



TOQUARTZ

Tech Specifications

Quartz Plate & Disc

Integrated Engineering & Agile Production
for Demanded Specifications

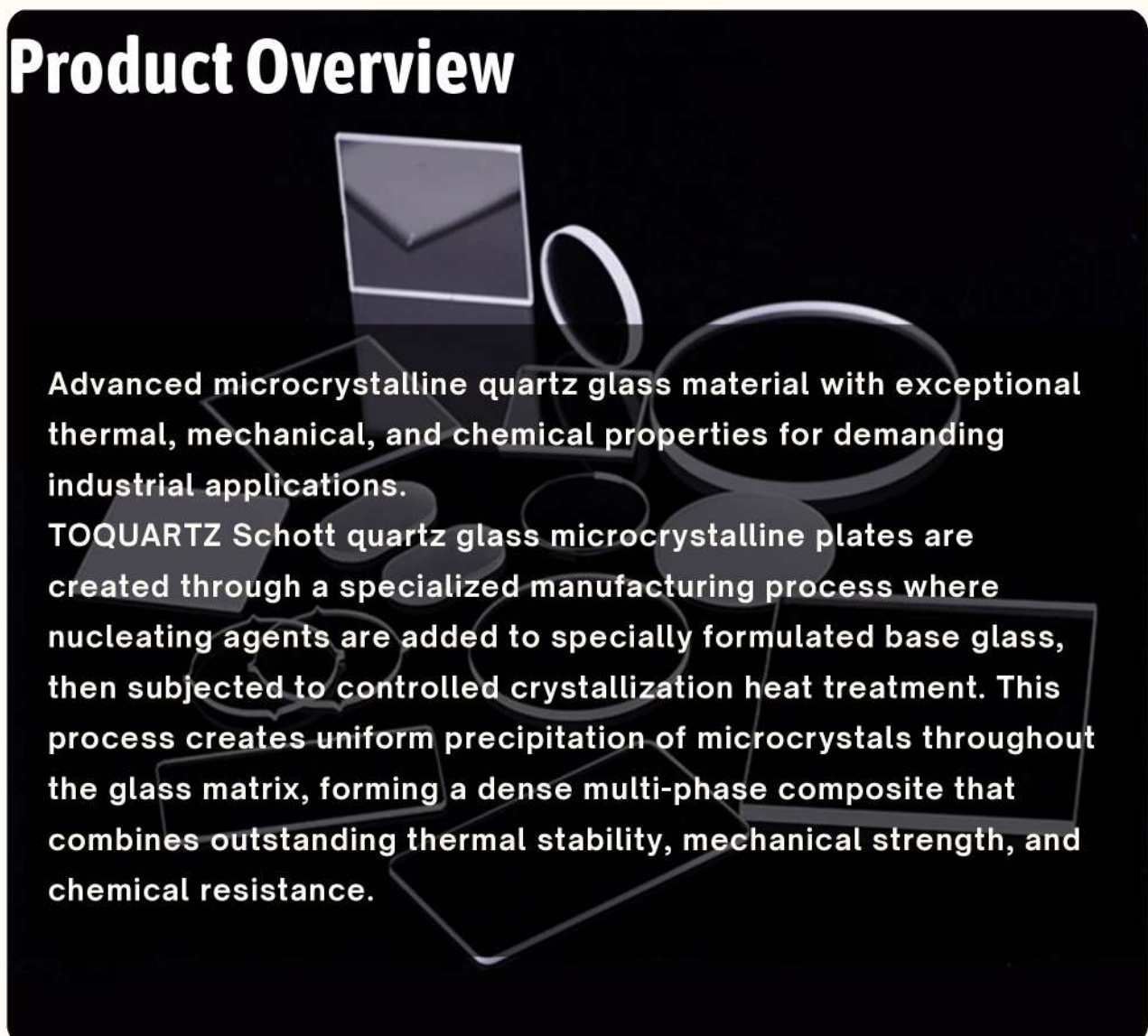


TOQUARTZ®

SCHOTT QUARTZ GLASS

MICROCRYSTALLINE PLATE

Product Overview



Advanced microcrystalline quartz glass material with exceptional thermal, mechanical, and chemical properties for demanding industrial applications.

TOQUARTZ Schott quartz glass microcrystalline plates are created through a specialized manufacturing process where nucleating agents are added to specially formulated base glass, then subjected to controlled crystallization heat treatment. This process creates uniform precipitation of microcrystals throughout the glass matrix, forming a dense multi-phase composite that combines outstanding thermal stability, mechanical strength, and chemical resistance.

