

Silicon Dioxide (Quartz Crystal)

Formula	SiO ₂
Crystal Growth	
Growth Method	hydrothermal
Max. Diameter (mm)	100 x 100
Crystallographic Properties	
Crystal Structure	trigonal
Lattice Constant (nm)	a= 0.49124 c= 0.54039
Color	colorless
Physical Properties	
Density (g/cm ³)	2.65
Melting Point (K)	1973
Thermal Conductivity (W · m ⁻¹ K ⁻¹)	10.7 c, 6.2 ⊥ c (at 323 K)
Thermal Expansion (10 ⁻⁶ K ⁻¹)	a ₁₁ = 13.71, a ₃₃ = 7.48
Dielectric Constant	4.34 c, 4.27 ⊥ c (at 30 MHz)
Elastic Coefficients	c ₁₁ =87 c ₁₂ =7 c ₄₄ =58 c ₁₃ =13 c ₁₄ =(-)18 c ₃₃ =106
Specific Heat Capacity (J · kg ⁻¹ K ⁻¹)	710
Hardness (Mohs)	7

