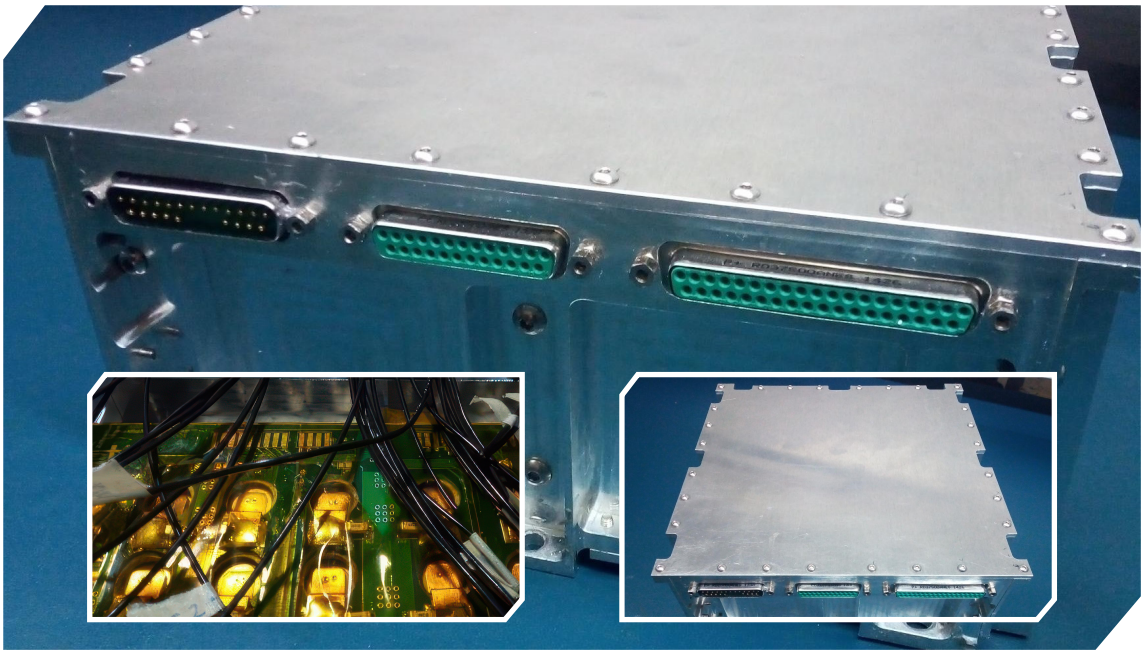
CYM-PG-04309-V02

AVIONICS

AVIONICS BATTERY

Overview



The cells used are NCA-type (Nickel Cobalt Aluminum - Lithium), and feature a specific energy of 243 Wh/kg with a nominal capacity of 3.35Ah. Each cell undergoes a rigorous selection process based on a statistical analysis of its capacities.

Our battery stands out for:

Designed for launch vehicles: Advanced battery with high capacity and adaptability to various operating conditions, ideal for demanding applications.

High-energy performance: Effective operational capacity of 19.6Ah, ensuring reliability under intensive use conditions.

Thermal versatility: Reliable operational temperature range from −10°C to 45°C, capable of withstanding extreme environmental conditions.

Balanced performance: Stable and safe voltages during charge and discharge, optimizing lifespan.

Adaptive power: Supports charge and discharge currents of up to 20A, providing reliable performance in high-demand energy applications.

Guaranteed durability: Designed to operate within a safe depth of discharge (DOD) level, maximizing lifespan and reliability.

Main features

BOL (beginning of life) Capacity
20.4Ah (3.4Ah / cell at C/10 discharge rate)

BOL Capacity under real operating conditions
19.6Ah (3.25Ah / cell at C/2 discharge rate)

Maximum operating temp. range
-10°C to 45°C

Optimal operating temp. range
5°C to 30°C

Maximum charging voltage (100% SOC)
33.6V (4.2V / cell)

Minimum discharge voltage (0% SOC)
24V (3V / cell)

Average discharge voltage
29.6V between 50% and 80% SOC (3.7V / cell)

Maximum charging current
20A

Nominal charging current
12A (6 x 2A)

Maximum discharge current
20A

Nominal discharge current
12A

Minimum safe DOD
20%

Recommended op. DOD
≥ 40%

Qualified and Tested for Space Readiness

Our battery has successfully passed rigorous environmental tests to ensure reliability and performance under the demanding conditions of aerospace missions:

- **Vibration Testing**: Qualified under NASA GSFC-STD-7000 levels, including Sine Burst up to 4.1 g and Full Random profiles with 14.1 Grms over 20–2000 Hz, demonstrating mechanical robustness and launch survivability.
- **Thermal Cycling**: Validated from –20°C to 40°C, simulating operational temperature extremes for reliable performance across diverse environments.
- **Vacuum Exposure:** Successfully tested under ambient-temperature vacuum conditions, verifying structural integrity and operational safety in low-pressure environments.

These tests confirm the battery's ability to perform consistently in harsh aerospace conditions, making it a dependable choice for launch vehicles and advanced space systems.

Specifications are subject to change without prior notice. For detailed technical information, please contact our technical team at scostamagna@veng.com.ar.

Commercial Inquiries

Lucas Tornado

ltornado@veng.com.ar

+54 9 35476-31792

Technical Contact

Sebastián Costamagna

scostamagna@veng.com.ar

+54 9 3547-651780

VENG.COM.AR

VENG-ARGENTINA

VENG_ARGENTINA