



REFLECTIVE GLASS SCALE SPECIFICATIONS

METALLIZATION – 99.999% CHROME

SUBSTRATE - SODALIME GLASS

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| Reflectivity, front surface: | >60% |
| Standard chrome thickness: | 800-1000 angstroms |
| Reflectivity, back surface (optional): | <10% 500-800nm |
| Minimum feature size: | 5um |
| Bar / Window Ratio (50/50) | +/- 2um |
| Maximum Length = 165 mm | Thickness - .012" - .250" (.30–6.35 mm) |
| Pattern to Scale Outline (scribe and break) | +/- 165um |
| Pattern to Scale Outline (saw) | +/- 5um |
| Edge chip specification: | Maximum .010" (250 um) / Special to 20um |
| Flatness over entire substrate: | 15um, Special to 5um |
| Parallelism: | .001" over 4" |

SODA LIME GLASS SUBSTRATE PROPERTIES

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|----------------------------------|--|
| Refractive index- | 1.523 (435nm), 1.513 (645 nm) |
| Thermal Conductivity: | 0.937 W.m/m ² °C |
| Soda Lime TCE: | (0/300 °C): 8.6 x 10 ⁻⁶ /°C |
| Annealing point: | 546 C / 1015 F |
| Strain point: | 514 C / 957 F |
| Softening Point: | 726°C/1340°F |
| Substrate density: | 2.44 g/cm ³ @ 20 C / 68 F |
| Modulus of Elasticity (Young's): | 7.2 x 10 ¹⁰ Pa |
| Modulus of Rigidity (Shear): | 3.0 x 10 ¹⁰ Pa |
| Bulk Modulus: | 4.3 x 10 ¹⁰ Pa |
| Poisson's ratio: | .22 |
| Density (at 20 °C/68 °F): | 2.44 g/cm ³ |
| Hardness (Moh's Scale): | 6 - 7 |
| Knoop Hardness: | 585 kg/mm ² ± 20 |
| Specific Gravity: | 2.53 |
| Specific Heat: | 0.21 |
| Specific Weight: | 2,483 g/cm ³ |