

Material Property – Quartz sight glass

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| Transmission Range | 0.26~2.10 μm | |
| OH- Content | 150 ppm | |
| Fluorescence (ex 254nm) | Strong v-b | |
| Impurity Content | 20-40 ppm | |
| Birefringence Constant | 4-6 nm/cm | |
| Melting Method | Oxy-hydrogen melting | |
| Density | 2.20g/cm ³ | |
| Abbe Constant | 67.6 | |
| Refractive Index (nd) at 588nm | 1.4586 | |
| Hardness | 5.5 - 6.5 Mohs' Scale 570 KHN 100 | |
| Design Tensile Strength | 4.8x10 ⁷ Pa (N/mm ²) (7000 psi) | |
| Design Compressive Strength | Greater than 1.1x10 ⁹ Pa (160,000 psi) | |
| Bulk Modulus | 3.7x10 ¹⁰ Pa (5.3x10 ⁶ psi) | |
| Rigidity Modulus | 3.1x10 ¹⁰ Pa (4.5x10 ⁶ psi) | |
| Young's Modulus | 7.2x10 ¹⁰ Pa (10.5x10 ⁶ psi) | |
| Poisson's Ratio | 0.17 | |
| Coefficient of Thermal Expansion | 5.5x10 ⁻⁷ cm/cm.°C (20°C-320°C) | |
| Thermal Conductivity | 1.4 W/m.°C | |
| Specific Heat | 670 J/kg.°C | |
| Softening Point | 1683°C | |
| Annealing Point | 1215°C | |
| Strain Point | 1120°C | |
| Electrical Receptivity | 7x10 ⁷ ohm.cm (350°C) | |
| Dielectric Properties (20°C and 1 MHz) | | |
| Constant | 3.75 | |
| Strength | 5x10 ⁷ V/m | |
| Loss Factor | Less than 4x10 ⁻⁴ | |
| Dissipation Factor | Less than 1x10 ⁻⁴ | |
| Velocity of Sound-Shear Wave | 3.75x10 ³ m/s | |
| Velocity of Sound/Compression Wave | 5.90x10 ³ m/s | |
| Sonic Attenuation | Less than 11 db/m MHz | |
| Permeability Constants (cm ³ mm/cm ² sec cm of Hg) | (700°C) | |
| Helium | 210x10 ⁻¹⁰ | |
| Hydrogen | 21x10 ⁻¹⁰ | |
| Deuterium | 17x10 ⁻¹⁰ | |
| Neon | 9.5x10 ⁻¹⁷ | |
| Chemical Stability (except hydrofluoric) | High resistance to water and acids | |