Intelligent Li-Ion Polymer Power System
Multiple Aerospace Platforms
Rockets, Missiles, Hypersonic Vehicles, Strike Weapons

Intelli-Pack®
Li-Ion Polymer
3.3Ah FTS Battery
Space Environmental
Qual Tested

FEATURES AND BENEFITS

- 200 Wh/Kg Energy Density
- Battery box is composed of Intelli-Pack® Li-Ion Battery, 33.6Vdc, 3.3Ah
- Li-Ion Polymer Cells have no leakage and can be oriented in any direction
- Highly immune to shock and vibration
- Can be recharged from depletion to 96% in less than 1 hour (1C charge rate)
- Recharge Cycle Life > 1000 cycles
- Li-Ion Intelli-Pack® battery issues can be diagnosed and repaired in < 5 minutes
- RCC 319 for Range Safety Space Qualification for FTS Li-Ion Batteries

BATTERY MANAGEMENT SYSTEM

- Class III PCBA with automatic overvoltage, undervoltage, short circuit and thermal protection for all cells in series, and cell balancing
- Health status is provided in real-time via a Windows GUI that includes individual cell voltages, SOC, SOH battery current and temperatures

INTELLI-PACK® PCBA

- Up to 30 Amps continuous current 33.6 Vdc, 3.3 Ah Li-Ion Polymer Intelli-Pack® Battery
- Intelli-Pack® cell voltages transmitted via a unique I2C bus
- Voltage monitoring and cell balancing of all Li-Ion Polymer series cells are displayed on a Windows GUI and Data Logger via portable computer or sent via telemetry (RS-422 or RS-485 Comm Ports)

Li-Ion Polymer Battery Technical Information

Battery Unit Physical Characteristic

Dimensions: 6.75”L x 4”W x 2.8”H (inches)
Weight: 3.25 lbs (shown to right with internal BMS PCB and Connectors)

Electrical:

Power: 33.6Vdc, 3.3Ah
Current Sink: 6.6 Amps Continuous
16.5 Amps (Pulse, 200 msecs)

Advanced Li-Ion Polymer Batteries for Aerospace Implementation Now!

Li-Ion Polymer combines high-energy and low internal resistance with the reliability and packaging flexibility to any box mechanical dimension

1. ***Electrolyte, no leakage***: All solid components, requiring no bulky cell housings. The result is a safer, more efficient package.
2. ***Lightweight:*** *200 Wh/Kg* Li-Ion Polymer Cells can be stacked and wired in parallel or series to meet customer requirements
3. ***Shock and Vibe***: Li-Ion Polymer meets or exceeds all shock and vibe requirements for all aerospace applications. It weighs less and has 2 to 3 times the energy density of batteries currently used on aerospace missions (i.e. Silver Zinc, Nickel Cadmium).

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33.6Vdc, 3.3 Ah LiPo Battery Unit

Environmental Specifications:

SPACE ENVIRONMENT QUAL:

Thermal Cycle: -40C to +55C (24 cycles)

Vacuum: 1*10-5 Torr

Random Vib.: 16.4 grms, 3 mins per XYZ axis
0 to 2000 Hz

Sine Vibration: 70 and 100Hz, 18G
500 and 700Hz, 7.8G
1100 and 1400Hz, .6G

Shock:

Freq. (Hz)	Shock Level (g)
100	226
1000	400
1800	735
10000	735

Three Hits: +/- XYZ Axis

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Patent # 9,748,541 B2