

CORNINGPrecision Glass
Solutions**REALITY
REVEALED**

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 transmittance, and greater clarity. The following data apply to a typical sample of ARS 2.0.

*Wafer Properties

Available Thickness	≥ 0.3 mm
Diameter	≤ 300 mm
TTV	≤ 1 μm
Warp	≤ 20 μm

*Customized specifications are available upon request.

Mechanical Properties

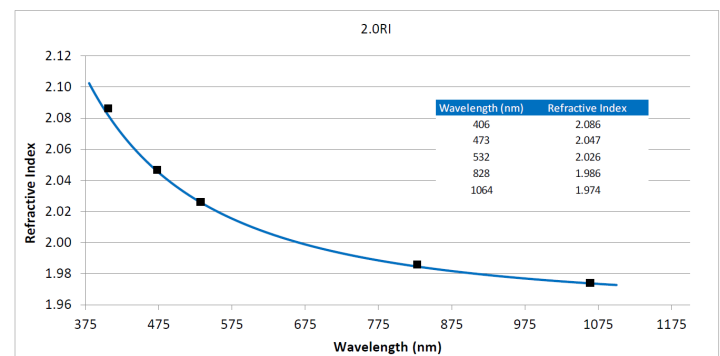
Young's Modulus	116 GPa
Poisson's Ratio	0.3
Shear Modulus	45 GPa
Knoop Hardness	664 kg/mm ²
Fracture Toughness	0.753 MPa · m ^{0.5}

Chemical Durability (Class)

To Acids	ISO 8424	SR 3.3
To Base	ISO 10629	AR 1.0
To Climate	ISO 22531	CR 0

Optical Properties

Refractive Index, n_d (587.6 nm)	2.01
Abbe number, V_d	25.7
Stress Optical Coefficient	1.53 (nm/mm/MPa)



Physical Properties

Density @ RT	5.162 g/cm ³
CTE RT-300°C	7.18x10 ⁻⁶ /°C
Softening point	713°C
Anneal point	634°C
Strain point	613°C
Heat Capacity (RT)	0.42 J/(g*K)
Heat Capacity (300°C)	0.57 J/(g*K)

Thermal Properties

Temperature °C	Specific Heat Cp (J/g. °C)	Conductivity (W/m.K)
25	0.42	0.85
100	0.49	0.86
200	0.54	0.93
300	0.57	1.00
400	0.6	1.08
500	0.61	1.26
600	0.61	1.48
600	0.81	2.17

Electrical Properties

Frequency (Hz)	Dielectric Constant	Loss Tangent
1×10^3	18.44	0.000
5×10^3	18.38	0.000
1×10^4	18.38	0.001
5×10^4	18.37	0.001
1×10^5	18.37	0.001
5×10^5	18.35	0.001
1×10^6	18.34	0.001

Internal Transmittance

Wavelength (nm)	Transmittance (%)
460	96.88
525	99.11
633	99.79
828	99.99
1064	99.99

Internal transmittance measured at 10 mm thickness.

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