

AF 32® Thin Glass

Product Information

AF 32® eco is an alkali-free flat glass produced by a SCHOTT specific down-draw technology, enabling production in a thickness range from 0.03 mm to 1.1 mm. Its fire-polished surface results in a low roughness value. The coefficient of thermal expansion of AF 32® eco matches silicon, therefore it is the perfect choice as optical packaging material in semiconductor related applications. Due to its high transformation temperature it can be used for high temperature applications up to approx. 600 °C. AF 32® eco is available in wafer format and is manufactured with eco-friendly refining agents.

Applications

Wafer Level Chip Size Packaging

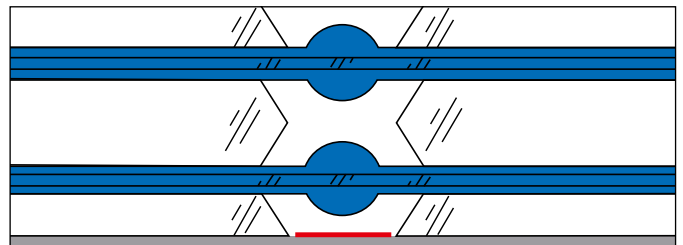
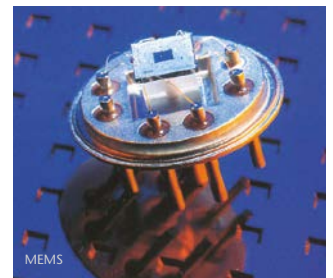
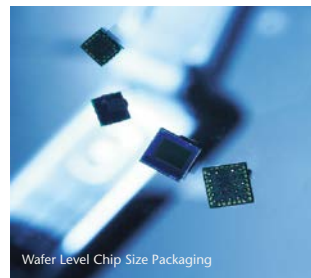
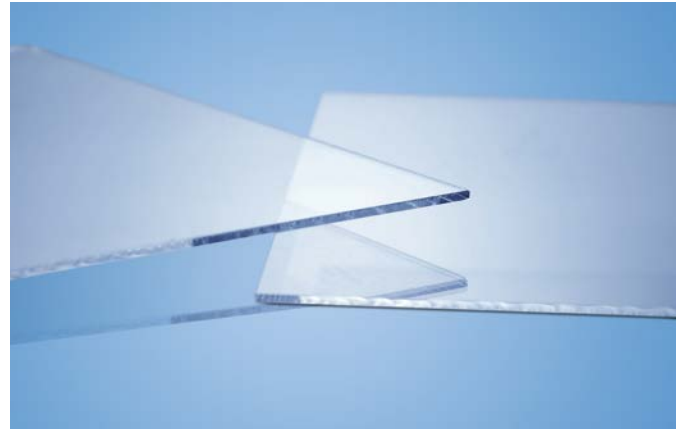
- Coefficient of thermal expansion match to silicon
- High transmittance
- Large sheet format suitable for 12-inch wafers

MEMS

- Coefficient of thermal expansion match to silicon
- Low roughness due to fire-polished surface

Wafer Level Optics

- Coefficient of thermal expansion matches
- Silicon
- High transmittance
- Several thicknesses available
- Tight thickness control
- Easy to dice by diamond saw



Technical Data

Dimensions	round and square custom size wafer formats, e.g. 6", 8" or 12"
Surface roughness	< 1 nm RMS
Thicknesses	0.03 mm up to 1.1 mm
Standard thicknesses	0.3 mm, 0.4 mm
Luminous transmittance τ_{vD65} (d = 0.5 mm)	91.9 %
Coefficient of mean linear thermal expansion α (20 °C; 300 °C) (static measurement)	$3.2 \times 10^{-6} \text{ K}^{-1}$
Transformation temperature Tg	717 °C
Dielectric constant ϵ_r at 1MHz	5.1
Refractive index n_D	1.5099
Density ρ (annealed at 40 °C/h)	2.43 g/cm ³



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