

Ultracapacitor System

MW-scale Ultracapacitor ESS for Enhanced STATCOM

LS UltraGrid (19" Rack)



SMART BALANCING

Single cell / Module-to-Module / Rack-to Rack

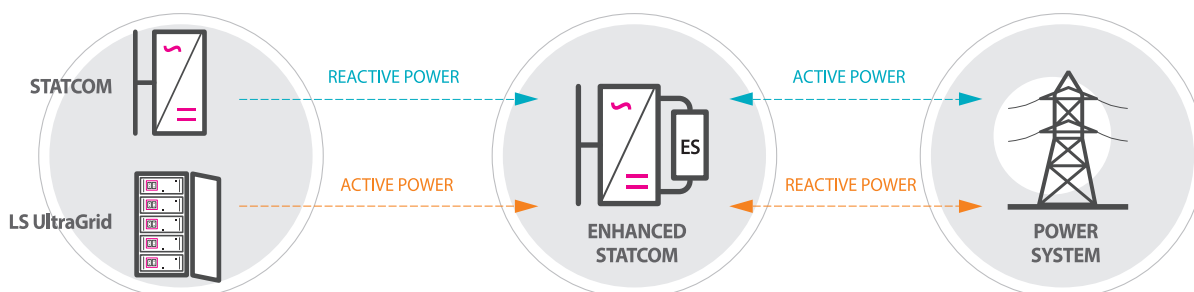
SoH / SoA ESTIMATION SOFTWARE

Life Time Estimation by Cutting-Edge Algorithm

CMS (Capacitor Management System)

SPECIFICATION

Voltage	1,440V
Capacitance	7.1F
Max DC ESR	88mΩ
Max Current	3.1kA
Number of Units	10 Rack modules + 1 CPU module
Size	600W x 700D x 2,100H mm – 43U(19")



LS UltraGrid Module (19" Rack Module)



CAN 2.0B Communication Interface & Remote FW Update

19" Rack-Compatible

Designed for industrial standard cabinets and containers

SPECIFICATION

Voltage	144 V
Capacitance	70.8F
Max DC ESR	8.1mΩ
Max Current	3.2kA
Cells	3V 3400F cell in 48 series
Size	482W x 597D x 174H mm – 4U(19")

New Cell & New Module

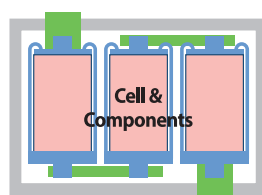
Low ESR Cell Enhanced Power		High Capacitance Cell Enhanced Energy	
ESR 30~50% ↓ Power Density 20~40% ↑		Energy Density 20% ↑	
 3V 360F 3.2mΩ → 1.7mΩ 335A 0.45Wh Ø35x61mm	 3V 3400F 0.2mΩ → 0.14mΩ 3.4kA 4.25Wh Ø60x138mm	 3V 600F 2.8V → 3.0V 0.65Wh → 0.75Wh 3.2mΩ 308A Ø35x71mm	 3V 4000F 3400F → 4000F 5.0Wh 0.23mΩ 3.1kA Ø60x138mm

Celldule 16.2V 200F World's First Innovative Technology

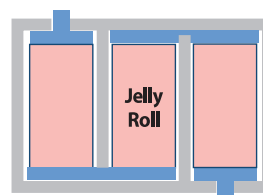
- Innovative Structure : Jelly Roll directly into the Module
- High-Voltage and High-Capacity Cell with Module-Level Performance



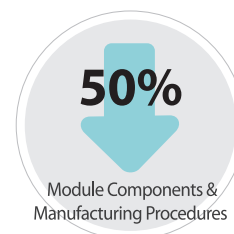
CELLDULE™
LS ULTRACAPACITOR



- Existing Module -



- Celldule -



- Price Competitiveness
- Double Energy Density
- Compact Size & Lightweight
- Quality Improvement

SPECIFICATION

Stored Energy	7.29Wh (4.05Wh/Kg)	Max ESR (DC)	4.0mΩ
Size	1.8kg / 258L x 168W x 47.5H mm	Max Current	1,000A

DC CAN Module 54V 188F Enhanced Communication Function



CAN 2.0B Communication Interface

Enhanced Balancing

Smart Single Cell Balancing Module to Module Balancing

SPECIFICATION

Cells	3V 3400F cell in 18 series	Max ESR (DC)	4.4mΩ
Max Current	2,700A	Total Energy	76.4Wh
Size	14kg / 194.5L x 419.5W x 177H mm		