

High Purity Quartz Tube And Quartz Boat For Laboratory Furnaces

Item Number: KT-SYG



Introduction

Premium high purity quartz tubes and quartz boats engineered for high-temperature laboratory furnaces. Offers unmatched thermal stability, chemical inertness, and optical transparency. Ideal for semiconductor processing, materials research, and chemical synthesis. Custom dimensions to fit any furnace. Get custom quote.

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Application	Description	Key Benefit
Laboratory Tube Furnace Heating	Quartz tubes serve as process chambers and quartz boats as sample carriers in tube furnaces for materials synthesis, thermal treatment, and catalyst testing.	Ensures uniform temperature distribution and minimal reactivity with samples, providing reliable and reproducible experimental data.
Semiconductor Diffusion and Oxidation	Utilized as furnace tubes and wafer boats in high-temperature diffusion and oxidation steps for silicon wafer processing.	Ultra-high purity prevents metal ion contamination, preserving the electrical characteristics of semiconductor devices.
Carbon Nanotube and Nanomaterial Growth	Quartz boats function as catalyst substrates in CVD and ammonia reduction processes for growing carbon nanotubes and other nanostructures.	Chemical inertness avoids unwanted reactions, ensuring consistent product morphology and high purity.
Optical Spectroscopy and Photoreactor Systems	High-purity quartz tubes with excellent UV-Vis transmission are used in flow photoreactors and spectroscopic cells.	Broad optical window allows accurate light delivery and detection without absorption artifacts.
Environmental and Water Purification	Quartz sleeves for UV disinfection units and corrosion-resistant pipes for aggressive chemical transport.	High UV transmission and exceptional durability extend service life in demanding water treatment environments.
High-Temperature Corrosion Testing	Tubes and boats used to hold samples exposed to corrosive gases at elevated temperatures in materials research.	Resistance to acid and salt fumes protects the equipment and ensures test validity.
Thermal Analysis (TGA/DSC)	Quartz boats as sample pans for thermogravimetric analysis and differential scanning calorimetry up to 1100°C.	Low thermal mass and inertness prevent side reactions, delivering accurate thermal data.
Advanced Ceramic and Glass Processing	Used as supports and containers in the sintering and melting of advanced ceramics and specialty glasses.	High-temperature stability and non-wetting properties prevent sticking and contamination.

Outer Diameter (mm)	Wall Thickness (mm)	Available Lengths (mm)
25	2	600, 1000, 1200
25	2.5	600, 1000, 1200
40	3	800, 1000
50	3	450, 500, 600, 700, 800, 1000, 1200, 1400, 1500
50	4	600, 1000, 1200, 1400, 1500
50	5	1000, 1200
60	3	800, 1000, 1200, 1400
60	4	1000, 1200

Outer Diameter (mm)	Wall Thickness (mm)	Available Lengths (mm)
60	5	1000, 1200
80	3	1000, 1200, 1400
80	4	1000, 1200, 1400, 2000
80	5	1000, 1200
100	3	1000, 1200, 1400, 1500
100	4	1000, 1200, 1400
100	5	1000, 1200, 1400

Dimensions (L × W × H, mm)
50 × 10 × 5
100 × 10 × 5
50 × 15 × 7.5
100 × 15 × 7.5
50 × 20 × 10
100 × 20 × 10
50 × 25 × 12.5
100 × 25 × 12.5
50 × 30 × 15
100 × 30 × 15
200 × 30 × 15
50 × 40 × 20
100 × 40 × 20
200 × 40 × 20
50 × 50 × 25
100 × 50 × 25
200 × 50 × 25