



General Information Sheet: Glass

Soda Lime

Physical Properties

Modulus of Elasticity (Youngs)	$7.2 \times 10^{10} \text{ N/m}^2$
Modulus of Rigidity (Shear)	$3.0 \times 10^{10} \text{ N/m}^2$
Density	2530 kg/m^3
Thermal Conductivity	$0.937 \text{ W.m/m}^2 \text{ }^\circ \text{C}$
Coefficient of Linear Expansion	$8.9 \times 10^{-6} \text{ strain/}^\circ \text{C}$
Refractive Index (Sodium D line)	1.523

Spectrosil Quartz

Physical Properties

Modulus of Elasticity (Youngs)	$73 \times 10^9 \text{ N/m}^2$
Modulus of Rigidity (Shear)	$31 \times 10^9 \text{ N/m}^2$
Density	2200 kg/m^3
Tensile Strength	$55 \times 10^6 \text{ N/m}^2$
Coefficient of Thermal Expansion	$0.54 \times 10^{-6} /^\circ \text{C}$
Refractive Index (wavelength 200nm)	1.551

Sapphire

Physical Properties

Modulus of Elasticity (Youngs)	$3.35 \times 10^{11} \text{ N/m}^2$
Modulus of Rigidity (Shear)	$1.48 \times 10^{11} \text{ N/m}^2$
Poisson Ratio	0.25
Density	3970 kg/m^3
Thermal Conductivity	$27.21 \text{ W.m/m}^2 \text{ }^\circ \text{C}$
Thermal Expansion	$5.0 \times 10^{-6} /^\circ \text{C}$