



TOQUARTZ
Tech Specifications

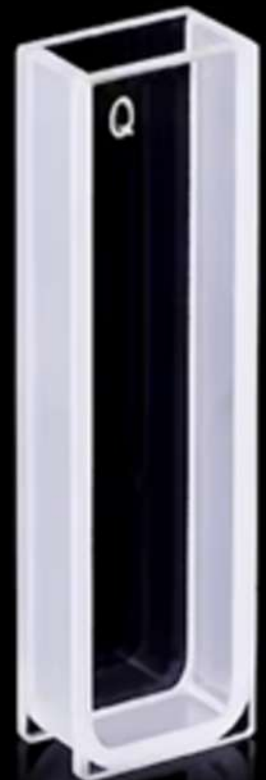
TOQUARTZ®

Standard Quartz

UV Cuvette

Product Catalog

Integrated Engineering & Agile Production
for Demanded Specifications



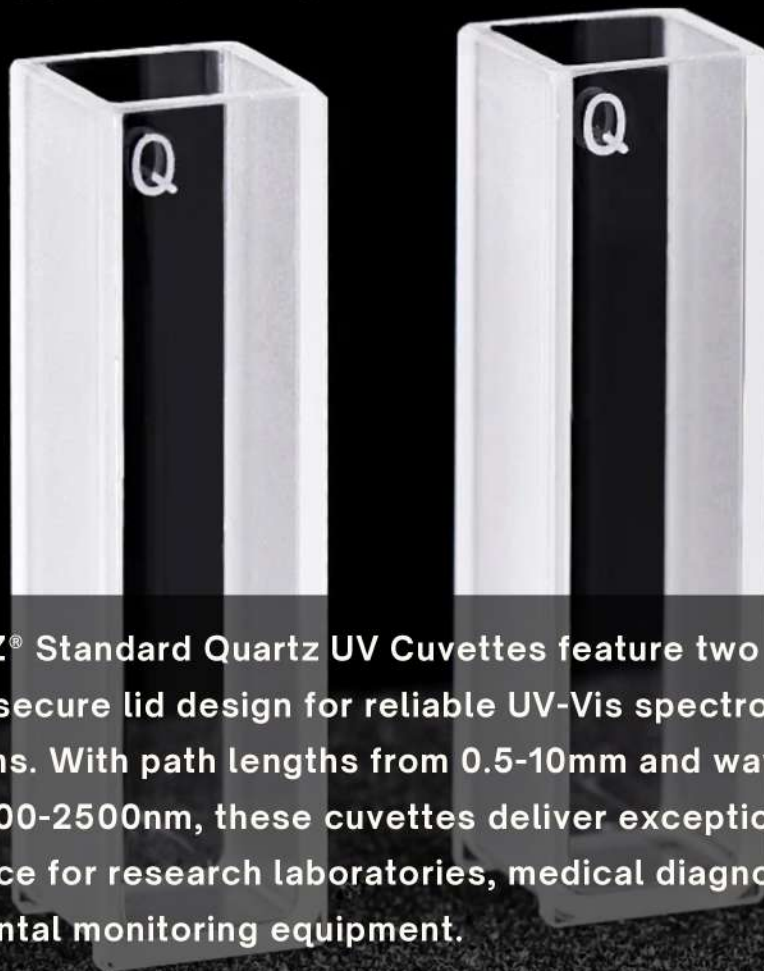
TOQUARTZ® STANDARD QUARTZ UV CUVETTE

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® Standard Quartz UV Cuvettes with fast delivery and consistent quality.



TOQUARTZ

Product Overview



TOQUARTZ® Standard Quartz UV Cuvettes feature two polished sides and secure lid design for reliable UV-Vis spectroscopy applications. With path lengths from 0.5-10mm and wavelength range of 200-2500nm, these cuvettes deliver exceptional optical performance for research laboratories, medical diagnostics, and environmental monitoring equipment.

