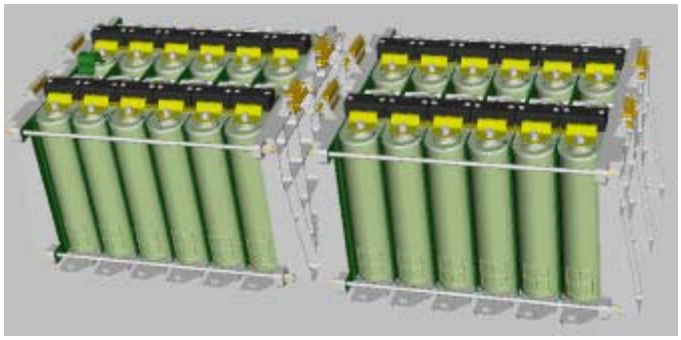
Lithium Ion Battery Module

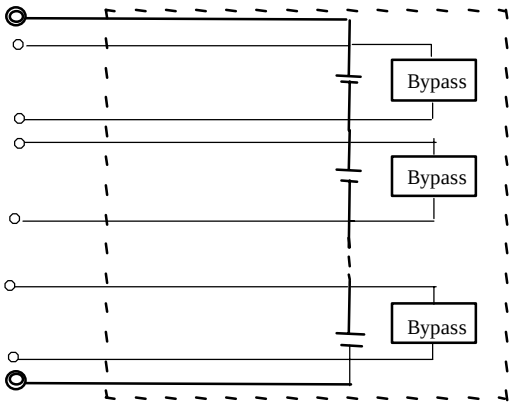
(5kw Class Lithium Ion Battery)



Features

*Light weight : Over than 100 wh/kg
High specific energy
*Small volume : Less than 32 wh/l
High energy density
*Small number of cells for Battery
High discharge voltage (3.6V/one cell)
*No trickle charge
Small self discharge current: 0.1%/day
*No reconditioning operation
No memory effect
*Long life : longer than 15 yeas
for GEO satellite and 7years for
LEO satellite

Block Diagram



Protection

*Overcharge: Cell voltage is controled by each individual charge circuit in BCE.
*Open failure: By-pass switch on each cell protects open cell failure by closing the circuit.
*Electrical insulation failure: Double insulation between cell case and chassis protects the failure.
*Low temperature: Heater elements on the cell mounting structure protect the low temperature.

Performance Summary

Items	Description	Remarks
Voltage Range (V)	72 - 96	
Nominal Voltage (V)	86.4	
Capacity (Whr)	8640	
Discharge Current : Max. (A)	300	3C, 2 sec.
Discharge Current : Cont. (A)	100	1C
Life for LEO satellite	7 years (38,000 cycles)	@ DOD: 20%
Life for GEO satellite	15 years (1,500 cycles)	@ DOD: 56%, (Ave), 70% (max)
Resistance (mohms)	48	
QT Temperature Range (deg-C)	-10 to +35	
AT Temperature Range (deg-C)	0 to +25	
Weight (kg)	81.0	without mounting panel
Dimensions (mm)	823(W) x 340(L) x 249.4(H)	