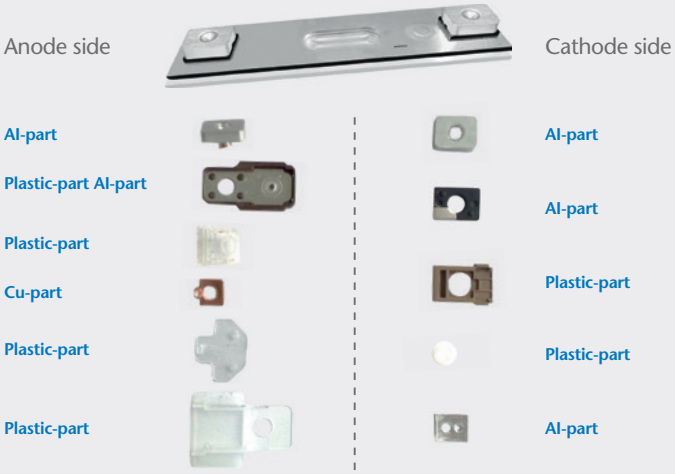
# GTAS® Inorganic & Robust Battery Cell Lids

## Reduce battery housing complexity with simple, yet more robust design


**Battery packaging impacts battery capacity and service lifetime**

- Lithium-Ion Batteries for xEVs, are exposed to many hazards during operation, including extreme temperatures, humidity, vibration, salt fog, and harmful gases.
- Therefore, battery housing and cooling is key for optimal performance and lifetime.
- Today's battery packaging, especially the lid technology, is rather complex, using multiple components to ensure battery performance and safety.

## Multi-component Battery Cell Lids



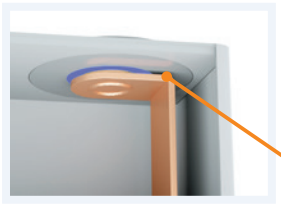

## GTAS® Battery Cell Lids – Simple & Robust


## Reduce parts to simplify battery lid construction

GTAS® Battery Lids are developed to increase leak-tightness and eliminate moisture intrusion into battery cell. This is achieved by employing a special glass seal for the battery terminals, replacing the multiple organic polymer-based sealing components.

Inorganic and robust GTAS® lid design allows battery developers to reduce the number of parts needed. This enables a simplified lid construction, potentially even reducing the number of parts used for the battery packaging as a whole by bringing reliable, long-term hermeticity to the cell level.

## Flexible designs of current collectors

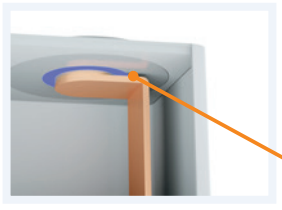


**Laser welded**

**Contacting option 1**

Sealed Pin contacted to current collector by laser welding

only 1mm distance between glass and current collector is needed



**Continous Pin**

**Contacting option 2**

Direct sealing of current collector (continous Pin design)

only 1mm distance between glass and current collector is needed

## Glass-to-metal sealed Battery Lids – The preferred and proven packaging technology for Lithium Primary Batteries

Glass-to-aluminium sealing (GTAS) is a proprietory technology developed based on SCHOTT's expertise in glass-to-metal sealing (GTMS) since 1939. Glass-to-metal sealing is the standard packaging for millions of high-performing, long life Lithium Primary Batteries in automotive and other applications.

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