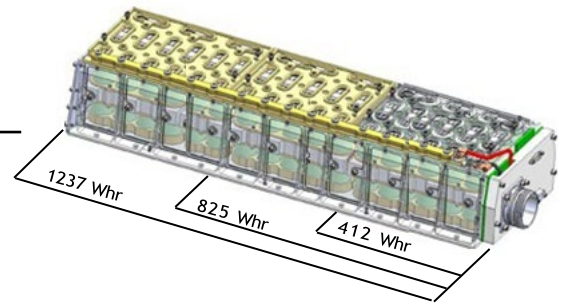


B50-412/825/1237

50-Volt Modular Battery



OVERVIEW

Ibeos' 50-Volt lithium-ion battery assemblies are radiation tolerant and fault tolerant. There are three unique configurations available with 412, 825 and 1237-Watt-hour capacity, respectively. The aluminum and PEEK packaging is rigid, thermally conductive, and enables flexible mechanical and thermal spacecraft interfacing. Thermistors and polyimide thermofoil heaters allow for thermal control. Radiation tolerant battery interface electronics (BIE) provide a storage inhibit in addition to over-voltage, over-current, and under-voltage protection.

SPECIFICATIONS

Parameter	Configuration		
	12S2P	12S4P	12S6P
Capacity (Whr)	412	825	1237
Max. Discharge Rate (A)	20	40	60
Recommended Charge Rate (A)	5	10	15
Heater Power @ 28V, ea.	20W	40W	60W
Mass (Kg)	3.0	5.9	8.8
Length Dimension (mm)	185	350	515
Width and Height Dimensions (mm x mm)	147 x 90		
Operating Voltage	36 V to 50.4 V		
Charge Cell Temperature	0 to 45 °C		
Discharge Cell Temperature	-25 to 55 °C		
Single Event Effects	Operate through: LET > 37 Survive: LET > 55		
Total Ionizing Dose	30 kRad (Si)		

PACKAGING

- Bottom mounting
- Aluminum chassis with PEEK cell capture plates
- External aluminum surfaces treated with MIL-DTL-5541 Type II, Class 3 chem film
- Kapton thermofoil heaters

BUILT-IN PROTECTION

- Over-voltage, under-voltage
- Over-current charge and discharge
- Survives sustained short-circuit
- Storage/pre-launch inhibit interface

ELECTRICAL INTERFACE

- 1x 100-Pin scoop-proof 38999 connector
- 1x 21-Pin Micro-D Connector
- Connections for
 - Protected power
 - Battery voltage sense
 - Heater
 - Inhibit
 - PT1000 RTD thermistors



B50-825 Battery