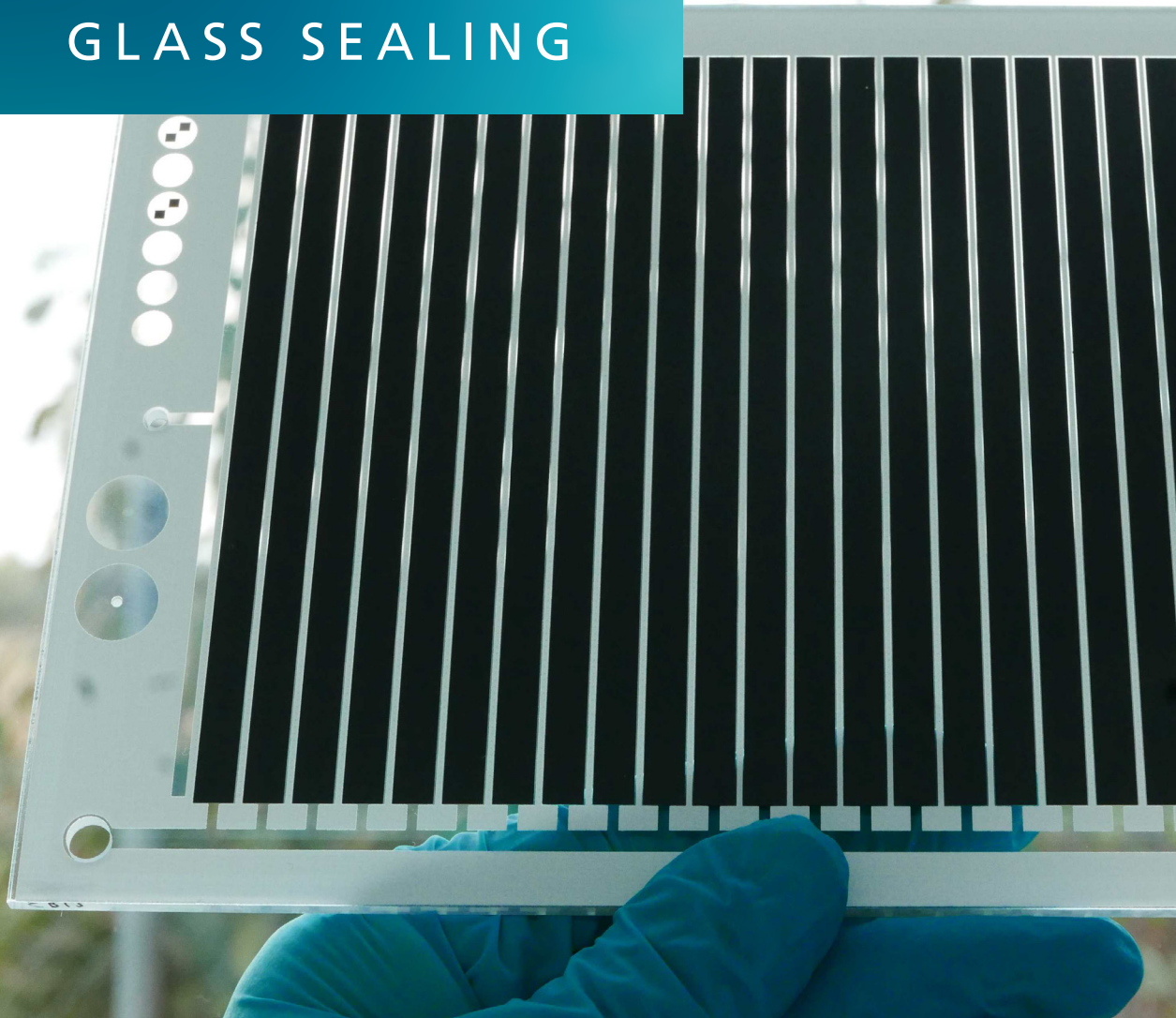


GLASS SEALING



GLASS SEALING

When other sealing materials approach their limits, GLASS SOLDERS show their full potential:

- Gastight (even H₂) bonds due to viscous flow above T_g.
- Adjustable thermal expansion coefficient (CTE), allowing strong bonding of ceramics and metals.
- Good chemical and mechanical durability up to T_g.
- Fusing temperatures from 400 °C far above 1000 °C by selected glass compositions.

For even higher temperatures up to 1200 °C and advanced applications CRYSTALLIZING GLASS SOLDERS offer:

- Mechanical and chemical durability far above T_g of the starting glass.
- Application even above sealing temperature.
- Broader range of adjustable CTE, starting from -1•10⁻⁶ K⁻¹ to 16 •10⁻⁶ K⁻¹.
- Tunable conductivity and permittivity.

We develop and produce for your needs glass sealing compositions adapted to your process applications, among others:

- CTE range
- Application temperatures
- Contact materials and operation atmospheres
- Type of application
- Adapted flow behavior
- Structuring and crystallization program (T_{max}, heat-up rate, holding times)
- Up to 50 kg solder glass as printable slurries, powders, frit or moldings.

For more information visit our website or contact us!



SUCCESS STORIES – IN USE

Hermetic compounds for
photovoltaics electronics lighting optoelectronics telecommunications
automotive technology sensors

Materials almost without thermal expansion for
ceramic hobs reflecting telescopes

Bioactive glass ceramics for medical devices

Gas-tight and insulating sealing for fuel cells

CONTACT: glassinfo@isc.fraunhofer.de | www.isc.fraunhofer.de