



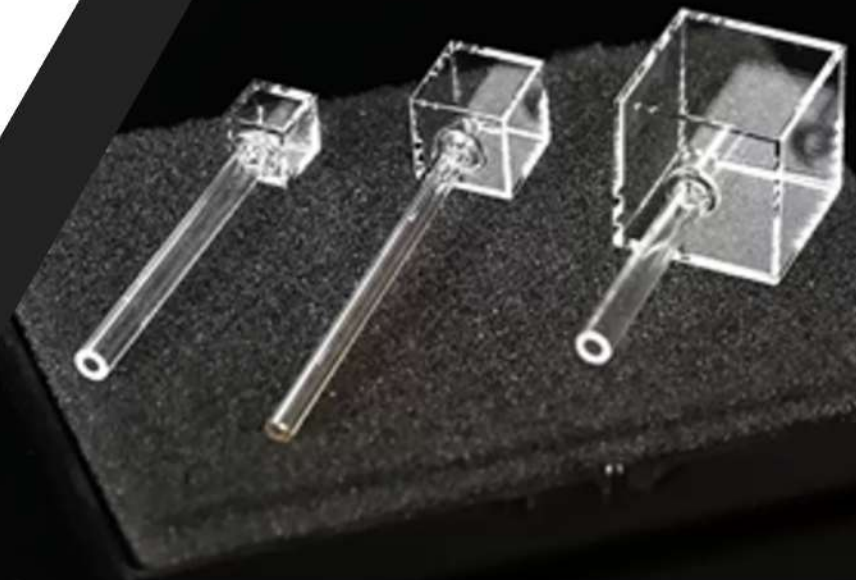
TOQUARTZ

Product Catalog

TOQUARTZ®

Quartz Atomic Gas Cell Cuvette

Integrated Engineering & Agile Production
for Demanded Specifications





TOQUARTZ® QUARTZ ATOMIC GAS CELL CUVETTE

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 Atomic Gas Cell Cuvette with fast delivery and consistent quality.

Product Overview

TOQUARTZ® Quartz Atomic Gas Cell Cuvettes with high-purity optical quartz $\geq 99.98\%$ (max. up to $99.995\% \text{SiO}_2$) is engineered for high-sensitivity fluorescence and absorption spectroscopy involving gaseous samples. It features a sealed or semi-sealed gas chamber with extended inlet/outlet tubes, allowing controlled gas flow or static gas retention for atomic or molecular analysis. Ideal for custom spectroscopy setups, photochemical reactions, and gas-phase fluorescence detection.



TOQUARTZ® QUARTZ ATOMIC GAS CELL CUVETTE



Key Features

- UV to IR optical transmission range
- Ultra-low background fluorescence quartz
- Customizable path length and geometry
- Micro-volume chamber for trace analysis
- Compatible with standard gas fittings
- Surface flatness $< \lambda/10$ for LIF
- Corrosion-resistant to VOCs and acids
- EO sterilizable for medical applications
- Leak-tested to $< 10^{-9}$ atm·cc/sec
- Optical clarity $> 90\%$ at 200nm
- Biocompatible fused quartz construction



TOQUARTZ® QUARTZ ATOMIC GAS CELL CUVETTE



Applications

- Gas Absorption Spectroscopy
- Atomic Absorption Analysis
- Fluorescence Detection Systems
- Photochemical Reaction Studies
- Environmental Gas Monitoring
- Research Laboratory Gas Analysis



TECHNICAL SPECIFICATIONS

Material Properties:

- Material: High-purity fused quartz (99.995% SiO₂)
- Density: 2.2 g/cm³
- Thermal Expansion: 5.5×10^{-7} /°C (20-320°C)
- Maximum Operating Temperature: 1100°C (continuous)
- Thermal Conductivity: 1.4 W/m·K at 20°C

Optical Performance:

