



TOQUARTZ  
Tech Specifications

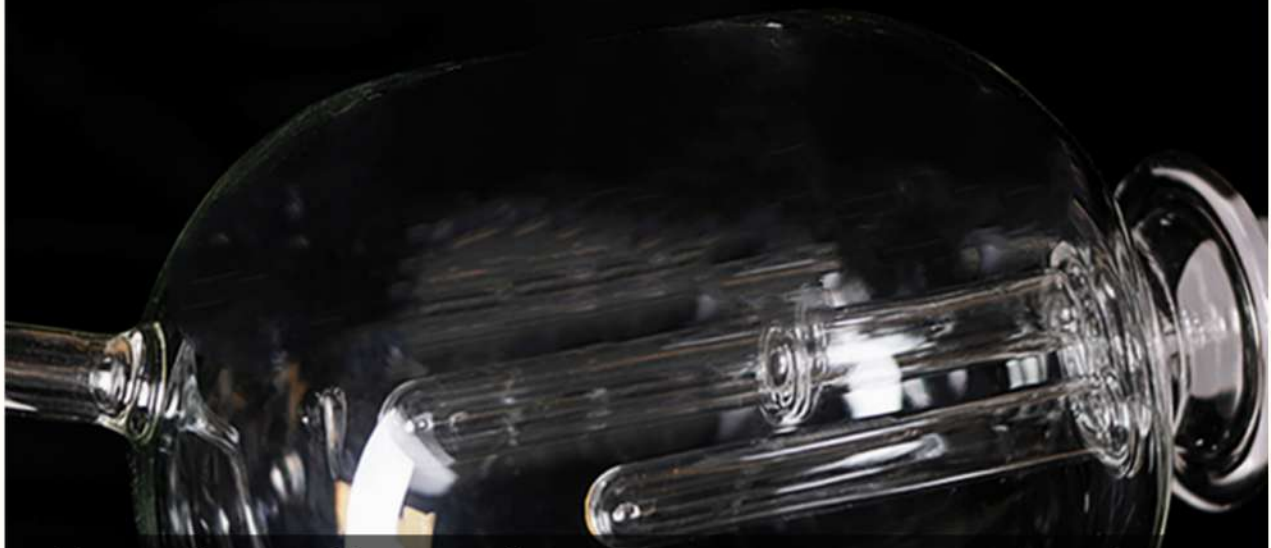
# TOQUARTZ® Quartz Source Bottle Product Catalog

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



# TOQUARTZ® QUARTZ SOURCE BOTTLES

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® Quartz Source Bottles with fast delivery and consistent quality.



## Product Overview

TOQUARTZ® offers high-purity quartz precursor bottles designed specifically for CVD, ALD, and MOCVD applications. Our quartz source bottles and bubblers provide excellent thermal stability, superior chemical resistance, and precise dimensional control for optimal precursor delivery in advanced material processing systems.

# TOQUARTZ® QUARTZ SOURCE BOTTLES



## Key Features

- **High Temperature Resistance:** Withstands operating temperatures up to 1200°C
- **Superior Chemical Resistance:** Resistant to acids, alkalis, and reactive gases
- **Precision Engineering:** Dimensional tolerance of  $\pm 0.1\text{mm}$  for critical components
- **Optical Clarity:** High transparency for easy visual monitoring
- **Customizable Design:** Available in standard sizes or custom configurations



# TOQUARTZ® QUARTZ SOURCE BOTTLES



## Applications

- Semiconductor Manufacturing: Precursor delivery in CVD and epitaxial growth processes
- Materials Research: Experimental work in ALD, CVD, and related deposition techniques
- Advanced Materials Production: Manufacturing of OLED components, photovoltaic cells, and specialty coatings
- Specialty Chemical Processing: Controlled delivery of reactive precursors



# TECHNICAL SPECIFICATIONS

Property Category	Parameter	Value / Description
Physical Properties	Density	2.2 g/cm <sup>3</sup>
	Maximum Working Temperature	1200°C
	Thermal Shock Resistance	Excellent (ΔT = 900°C)
	Thermal Expansion Coefficient	5.5 × 10 <sup>-7</sup> /°C (20–800°C)
	Thermal Conductivity	1.4 W/m·K (at 20°C)
Chemical Properties	SiO <sub>2</sub> Content	≥99.99%
	Total Trace Elements	<10 ppm
	Acid Resistance	Excellent (except HF)
	Alkali Resistance	Good (below 600°C)
Optical Properties	Refractive Index	1.458 (at 589.3 nm)
	UV Transmission	>80% (200–2000 nm range)
	IR Transmission	Good up to 3.5 μm



## CUSTOMIZATION OPTIONS

**TOQUARTZ offers comprehensive customization services for quartz source bottles:**

- Custom capacities from 500ml to 5,000ml
- Specialized inlet tube designs for optimized bubbling
- Custom fittings compatible with your existing system
- Multi-chamber configurations for complex processes
- Modified wall thickness for specific thermal profiles
- Integration with temperature control systems



# USAGE GUIDELINES

## Handling & Installation:

- Always wear clean, powder-free gloves when handling
- Inspect all connections for proper fit before installing
- Apply even pressure when tightening fittings
- Allow adequate clearance for thermal expansion

## Operation & Maintenance:

- Implement gradual heating and cooling cycles ( $<5^{\circ}\text{C}/\text{min}$ )
- Use only approved cleaning solutions
- Regularly inspect for devitrification
- Store in clean, dry environment when not in use





# 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.*