SCHOTT QUARTZ GLASS MICROCRYSTALLINE PLATE

Key Features

- **Superior Thermal Properties:** Operating temperature up to 1100°C with low thermal expansion coefficient ($72 \times 10^{-7} / ^\circ\text{C}$)
- **Exceptional Mechanical Strength:** Flexural strength >108 MPa, compressive strength >508 MPa
- **Excellent Chemical Stability:** Resistance to acids, alkalis, and salts
- **Superior Electrical Performance:** Volume resistivity $1.08 \times 10^{16} \Omega \cdot \text{cm}$ at 25°C
- **Precision Manufacturing:** Dimensional tolerance $\pm 0.2\text{mm}$, surface roughness $R_a \leq 0.01\mu\text{m}$

SCHOTT QUARTZ GLASS MICROCRYSTALLINE PLATE

Applications

- Laboratory equipment (heating platforms, microwave digestion systems)
- Industrial heating systems (infrared heaters, industrial ovens, furnaces)
- Optical instruments (optical platforms, laser systems)
- High-temperature viewing windows
- Thermal processing equipment



MATERIAL PROPERTIES

Property	Value	Notes
Density	2.6 g/cm ³	Archimedes method
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Apparent porosity	0.07%	
Water absorption	0	
Hardness	4-5	Mohs scale
Color	White	
Thermal expansion coefficient	$72 \times 10^{-7} / ^\circ\text{C}$	-50°C to 200°C average
Thermal conductivity	1.71 W/m.K	at 25°C
Long-term use temperature	800°C	
Flexural strength	>108 MPa	



MATERIAL PROPERTIES

Property	Value	Notes
Compressive strength	>508 MPa	
Impact resistance	>2.56 KJ/m ²	
Elastic modulus	65 GPa	
Dielectric loss	$1-4 \times 10^{-3}$	Room temperature
Dielectric constant	6-7	Room temperature
Breakdown strength	>40 KV/mm	Sample thickness 1mm
Volume resistivity	$1.08 \times 10^{16} \Omega \cdot \text{cm}$	at 25°C
	$1.5 \times 10^{12} \Omega \cdot \text{cm}$	at 200°C
	$1.1 \times 10^9 \Omega \cdot \text{cm}$	at 500°C



SIZE CHART

SCHOTT QUARTZ GLASS MICROCRYSTALLINE PLATES

Model	Dimensions (L×W mm)	Thickness (mm)
AT-WJ-B1001	100×100	3
AT-WJ-B1002	300×300	4.0-8.0
AT-WJ-B1003	330×330	4.0-8.0
AT-WJ-B1004	400×400	4.0-8.0
AT-WJ-B1005	500×500	4.0-8.0
AT-WJ-B1006	720×500	4.0-8.0
AT-WJ-B1007	1200×800	4.0-8.0
AT-WJ-B1008	1950×1100	4.0-8.0



PROCESSING CAPABILITIES



- Edge processing: Rough grinding/polishing/step-shaped/custom profiling
- Corner treatment: Cut corners/round corners (tolerance: $\pm 0.3\text{mm}$)
- Drilling/cutting: Square/round/oval/custom shapes
- Linear precision: $\pm 0.15\text{mm}$, Positioning accuracy: $\pm 0.25\text{mm}$
- Printing: Silk screening available in 10 colors; custom colors available
- Dimensional tolerance: $\pm 0.2\text{mm}$ for custom sizes
- Surface roughness: $Ra \leq 0.01\mu\text{m}$
- Available colors: Light brown, milky white, transparent, black

CUSTOMIZATION OPTIONS

TOQUARTZ offers comprehensive customization services for Schott quartz glass microcrystalline plates to meet your specific application requirements:

- **Dimensional Customization:** Custom lengths and widths up to 1950x1100mm, thickness from 3mm to 8mm
- **Surface Treatments:** Polished finish, ground finish, sand-blasted surface, custom silk screening
- **Edge & Corner Treatments:** Beveled edges, rounded corners, step edges, chamfered edges
- **Drilling & Machining:** Precision hole drilling, complex cutouts, threaded inserts, multi-level machining



QUALITY ASSURANCE

Each TOQUARTZ Schott quartz glass microcrystalline plate undergoes rigorous quality control testing to ensure consistent performance and reliability:

- Dimensional inspection
- Surface quality assessment
- Material property verification
- Visual inspection

Contact Information

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For technical specifications, custom requirements, or pricing information, please contact our sales team.