



Too hard to beat!

**Semicon
Grade**
DATASHEET

SEMICONDUCTOR GRADE QUARTZ TUBE

I. Application

Semiconductor grade quartz tube is widely used in the oxidation and diffusion process in semiconductor wafer manufacturing.

II. Characteristics

Semiconductor grade quartz tube features high purity, low hydroxyl and good high-temperature resistance, etc.

IV. TYPICAL SIZE

OD Range	OD Tolerance	WT Tolerance	Siding	Ovality	Bow
OD < 100.00	±1.00	±10.00%	15.00%	1.00%	0.10%
100.00 ≤ OD <	±1.00	±10.00%	15.00%	1.00%	0.10%
200.00 ≤ OD < 300.00	±1.00	±10.00%	15.00%	1.00%	0.10%
300.00 ≤ OD < 400.00	±1.00	±10.00%	15.00%	1.00%	0.10%
400.00 ≤ OD < 500.00	±1.00	±10.00%	15.00%	1.00%	0.10%
500.00 ≤ OD < 900.00	±2.00	±10.00%	15.00%	1.00%	0.10%

V. PHYSICAL & CHEMICAL PROPERTIES I.TRACE ELEMENTS

Code	Criteria	Al	Ca	Cr	Cu	Fe	K	Li	Mg	Mn	Na	Ti	Zr
E	Typical	13	0.5	<0.05	<0.05	0.1	0.1	0.3	0.05	0.05	0.1	1.3	1
E-R	Maximum	19	1	0.1	0.1	0.5	1	1	0.2	0.2	1	2	2
EH	Typical	8	0.6	<0.05	<0.01	0.1	0.1	0.2	0.05	0.05	0.1	1.3	1
EH-R	Maximum	10	1	0.1	<0.01	0.5	0.5	0.5	0.2	0.2	0.5	2	2

II. OH CONTENT

E/	EH	OH < 10 ppm	E-R/	EH-R	OH < 30 ppm
----	----	-------------	------	------	-------------

III. PHYSICAL PROPERTIES

Item	Index Value
Density (g/cm ³)	2.2
Heat Conductivity (w/m·k, 1000°C)	2.28
Coefficient of Thermal Expansion (°C-1, 1000°C)	5.5x10 ⁻⁷
Softening Point (°C)	1670
Annealing Point (°C)	1210
Strain Point (°C)	1110

IV. COEFFICIENT OF THERMAL EXPANSION & VISCOSITY

