZ GLASS TUBES



Key Features

- **Exceptional Heat Resistance:** Continuous operation up to 1200°C, short-term exposure to 1450°C
- **Superior Chemical Resistance:** Inert to most chemicals except hydrofluoric acid
- **Excellent Thermal Stability:** Extremely low thermal expansion coefficient ($5.5 \times 10^{-7} / ^\circ\text{C}$)
- **Superior Optical Transparency:** >93% visible light transmission, >80% UV transmission
- **Excellent Electrical Insulation:** 10,000× greater resistance than ordinary glass
- **Precision Flange Design:** Engineered for optimal sealing and secure connections

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Applications

- Laboratory Equipment: Reaction vessels, sample processing, analytical instruments
- CVD & Semiconductor Processing: Reaction chambers, gas delivery systems
- High-Temperature Furnaces: Sample containment, controlled atmosphere processing
- Chemical Processing: Corrosive media handling, high-purity production
- Optical & UV Systems: Light transmission, controlled environment optics



TECHNICAL SPECIFICATIONS

Physical Properties

- Material: High-purity fused quartz ($\geq 99.99\%$ SiO₂)
- Density: 2.2 g/cm³
- Tensile Strength: ≥ 50 MPa
- Flexural Strength: Up to 350 MPa
- Thermal Expansion Coefficient: 5.5×10^{-7} /°C
- Thermal Conductivity: 1.3-1.4 W/(m·K)

Thermal Properties

- Maximum Operating Temperature (Continuous): 1200°C
- Maximum Operating Temperature (Short-term): 1450°C
- Softening Point: 1730°C
- Thermal Shock Resistance: Excellent

Optical Properties

- Visible Light Transmittance: $\geq 93\%$
- UV Transmittance (254 nm): $\geq 80\%$
- Refractive Index (589.3 nm): 1.4585

Electrical Properties

- Volume Resistivity (20°C): $\geq 10^{18}$ Ω·cm
- Dielectric Strength: 25-40 kV/mm



CUSTOM DIMENSIONS

Common Customization Options:

- Tube outer diameter: 5mm - 300mm
- Tube inner diameter: 3mm - 295mm
- Wall thickness: 1mm - 5mm
- Flange outer diameter: 1.5x - 3x tube diameter
- Flange thickness: 2mm - 10mm
- Total length: 50mm - 2000mm
- Surface finish: Fire-polished, ground, or custom



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.