



Lithium ion cells for Satellite applications LSE series



Overview

The LSE family of Lithium ion cells is specifically designed for the highest reliability and performance to meet the requirements of long duration satellite missions.

Features

- High energy density
- Excellent discharge characteristics
- Excellent cycle life
- Sealed Structure
- Elliptic cylindrical shape for efficient packing and battery design

Applications

- Satellites
- Other uses where high reliability and long life required

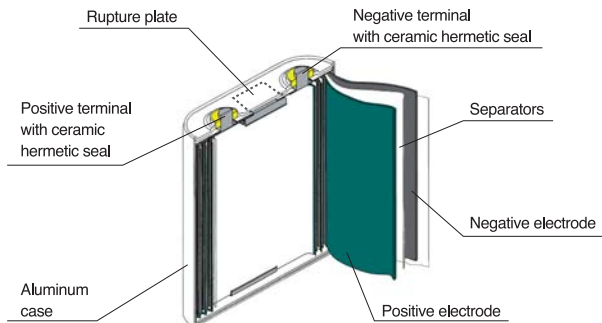
Cell specification

		LSE50	LSE100	LSE175
Nominal voltage (V)		3.7		
Capacity (Ah)	Rated	50	100	175
	Nominal	55	110	183
Dimensions(mm)	Width	130	130	165
	Thickness	50	50	50
	Height	123	208	263
Weight (Kg)		1.50	2.79	4.65
Specific Energy (Wh/kg)		136	146	146
Energy Density (Wh/l)		277	328	334
Maximum charge rate(CA)		0.5		
Maximum discharge rate(CA)		1.0(continuous), 3.0(5 sec. pulse)		
Recommended temperature range	Charge	10°C~+35°C		
	Discharge	-10°C~+35°C		
	Storage	-10°C~+10°C		
Maximum AC impedance at BOL (1kHz, 25°C)		0.9mΩ	0.7mΩ	0.6mΩ

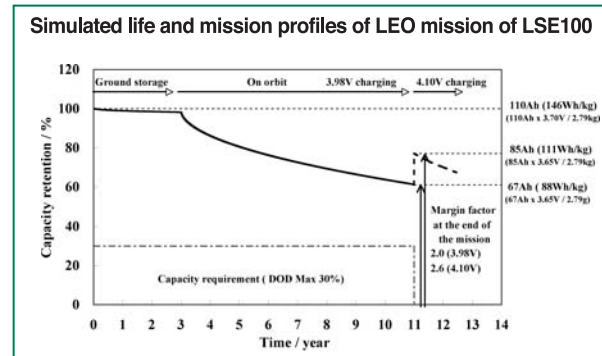
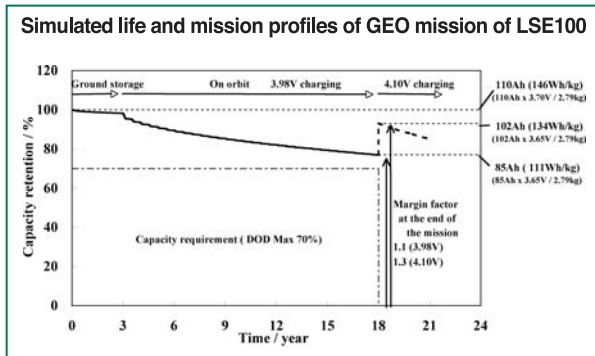
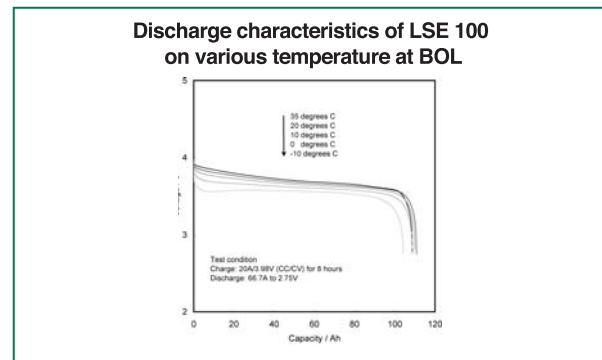
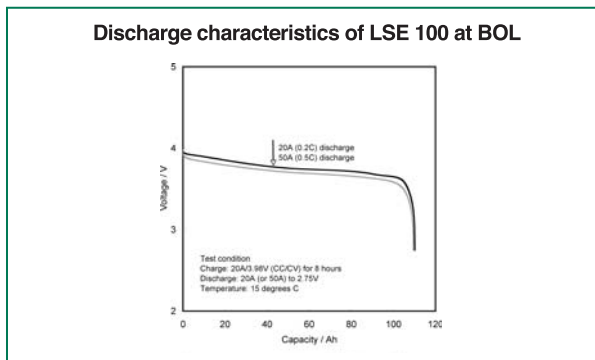
Technology

- **Hermetically-sealed cell:**
Achieved using laser welded construction along with a ceramic terminal seal.
- **Lithium Cobalt Oxide cathode material:**
Provides the best combination of high reliability, high-energy storage, and long life on orbit.
- **Elliptical cylindrical construction:**
Allows for better thermal management and packaging efficiency when compared to cylindrical cells.

Cell construction



Cell Characteristics



Safety and Handling information

To insure personnel safety and specified product performance, read and understand the LSE Instruction Manual before handling, testing, or installing the cells. Inappropriate handling or application of the cells can result in reduced cell life and performance, electrolyte leakage, high cell temperatures, and even the possibility of smoke generation and fire.

GS Yuasa strongly recommends that LSE cells be utilized with appropriate battery protection circuitry. Recommended protection circuitry requirements are available upon request. GS Yuasa can also provide battery systems, complete with cell balancing, monitoring and protection electronics for your specific application.

Cell design details and specifications are subject to change without notice.

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