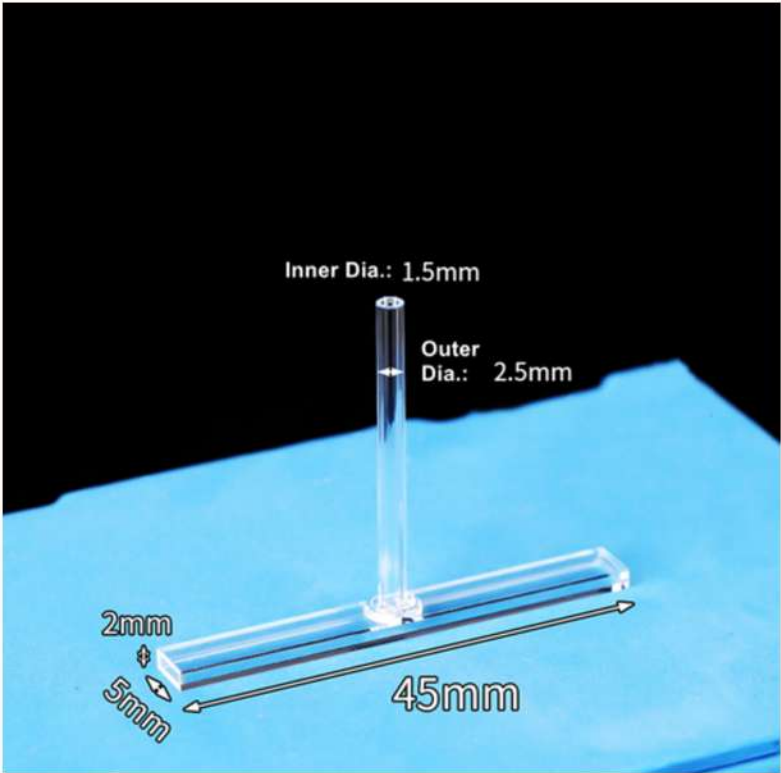
- Transmission Range: 120-4500 nm
- UV Transmission (10mm path): >80% at 170nm, >90% at 200nm
- Refractive Index: 1.458 at 546.1 nm (20°C)
- Surface Quality: 80-50 scratch-dig per MIL-PRF-13830B
- Flatness: $<\lambda/10$ at 632.8 nm

Chemical Properties:

- Chemical Composition: $\geq 99.995\%$ SiO₂
- Impurity Content: Al <20 ppm, Ca <1 ppm, Fe <1 ppm, K <1 ppm, Li <1 ppm, Na <1 ppm
- Chemical Resistance: Excellent resistance to acids, alkalis, and halogens (except HF)
- Gas Permeability: Helium: $<10^{-11}$ cm²/s at 20°C



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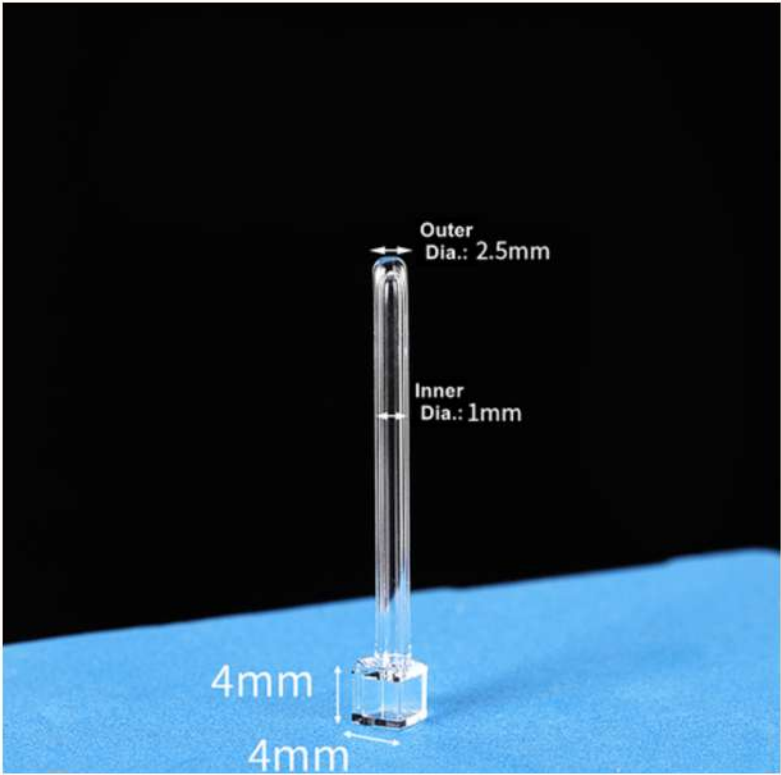


