

Operating at high ambient temperature (40°C)



L.Pack Lithium-ion Battery 48VDC – 42Ah – 2kWh

This test confirms L.Pack's ability to deliver **high power in 40°C heat**, enabled by Calogy's proprietary integrated thermal management. Even under demanding cycles, LPack maintained <8°C above ambient and <1°C internal variation, with no external cooling system. This level of thermal stability is ideal for **ePTO systems** and **non-road mobile machinery**, where compact, reliable power is essential - even in harsh conditions.

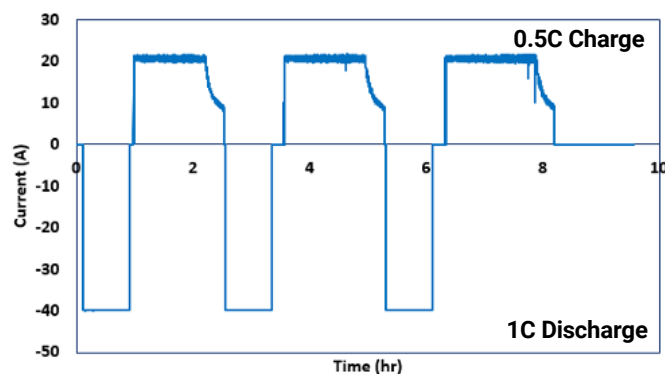
Objectives

- Demonstrate intense operation at high temperature.
- Measure the pack temperature and temperature non-uniformity.

Test conditions

Intense Operation : Repeated Discharge-Charge cycles

- Initial and ambient temperature: **40°C**
- **1C** constant current discharge of 40A for 80% DOD
- CC-CV charge [20A (**0.5C**), 53V]
- Resting time between charge and discharge: 3 min
- Initial State of Charge (SoC): 97%.
- Number of cycles: 3



Results and conclusions

- The temperature difference between the cells and the ambient is less than 8°C. The cells therefore remain in the safe operating zone even in a hot ambient and under intense operation.
- Exceptional temperature uniformity across cells (**less than 1°C**) for an extended lifetime, demonstrating the high performance of the proprietary embedded thermal management technology.

