TOQUARTZ

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Product Catalog

TOQUARTZ®
Rhombus Black-Wall Quartz Flow-Through Cell

Integrated Engineering & Agile Production
for Demanded Specifications

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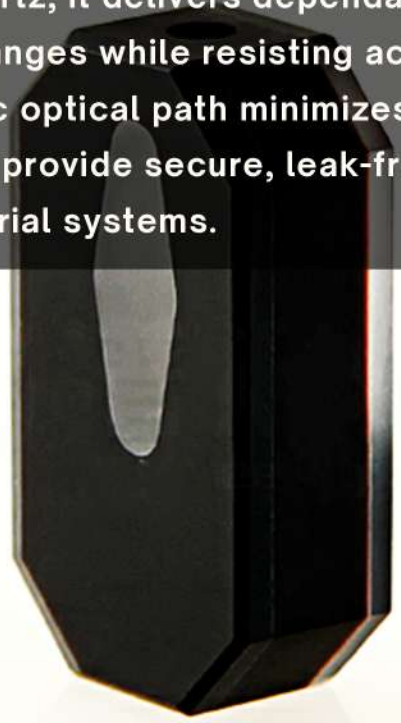
TOQUARTZ® RHOMBUS BLACK-WALL QUARTZ FLOW-THROUGH CELL

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® Rhombus Black-Wall Quartz Flow-Through Cell with fast delivery and consistent quality.

Product Overview

The Rhombus Black-Wall Quartz Flow-Through Cell is engineered for spectroscopy, chromatography, and continuous flow analysis where stable optical transmission is essential. Constructed from ⩾ 99.995% fused quartz, it delivers dependable performance across UV–VIS–NIR ranges while resisting acids, alkalis, and solvents. The rhombic optical path minimizes stray light, while threaded connectors provide secure, leak-free integration into laboratory and industrial systems.



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TOQUARTZ® RHOMBUS BLACK-WALL QUARTZ FLOW-THROUGH CELL

Key Features

- Black-wall design to suppress stray light and improve signal clarity.
- High-purity quartz ensuring broad transmission from 190–2500 nm.
- Rhombic 5 mm path geometry for stable optical performance.
- Threaded connectors (M5 or stainless steel) for secure flow integration.

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Applications

- Pharmaceutical Research
- Environmental Analysis
- Petrochemical Monitoring
- Biotechnology
- Food Safety Testing

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TECHNICAL SPECIFICATIONS

Physical Properties

- Material Composition: ≥ 99.995% SiO_2 fused quartz
- Density: 2.2 g/cm³ typical for fused silica
- Electrical Insulation: Dielectric strength ~250–300 kV/cm; resistivity >10^{16} Ω·cm

Optical Properties

- Transmission Range: 190–2500 nm with ≤ 0.3% deviation
- UV Transparency: > 90% at 220 nm for 1 mm thickness
- Stray Light Reduction: Black-wall design decreases background by 35–60%

Thermal Properties

- Continuous Use Temperature: ≥ 1100 °C
- Softening Point: ~1665 °C
- Thermal Expansion Coefficient: 0.55 × 10^{-6}/K (20–1000 °C)

Mechanical Properties

- Flexural Strength: ≥ 350 MPa
- Young's Modulus: ~72 GPa
- Hardness: Mohs scale ~6.6

Chemical Properties

- Resistance: Stable against acids, alkalis, HF gas, and aggressive solvents
- Corrosion Stability: Maintains integrity in salt-rich and acidic environments
- Surface Quality: Optical polishing ensures ≤ 0.3% transmittance deviation

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SIZE CHART

5mm Path Length Rhombus Black-Wall Quartz Flow-Through Cell

Model	Description	PathLength	Wave Length	Outline Dimension
AT-BSM-8044	5mm Path Length Rhombus Black-Wall Quartz Flow-Through Cell	5mm	200-2500nm	10x5x15mm

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CUSTOM ENGINEERING SERVICES

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

- Optical Path Adaptation: Rhombic path configurations aligned with analytical needs.
- Connector Integration: Threaded or tube connectors tailored for laboratory and industrial systems.
- Material & Surface Treatments: Enhanced finishes and coatings for solvent compatibility and extended lifespan.
- Design Process Support: Engineering consultation to align flow cell design with application-specific requirements.

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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.

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