# SCHOTT GTAS® Leak-tight Ultracapacitor Lids for eBus & Tram

- Designed to perform for years and years
- For millions of charging & discharging cycles



#### Rugged & safe

- Easy to assemble
- Simple and mechanically strong
- Superior robustness: specialty glass-toaluminium sealed capacitor terminals, replacing organic polymer or rubber sealing



### Long cycle life = Reduced Total Cost of Ownership (TCO)

- Non-aging, inorganic sealing material
- Maintains hermeticity on cell level for years (10-8 mbar × l/s helium-tightness)
- Designed to eliminate moisture intrusion



#### High temperature resistance

 From -40°C to over +125°C thanks to glass-sealed capacitor terminals



#### **Miniaturization**

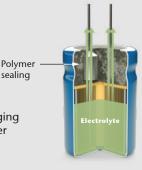
- GTAS Ultracapacitor Lids: A small design change enables significant reduction in capacitor size
- 20% less electrolyte volume needed
- Improvement of internal resistance by more than 50%
- Reduction of capacity loss over time by up to 60%



## Conventional Designs

#### **Electrolyte leakage**

Organic seals suffer from aging and may become brittle over time



#### SCHOTT Hermetic Designs

**Fully gastight**Glass is inorganic and non-aging



#### **Glass-To-Metal Sealed Lids**

For decades, glass-to-metal sealed (GTMS) lids have been used as the standard housing technology for high quality and high volume automotive Lithium Primary batteries as well as industrial-grade Lithium Ion batteries.

Glass-to-aluminium sealing (GTAS) is a proprietory technology based on SCHOTT's expertise in glass-to-metal sealing since 1939.

Specialty glass
Aluminium or copper pin
Aluminium can





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