TOQUARTZ® STANDARD QUARTZ UV CUVETTE



Key Features

- **High-Purity Material:** 99.98%+ SiO_2 composition for superior optical clarity
- **Excellent UV Transmission:** >80% transmittance at 200nm (paired testing)
- **Chemical Resistance:** Stable against acids, bases, and most solvents
- **Thermal Stability:** Operating temperature up to 1100°C
- **Precise Dimensions:** $\pm 0.1\text{mm}$ tolerance for reliable instrument compatibility
- **Multiple Path Lengths:** Options from 0.5mm to 10mm for various sample volumes
- **Secure Lid Design:** Prevents evaporation and contamination

TOQUARTZ® STANDARD QUARTZ UV CUVETTE



Applications

- **Laboratory Research:**
Quantitative analysis of biomolecules and chemical compounds
- **Medical Diagnostics:** In-vitro diagnostic equipment for biological sample analysis
- **Environmental Monitoring:**
Water quality testing and pollution analysis
- **Industrial Quality Control:**
Process monitoring and product verification
- **Academic Teaching:**
Educational demonstrations and student laboratory work





TECHNICAL SPECIFICATIONS

Property	Value / Range	Unit / Description
Material Composition	≥99.99% SiO ₂	High-purity synthetic fused quartz
Optical Transmission Range	200 – 2500	nm (UV to NIR)
UV Transmittance @ 200nm	≥80% (paired)	Measured with matched cuvette pair
Refractive Index (at 589 nm)	1.4585	Dimensionless
Density	2.2	g/cm ³
Thermal Conductivity	1.4 – 1.5	W/m·K (at 20°C)
Specific Heat Capacity	~740	J/kg·K (at 20°C)



TECHNICAL SPECIFICATIONS

Property	Value / Range	Unit / Description
Softening Point	1680	°C
Annealing Point	1215	°C
Strain Point	1120	°C
Maximum Operating Temperature	1100	°C (continuous use)
Coefficient of Thermal Expansion	$\sim 5.5 \times 10^{-7}$	/°C (20–1000°C range)
Dielectric Strength	250 – 400	kV/cm
Electrical Resistivity	$>10^{18}$	$\Omega \cdot \text{cm}$ (at 20°C)

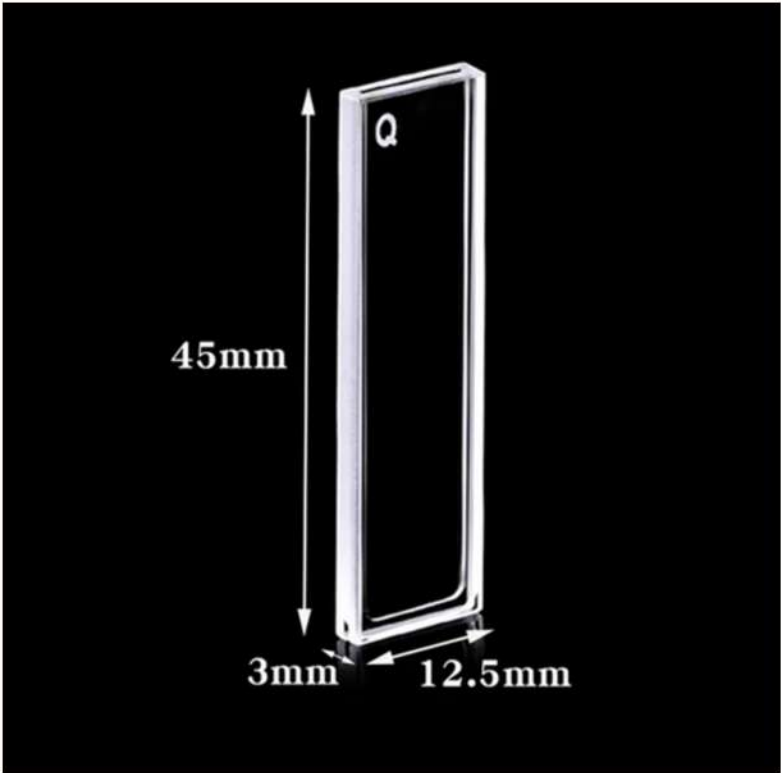


TECHNICAL SPECIFICATIONS

Property	Value / Range	Unit / Description
Acid Resistance	Excellent	Resistant to HCl, HNO ₃ , H ₂ SO ₄ , etc.
Alkali Resistance	Moderate	Limited resistance to strong hot alkalis
HF Resistance	Poor	Not resistant to hydrofluoric acid
Solvent Compatibility	Broad	Compatible with alcohols, ketones, hydrocarbons, etc.
Surface Roughness (Polished)	Ra < 0.01	µm (optical-grade polished surfaces)
Light Scattering Loss	<0.5	% (per optical surface, typical)
Biocompatibility	Inert	Suitable for biological and chemical sample analysis
Autoclavability	Yes	Can withstand standard autoclave sterilization cycles