Quartz Atomic Gas Cell Cuvette

Model	Description	Length	Width	Height	Outer Dia.	Inner Dia.
AT-BSM-6031	Quartz Atomic Gas Cell Cuvette	45mm	5mm	2mm	2.5mm	1.5mm



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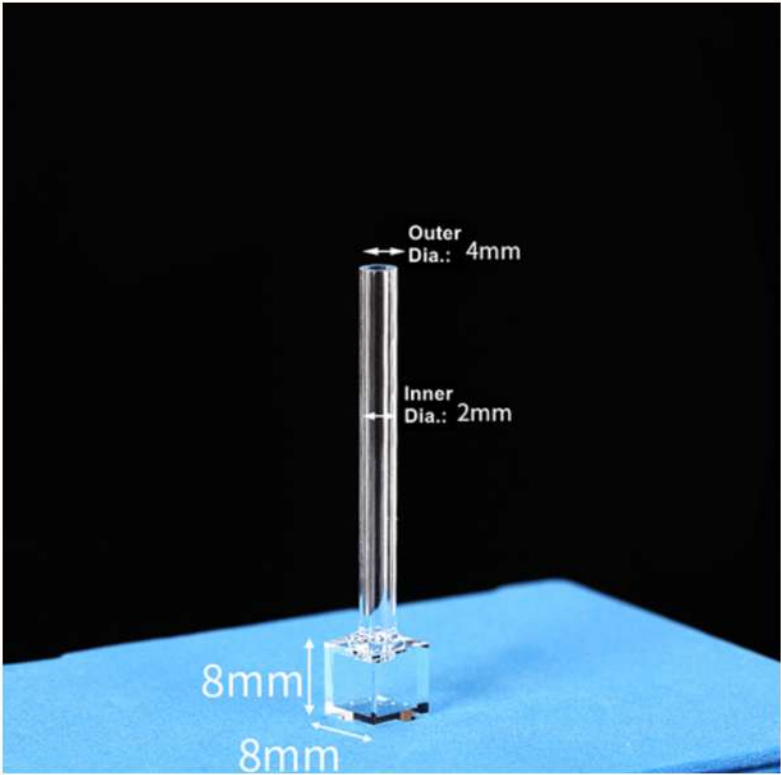


Quartz gas cell cuvette

Model	Description	Length	Width	Height	Outer Dia.	Inner Dia.
AT-BSM-6031-1	Quartz gas cell cuvette	4mm	4mm	4mm	2.5mm	1mm



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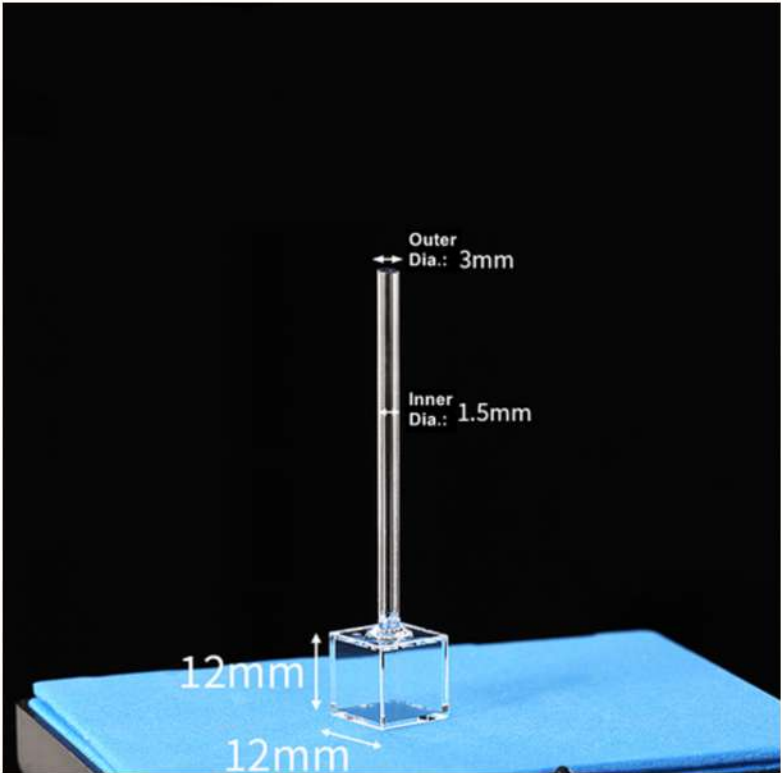


