

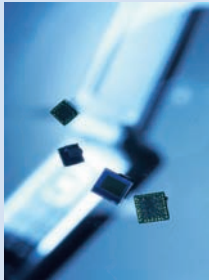
AF 32® eco Thin Glass

AF 32® eco is an alkali-free flat glass produced by the down-draw technology, enabling production in a thickness range between 0.1 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 without adding arsenic and antimony as refining agents.

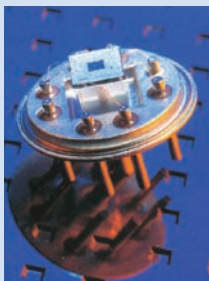


Applications



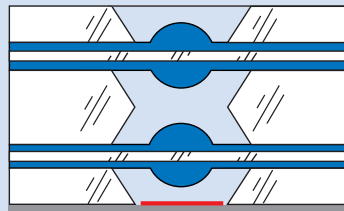
Wafer Level Chip Size Packaging

- 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
- High temperature resistance



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"
Thicknesses	0.1 mm up to 1.1 mm
Luminous transmittance T_{VD65} (d = 0.5 mm)	91.9 %
Coefficient of mean linear thermal expansion α (20 °C; 300 °C) (static measurement)	$3.2 \cdot 10^{-6} \text{ K}^{-1}$
Transformation temperature T_g	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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