SCHOTT MEMpax®

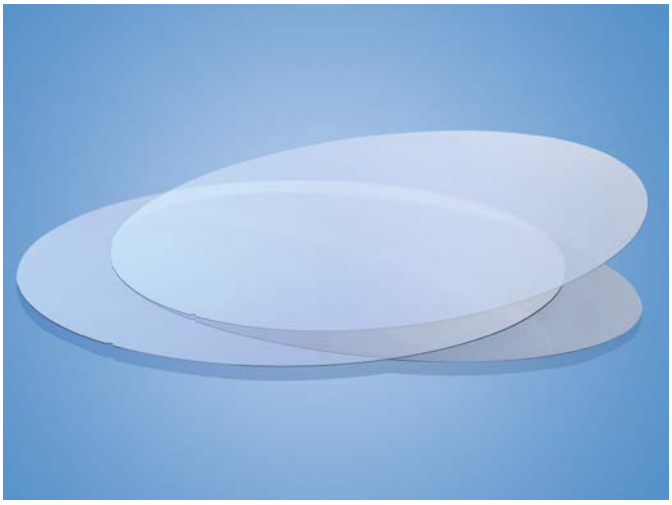
Product Information

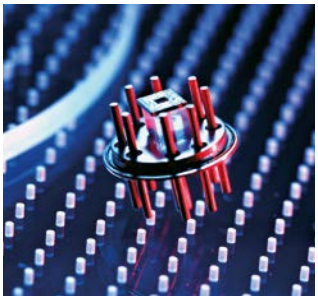
SCHOTT MEMpax® is a borosilicate glass that is manufactured with fire-polished surfaces. It has similar chemical and physical characteristics as the well-known product SCHOTT BOROFLOAT® 33.

At the same time, MEMpax® is available in much lower thicknesses and offers a thin wafer that no longer needs to be ground and polished, thanks to its excellent surface quality. SCHOTT MEMpax® can be put to use anywhere that extremely thin borosilicate glasses are needed. The coefficient of linear thermal expansion of MEMpax® corresponds with that of silicon, therefore this glass is perfectly suited for use in anodic bonding.

Its low autofluorescence, combined with its excellent surface quality, flatness and homogeneity, opens up numerous application possibilities for SCHOTT MEMpax® in MEMS and Biotechnology.

Thanks to its low alkali content, MEMpax® acts as a high-quality insulator. For this reason, MEMpax® is an extremely appropriate material for applications that require nonconductive characteristics at high temperatures (up to 450 °C).





Applications

MEMS

- Coefficient of linear thermal expansion corresponds with that of silicon
- Suited for anodic bonding
- Thin wafers without polishing
- High thermal and chemical resistance

Biotechnology

- High transmission
- Available in various thicknesses
- Low autofluorescence
- Excellent surface quality

Technical Data	
Dimensions	6”, 8” or 12” Wafer
Surface roughness	< 1 nm RMS
Thicknesses	0.1 mm to 0.7 mm
Standard thicknesses	0.2, 0.3, 0.4, 0.5, 0.7 mm
Luminous transmittance τ_{vD65} (d = 0.5 mm)	91,7 %
Coefficient of mean linear thermal expansion α (20 °C; 300 °C) (static measurement)	3.25 x 10^{-6} K^{-1}
Transformation temperature Tg	525 °C
Dielectric constant ε_r at 1 MHz	4.6
Refractive index n_D	1.4714
Density ρ (annealed at 40 °C/h)	2.2 g/cm^3

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