Quartz fluorescence cuvette with gas chamber

Model	Description	Length	Width	Height	Outer Dia.	Inner Dia.
AT-BSM-6031-2	Quartz fluorescence cuvette with gas chamber	8mm	8mm	8mm	4mm	2mm



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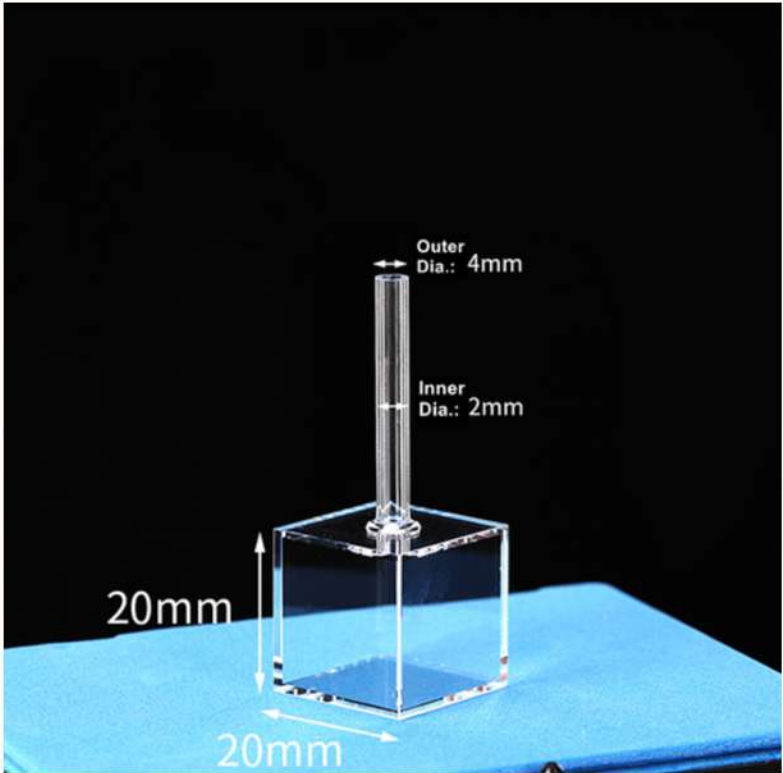


Quartz spectroscopy gas cell

Model	Description	Length	Width	Height	Outer Dia.	Inner Dia.
AT-BSM-6031-3	Quartz spectroscopy gas cell	12mm	12mm	12mm	3mm	1.5mm



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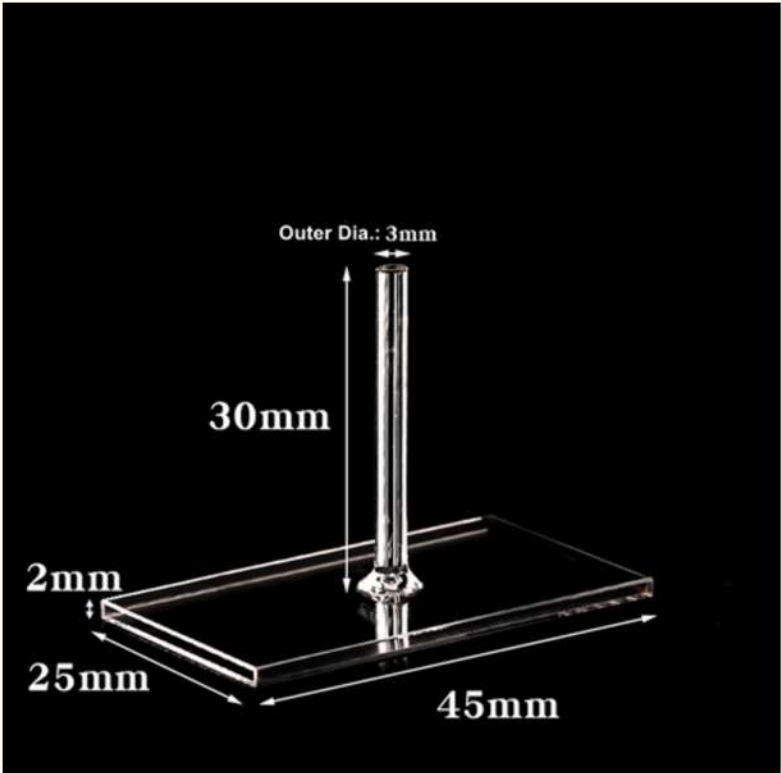


