

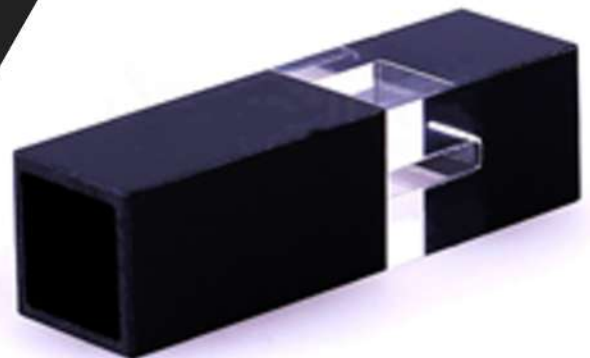


# TOQUARTZ

## Product Catalog

# TOQUARTZ® Quartz Micro Fluorescence Cuvette with Black Walls and Lid

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



# TOQUARTZ® QUARTZ MICRO FLUORESCENCE CUVETTE WITH BLACK WALLS AND LID

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 Micro Fluorescence Cuvette with Black Walls and Lid with fast delivery and consistent quality.



## Product Overview

TOQUARTZ® high-precision quartz micro cuvette is designed for fluorescence spectroscopy applications requiring minimal sample volume and maximum light isolation. Made from high-purity quartz ( $\geq 99.98\%$  SiO<sub>2</sub>), it features black walls and a black lid to minimize stray light and enhance signal accuracy. It is ideal for DNA/RNA quantification, protein analysis, and other sensitive bioassays. Custom dimensions and engineering services are available upon request.

# TOQUARTZ® QUARTZ MICRO FLUORESCENCE CUVETTE WITH BLACK WALLS AND LID



## Key Features

- High-purity quartz ( $\geq 99.98\%$  SiO<sub>2</sub>) for optimal optical clarity
- Black walls and lid for maximum light isolation and fluorescence sensitivity
- Excellent transmission across 120-4500nm wavelength range
- Chemical resistance to acids, bases, and most laboratory solvents
- Temperature stability up to 200°C (black coating limit)
- Compatible with standard spectrophotometer and fluorometer holders



# TOQUARTZ® QUARTZ MICRO FLUORESCENCE CUVETTE WITH BLACK WALLS AND LID



## Applications

- **DNA/RNA Quantification** - Low volume nucleic acid analysis
- **Protein Analysis** - Fluorescence-based protein quantification
- **Fluorescent Assays** - Enhanced sensitivity for fluorescent dye measurements
- **Pharmaceutical Research** - Drug discovery and quality control
- **Nanoparticle Analysis** - Fluorescence characterization of nanomaterials
- **Environmental Testing** - Trace compound detection in environmental samples



# TECHNICAL SPECIFICATIONS

## 1. Physical Properties

- **Material:** High-purity fused quartz ( $\geq 99.98\%$  SiO<sub>2</sub>)
- **Available Volumes:** 20 $\mu$ l / 100 $\mu$ l / 200 $\mu$ l
- **Standard Pathlength:** 10mm ( $\pm 0.1$ mm tolerance)
- **Wall Thickness:** 1.25mm ( $\pm 0.1$ mm)
- **External Dimensions:** 12.5mm  $\times$  12.5mm  $\times$  45mm
- **Window Dimensions:** 2 $\times$ 2mm to 4 $\times$ 5mm (depending on volume)
- **Lid Type:** Black quartz lid, friction-fit or sealed
- **Surface Finish:** Optical windows polished to  $\lambda/4$  flatness; black coating on outer walls
- **Thermal Expansion Coefficient:**  $5.5 \times 10^{-7}$  / $^{\circ}$ C
- **Operating Temperature Range:** -200 $^{\circ}$ C to +200 $^{\circ}$ C (limited by black coating)
- **Weight:** Approx. 10–15g per unit (varies by volume)

## 2. Chemical Properties

- **Quartz Purity:**  $\geq 99.98\%$  SiO<sub>2</sub>
- **Chemical Resistance:** Excellent resistance to acids, bases, and most solvents
- **Incompatible Chemicals:** Hydrofluoric acid (HF), hot concentrated phosphoric acid
- **Water Absorption:** <0.001%
- **Surface Reactivity:** Chemically inert under standard lab conditions
- **Contamination Risk:** Minimal; suitable for trace-level fluorescence analysis

## 3. Optical Properties

- **Transmission Range:** 120nm – 4500nm
- **UV Cutoff:**  $\sim 170$ nm
- **Refractive Index:** 1.458 at 546nm (20 $^{\circ}$ C)
- **Auto-Fluorescence:** Negligible (suitable for low-signal fluorescence detection)
- **Optical Window Flatness:**  $\leq \lambda/4$
- **Light Path Accuracy:**  $\pm 0.1$ mm
- **Stray Light Suppression:** Black walls reduce lateral light interference by  $> 95\%$
- **Spectral Compatibility:** UV-VIS-NIR (UV/Visible/Near-Infrared)
- **Optical Homogeneity:** No internal striae or bubbles; laser-grade clarity

# TOQUARTZ SIZE CHART



20µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid

Model	Description	Wavelength	PathLength	Volume	Thermal Stability	Outline Dimension
AT-BSM-4008	20µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid	200nm-2500nm	10mm	20µl	100°C	12.5x12.5x45mm



# SIZE CHART



45µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid

Model	Description	Wavelength	PathLength	Volume	Thermal Stability	Outline Dimension
AT-BSM-4010	45µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid	200nm-2500nm	3mm	45µl	100°C	12.5x12.5x45mm

# TOQUARTZ SIZE CHART



50µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid

Model	Description	Wavelength	PathLength	Volume	Thermal Stability	Outline Dimension
AT-BSM-4017	50µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid	200nm-2500nm	10mm	50µl	100°C	12.5x12.5x45mm



# TOQUARTZ SIZE CHART



50µl Quartz Micro Fluorescence Cuvettes with Black Walls and Lid

Model	Description	Wavelength	PathLength	Volume	Thermal Stability	Outline Dimension
AT-BSM-4033	50µl Quartz Micro Fluorescence Cuvettes with Black Walls and Lid	200nm-2500nm	10mm	50µl	100°C	12.5x12.5x45mm

# TOQUARTZ SIZE CHART



100µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid

Model	Description	Wavelength	PathLength	Volume	Thermal Stability	Outline Dimension
AT-BSM-4019	100µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid	200nm-2500nm	10mm	100µl	100°C	12.5x12.5x45mm

# TOQUARTZ SIZE CHART



200µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid

Model	Description	Wavelength	PathLength	Volume	Thermal Stability	Outline Dimension
AT-BSM-4018	200µl Quartz Micro Fluorescence Cuvette with Black Walls and Lid	200nm-2500nm	10mm	200µl	100°C	12.5x12.5x45mm



# CUSTOM ENGINEERING SERVICES

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

- Custom pathlengths
- Special volumes
- Modified external dimensions for specialized instrument compatibility
- Flow-through ports for continuous monitoring
- Temperature control features for thermal studies
- Custom window shapes and sizes for unique optical setups





# 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.*