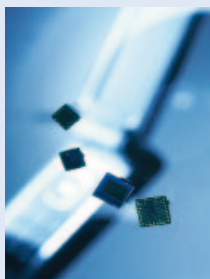


# AF 32® Thin Glass

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



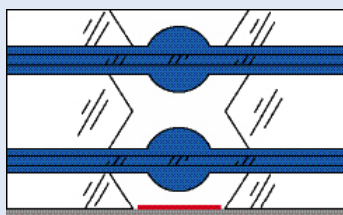
### Wafer Level Chip Size Packaging

- 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"
Thicknesses	0.03 mm up to 1.1 mm
Luminous transmittance $\tau_{\text{vD65}}$ (d = 0.5 mm)	91.9 %
Coefficient of mean linear thermal expansion $\alpha$ (20 °C; 300 °C) (static measurement)	$3.2 \cdot 10^{-6} \text{ K}^{-1}$
Transformation temperature $T_g$	717 °C
Dielectric constant $\epsilon_r$ at 1MHz	5.1
Refractive index $n_D$	1.5099
Density $\rho$ (annealed at 40 °C/h)	2.43 g/cm <sup>3</sup>

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 glass made of ideas