Quartz cuvette for atomic absorption

Model	Description	Length	Width	Height	Outer Dia.	Inner Dia.
AT-BSM-6031-4	Quartz cuvette for atomic absorption	20mm	20mm	20mm	4mm	2mm



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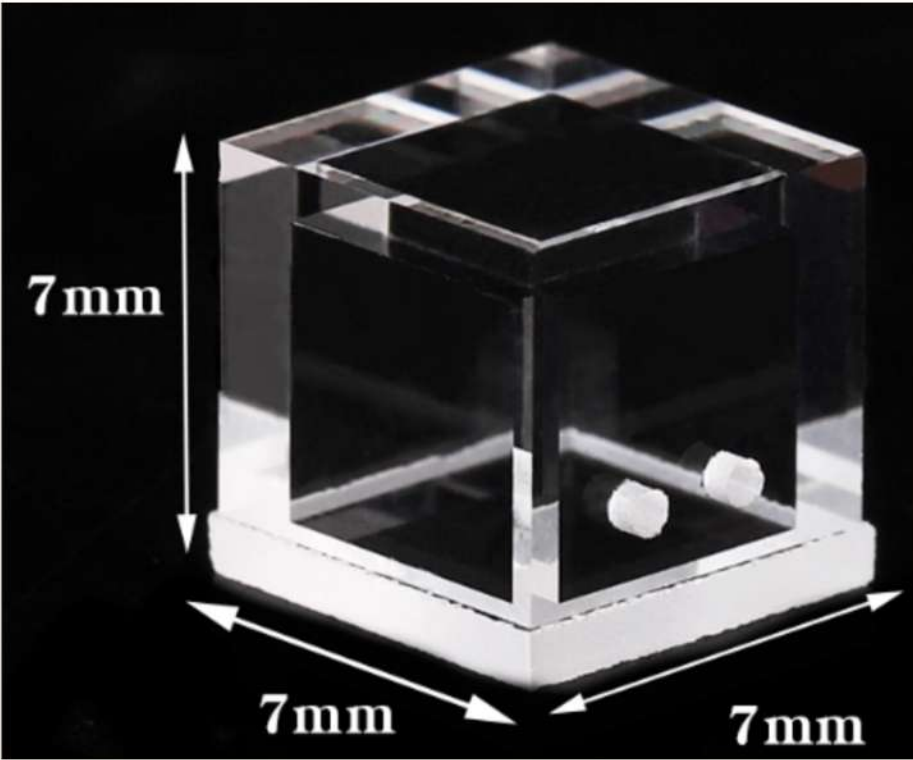


Quartz optical gas cell

Model	Description	Length	Width	Height1	Outer Dia.	Height2
AT-BSM-6031-5	Quartz optical gas cell	45mm	25mm	2mm	3mm	30mm



SIZE CHART



Quartz gas cuvette with dual bore

Model	Description	Length	Width	Height	Outer Dia.	Inner Dia.
AT-BSM-6031-6	Quartz gas cuvette with dual bore	7mm	7mm	7mm	/	/



CUSTOM ENGINEERING SERVICES

Customization Services Our engineering team provides comprehensive customization options to meet your specific requirements:

- Variable path lengths
- Specialized inlet/outlet configurations
- Multi-port designs for complex gas flows
- Integration with standard laboratory fittings
- Temperature-controlled designs
- Anti-reflection coatings for specific wavelengths



QUALITY ASSURANCE

Each TOQUARTZ Quartz Cuvette undergoes rigorous quality control testing:

- **Dimensional Verification:** Precision measurement of all critical dimensions
- **Optical Transmission Testing:** Verification of spectral transmission properties
- **Surface Quality Inspection:** Microscopic examination of polished surfaces
- **Paired Performance Testing:** Validation of optical consistency

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.