



1. Quartz Glass Products

High-Purity Fused Silica & Quartz for Demanding Applications

Quartz glass, also known as fused silica, is an extraordinary material defined by its exceptional purity, outstanding thermal stability, and unique optical transmission properties. Manufactured by melting high-purity natural quartz crystals or synthetic precursors at extremely high temperatures, it achieves a combination of characteristics unmatched by any other glass. With a near-zero coefficient of thermal expansion, the ability to withstand continuous use at temperatures over 1000°C, and excellent transmittance across the ultraviolet (UV) to infrared (IR) spectrum, quartz glass is the material of choice for semiconductor manufacturing, high-intensity lighting, precision optics, advanced laboratory equipment, and high-temperature industrial processes. Our comprehensive quartz product line delivers tailored solutions engineered to meet the most stringent purity and dimensional specifications.

(1) Quartz Glass Tube

Product Description

Our quartz glass tubes are manufactured from high-purity fused silica, available in a wide range of outer diameters, wall thicknesses, and lengths. Precision dimensional control and a smooth, flawless surface finish ensure reliable performance in fluid transport, optical paths, and furnace chambers. Both clear fused quartz and translucent grades are available, with options for cut ends, fire-polished edges, or ground surfaces. Custom configurations include closed-end tubes, multi-bore tubing, and tubes with specially formed flanges.

Application Scenarios

Lighting: Arc and halogen lamp envelopes, UV curing lamps.

Semiconductor: Diffusion and oxidation furnace chambers, wafer processing components.

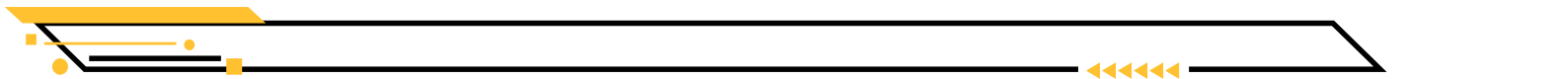
High-Temperature Processing: Thermocouple protection sheaths, sight glass windows for high-temperature reactors.

Analytical Instrumentation: Gas chromatography columns, sample introduction tubes.

Product Advantages

Superior thermal shock resistance enables rapid heating and cooling cycles.

Excellent chemical inertness; no contamination to ultra-pure process media.



High UV transmittance (down to 185nm) for photochemical and sterilization applications.

Dimensional stability and low sag even at continuous operating temperatures up to 1100°C.

(2) Quartz Glass Rod

Product Description

Quartz glass rods offer a combination of optical clarity, mechanical strength, and thermal endurance in a solid cylindrical form. Produced by drawing or precision grinding, these rods range from thin filament diameters to thick, rigid bars. Surface finishes include fire-polished, drawn (natural), and precision-ground for tight diameter tolerances. Material grades span from high-OH synthetic fused silica for deep UV transmission to low-OH natural quartz for infrared and high-temperature applications.

Application Scenarios

Optical Fiber Preforms & Light Guides: Core material and light transmission components.

Semiconductor Equipment: Electrode supports, insulating spacers, and wafer handling fixtures.

Precision Engineering: Probe tips, stirrer shafts for aggressive chemical environments, and mechanical spacers in high-temperature assemblies.

Jewelry & Decorative: High-clarity components requiring fire-polished aesthetics.

Product Advantages

Extreme purity prevents contamination in sensitive thermal and plasma processes.

Low dielectric constant and excellent electrical insulation at high temperatures.

High viscosity at elevated temperatures allows use as structural members near 1200°C.

Available in diameters from 0.5 mm to over 100 mm, with length and surface customization.

(3) Quartz Glass Sheet / Plate



Product Description

We supply quartz glass sheets and plates in both transparent and translucent (opalescent) grades, produced by melting, fusing, and precision cutting. Flatness and surface quality are tightly controlled, with options for as-cut, ground, lapped, or polished surfaces. Thickness ranges from ultra-thin microscope cover slips to heavy plates for furnace windows, all delivering the inherent thermal and optical properties of pure fused silica.

Application Scenarios

High-Temperature Viewing Ports: Furnace sight glasses, boiler inspection windows.

Optics & Photonics: Substrates for mirrors, beam splitters, and optical flats with high UV-IR transmission.

Semiconductor & Solar: Wafer carriers, plasma chamber windows, and electrode covers.

Industrial Equipment: Liquid level gauge transparent plates for steam and chemical service.

Product Advantages

Exceptional flatness and parallelism for distortion-free optical observation.

Withstands continuous thermal loads and extreme thermal gradients without fracture.

Resistant to attack from most acids, allowing direct contact with aggressive media.

Custom CNC machining to complex outlines with drilled holes and notches available.

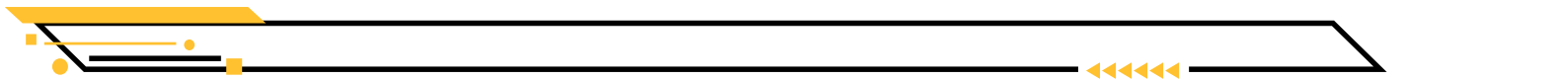
(4) Quartz Crucible

Product Description

Quartz crucibles are high-purity containers designed for melting, refining, and high-temperature reaction processes. Available in cylindrical, conical, and custom shapes with straight or flared walls, these crucibles are manufactured through arc-fusion or slip-casting processes to achieve a dense, bubble-free inner layer and a smooth, chemically inert surface. Capacities range from a few milliliters for laboratory use to large-diameter crucibles for industrial crystal pulling.

