



## COTS Satellite Battery



## Incorporating lithium-ion cells to deliver a proven battery design for space applications

### Lithium-Ion Cells

#### Features and Benefits

- Autonomous cell bypass capability
- Backup voltage and temperature telemetry
- Long operating life
- Rugged package meets all space qualified levels
- Sophisticated battery management system that optimizes the life of the cells
- Low cost solution
- Eliminates the possibility of cell propagation
- Panasonic or LG 18650 cells
- Standardized virtual cells
- High voltage and power configurations
- Power density for small cell count

#### Applications

- Aerospace
- Low-earth orbit satellite missions
- Scientific and exploratory satellite missions
- CubeSat and small satellites

#### Specifications

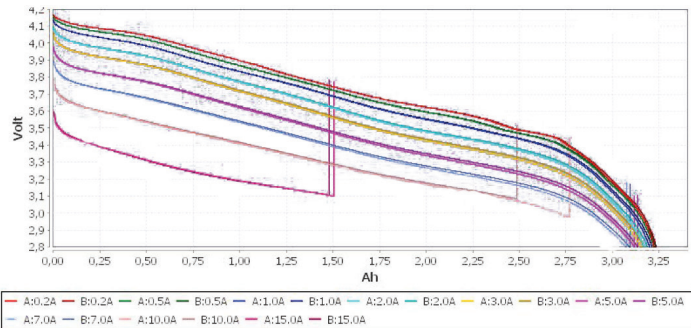
Weight	9.4 to 27.0 kg (21 to 60 lbs)
Dimensions	See details on back
Voltage Range	14 to 48V
Nominal Capacity	22 to 39Ah at 20°C (68°F)
Energy Density	22 to 39 Wh/kg
Discharge Rates	Max constant current 48A
	Max pulse current (<1 sec.) 100A

#### Electronics Options

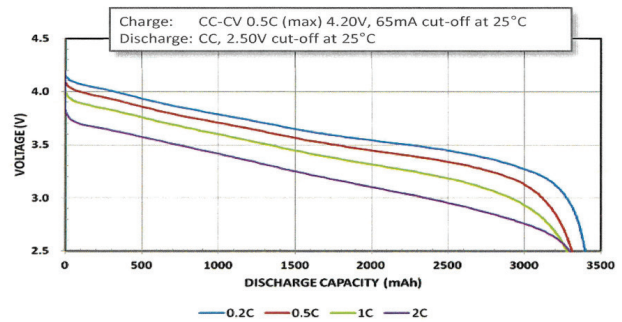
- Battery charging
- Cell charge balancing
- Battery monitoring (volts and temperature)
- Telemetry interfaces
- Cell/battery heaters with controllers
- Battery disconnect

# COTS Satellite Battery

Discharge, capacity : LG INR18650MJ1



Discharge, capacity : Panasonic NCR18650B



Virtual cell design is available in two formats:

- 20/16 - 18650 cells in parallel
- Two serial strings of eight - 18650 cells in parallel

Formats:

- Large Format:
  - 60.0 X 33.0 X 11.6 cm (23.6 X 13.0 X 4.6 in.)
  - 8 series 16 parallel cells
  - 16 series 8 parallel cells
- Medium Format:
  - 30.0 X 33.0 X 11.6 cm (11.8 X 13.0 X 4.6 in.)
  - 8 series 16 parallel cells
  - 16 series 8 parallel cells
- Small Format:
  - 30.0 X 16.5 X 11.6 cm (11.8 X 6.5 X 4.6 in.)
  - 4 series 16 parallel cells
  - 8 series 8 parallel cells