SIZE CHART



170µl Standard Quartz UV Cuvette with 2 Polished Sides and WITHOUT Lid for UV Spectrophotometer

Model	Description	Wavele ngth	Path Length	Volume	Transmittanc e	Outline Dimension
AT-BSM-011	170µl Standard Quartz UV Cuvette with 2 Polished Sides and WITHOUT Lid for UV Spectrophotomet er	200nm-2500nm	0.5mm	170µl	>80% (Paired Testing)	12.5x3x45 mm



SIZE CHART



3.5ml Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotometer

Model	Description	Wavele ngth	Path Length	Volume	Transmittanc e	Outline Dimension
AT-BSM-015	3.5ml Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotomet er	200nm-2500nm	10mm	3.5ml	>80% (Paired Testing)	12.5x12.5x45 mm



SIZE CHART



700µl Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotometer

Model	Description	Wavele ngth	Path Length	Volume	Transmittanc e	Outline Dimension
AT-BSM-017	700µl Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotomet er	200nm-2500nm	2mm	700µl	>80% (Paired Testing)	12.5x4.5x45 mm



SIZE CHART



350µl Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotometer

Model	Description	Wavele ngth	Path Length	Volume	Transmittanc e	Outline Dimension
AT-BSM-058	350µl Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotomet er	200nm-2500nm	1mm	350µl	>80% (Paired Testing)	12.5*3.5*45 mm



SIZE CHART



1.75ml Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotometer

Model	Description	Wavele ngth	Path Length	Volume	Transmittanc e	Outline Dimension
AT-BSM-059	1.75ml Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotomet er	200nm-2500nm	5mm	1.75ml	>80% (Paired Testing)	12.5x7.5x45 mm



SIZE CHART



4ml Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotometer

Model	Description	Wavele ngth	Path Length	Volume	Transmittanc e	Outline Dimension
AT-BSM-061	4ml Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotomet er	200nm-2500nm	10mm	4ml	>80% (Paired Testing)	13.5x14.5x43 mm



SIZE CHART



1.05ml Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotometer

Model	Description	Wavele ngth	Path Length	Volume	Transmittanc e	Outline Dimension
AT-BSM-062	1.05ml Standard Quartz UV Cuvette with 2 Polished Sides and Lid for UV Spectrophotomet er	200nm-2500nm	3mm	1.05ml	>80% (Paired Testing)	12.5*5.5*45 mm



CUSTOMIZATION OPTIONS

TOQUARTZ® offers specialized customization services to meet unique application requirements:

- Custom Path Lengths: Non-standard optical path lengths
- Specialized Lid Types: Screw caps, PTFE plugs, or flow-through connections
- Modified Dimensions: Custom height, width, or wall thickness
- Special Optical Windows: Additional polished sides for multi-directional measurements
- Volume Adjustments: Optimized for micro-volume or large sample applications



USAGE GUIDELINES

Handling and Operation:

- Clean before first use - Remove any manufacturing residues with spectroscopic-grade solvent
- Hold by non-optical surfaces - Avoid touching polished sides to prevent fingerprints
- Fill properly - For standard 10mm cuvettes, 3ml sample volume is optimal
- Orient correctly - Align polished sides perpendicular to the light path
- Secure lid properly - Tighten gently to prevent sample evaporation

Cleaning and Maintenance:

- Rinse immediately after use - Prevent sample residue buildup
- Clean with compatible solvents - For organic samples, use acetone, ethanol, or methanol
- Avoid abrasive materials - Never use paper towels or abrasive cleaners on optical surfaces
- Dry properly - Air dry in clean environment or use compressed air (oil-free)
- Store in protective case - Keep in original packaging or dedicated cuvette holders



QUALITY ASSURANCE

Each TOQUARTZ Standard Quartz UV 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.