Application Scenarios

Czochralski (CZ) Crystal Growth: Primary containers for monocrystalline silicon pulling in the semiconductor and solar photovoltaic industries.



Sample Preparation & Ashing: High-temperature sample combustion and ashing in analytical chemistry.

Precious Metal Melting: Melting and refining of high-purity metals without contamination.

Chemical Processing: Evaporation dishes and reaction vessels for aggressive acids and salts.

Product Advantages

Ultra-high purity (>99.99% SiO₂) eliminates contamination of melts.

Dense, devitrification-resistant inner layer extends crucible lifespan at sustained high temperatures.

Excellent thermal shock performance withstands rapid heating and quenching cycles.

Rigorous dimensional control ensures compatibility with automated crystal pulling equipment.

(5) Quartz Labware

Product Description

Our quartz labware encompasses a broad range of standard and customized laboratory apparatus made from high-purity fused quartz. The product family includes beakers, flasks (Erlenmeyer, round-bottom), test tubes, evaporating dishes, distillation apparatus, cuvettes, and microfluidic chips. Every piece is fabricated by skilled glassblowers using high-grade quartz tubing and rod, ensuring consistent wall thickness, smooth inner surfaces, and strong, transparent joints.

Application Scenarios

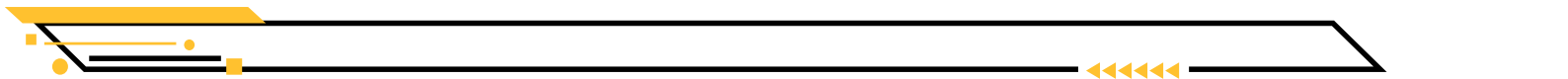
Analytical Chemistry: Sample digestion, trace-metal analysis, and ultrapure reagent handling.

Semiconductor Research: Acid etching baths, wafer cleaning vessels, and photoresist processing.

Environmental Testing: Total organic carbon (TOC) analysis vials, water quality sampling.

Pharmaceuticals & Biotechnology: Sterilization containers, UV-transparent reactors, and optical cells.

Product Advantages



Total resistance to thermal shock: can be heated red-hot and plunged into cold water without damage.

Non-contaminating: no leaching of metal ions, preserving the integrity of ultra-trace analyses.

Outstanding transparency for visual monitoring and spectroscopic measurements.

Custom fabrication service available for unique apparatus design and modifications.

(6) Silica Glass Wool

Product Description

Silica glass wool is a lightweight, fibrous thermal insulation material produced from high-silica (>96% SiO₂) glass fibers. It exhibits very low thermal conductivity, excellent thermal shock resistance, and does not contain organic binders that could burn out or create fumes. Available in bulk fiber, blanket, mat, board, and rope forms, it provides a clean, non-combustible insulation solution for extreme temperature environments.

Application Scenarios

High-Temperature Furnace Insulation: Backup insulation for induction furnaces, kilns, and vacuum furnaces.

Aerospace & Defense: Fire barriers, thermal shields, and ablation-resistant materials.

Exhaust Systems: Insulation wrapping for hot gas piping and catalytic converters.

Laboratory Appliances: Combustion tube packing, gas chromatography column support material.

Product Advantages

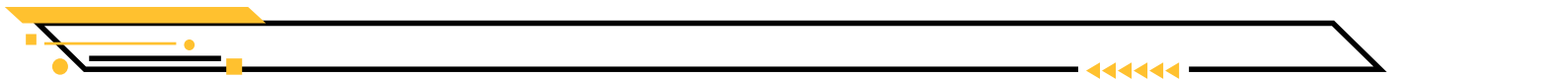
Continuous use temperature up to 1000 °C, with peak endurance well above.

Inherently non-flammable and smoke-free, meeting strict fire safety standards.

Excellent chemical stability; will not accelerate corrosion on stainless steel surfaces.

Low thermal conductivity minimizes energy loss and protects personnel from hot surfaces.

2. Our Quartz Manufacturing & Service Advantages



When you partner with us for quartz glass products, you gain more than just material — you gain a commitment to quality, precision, and reliability.

Material Purity Assurance: We utilize certified high-purity natural quartz and synthetic fused silica feedstocks, supported by lot-traceable certificates of analysis detailing hydroxyl (OH) content, metal impurities, and optical characteristics.

Precision Fabrication: Our in-house capabilities include CNC machining, grinding and polishing, laser cutting, thermal forming, and expert glassblowing. We hold dimensional tolerances down to ± 0.01 mm and surface flatness to $\lambda/4$.

Extreme Performance Customization: From high-OH synthetic quartz for deep UV optics to low-OH natural quartz for high-temperature IR applications, we help you specify the ideal grade. Custom doping, sandblasting, and opalizing treatments are also available.

Rigorous Quality Control: Every product undergoes thorough inspection, including dimensional metrology, visual inspection for bubbles and striae, thermal stress testing, and optical transmittance measurement. We test to ASTM, JIS, and ISO standards.

Engineering Support & Rapid Prototyping: Our technical team provides application reviews, material selection guidance, and rapid prototyping for custom quartz components. We support your development cycle from concept to volume production.

Reliable Global Supply: With robust packaging designed to prevent transit damage and strategically managed inventory of standard catalog items, we ensure short lead times and on-time delivery worldwide.

For a personalized consultation, detailed technical data sheets, or a quotation on custom dimensions and configurations, please contact our quartz engineering team. We look forward to being your trusted source for high-performance quartz glass solutions.