

Corning ARS 2.0

High-Refractive Index Glass Product Data Sheet

New solutions for augmented reality are here. Corning's high-refractive index, optical-grade glasses have a wider field of view, superior transmission, and greater clarity. The following data applies to a typical sample of our Augmented Reality Solutions (ARS) 2.0 glass.

Wafer Properties*

Available Thickness	≥ 0.3 mm
Diameter	≤ 300 mm
TTV	≤ 0.5 μm
Warp	≤ 30 μm

*Customized specifications are available upon request.

Mechanical Properties

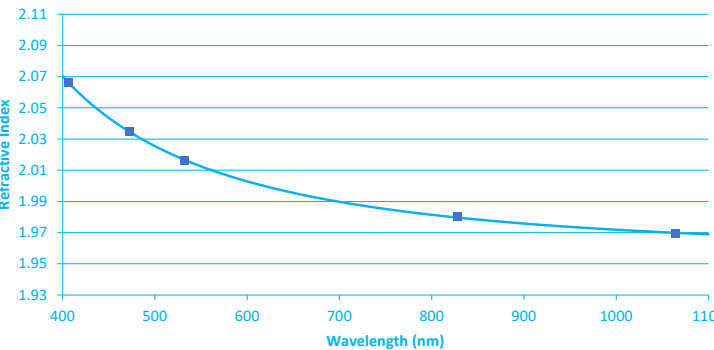
Young's Modulus	133 GPa
Shear Modulus	51 GPa
Poisson's Ratio	0.31
Fracture Toughness	0.82 MPa · m ^{1/2}
Knoop Hardness	644 kg/mm ²

Physical Properties

Density @ RT	5.04 g/cc
CTE RT-300°C	8.46x10 ⁻⁶ /°C
Softening Point	833°C
Anneal Point	727°C
Strain Point	694°C
Heat Capacity (RT)	0.44 J/(g*K)
Heat Capacity (300°C)	0.57 J/(g*K)

Optical Properties

Refractive Index (587.6 nm)	2.003
Abbe number, Vd	28.6
Stress Optical Coefficient	0.821 (nm/mm/MPa)

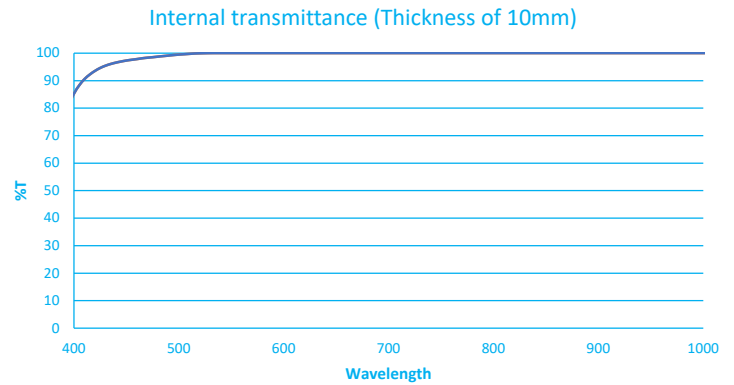


Wavelength	Measures
406	2.06610
473	2.03452
532	2.01643
828	1.98034
1064	1.96940

Internal Transmittance

Wavelength (mm)	Transmittance (%)
440	96.53
460	97.81
525	99.94
590	99.99
625	99.99
800	99.99

*Internal transmittance measured at 10mm thickness.



Thermal Properties

Temperature °C	Specific Heat Cp (J/g. °C)	Conductivity (W/m.K)
25	0.44	0.87
100	0.5	0.91
200	0.54	0.95
300	0.57	1.01
400	0.59	1.06
500	0.6	1.12

Electrical Properties

Frequency (Hz)	Dielectric Constant	Loss Tangent
1×10^3	19.27	0.001
5×10^3	19.19	0.001
1×10^4	19.19	0.001
5×10^4	19.17	0.001
1×10^5	19.16	0.001
5×10^5	19.14	0.001
1×10^6	19.13	0.001

CORNING

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