

LSUM 168ROL 0005F EA

The Ultracapacitor, also known as double-layer capacitor, stores energy by means of a static charge as opposed to a battery, which uses an electrochemical reaction.

The Ultracapacitor is used for energy storage applications which undergo very frequent charge and discharge cycles at high current and short duration. Its life can be as high as one million cycles. It features a wide operating temperature range, from - 40°C to 65°C, making it an ideal energy storage device for extreme environments.

It can be applied in wind power, hybrid systems, industrial automation, power backup and stabilization. Imagination is its only boundary.



* This is an image for reference.

PERFORMANCE SPECIFICATIONS

Rated Voltage(Nominal)	168 V
Serge Voltage	180 V
Max. Series Voltage	750 V
Capacitance	5.0 F
Capacitance Tolerance	- 0% / + 20%
Max. ESR DC	240 mΩ
Typical ESR DC	180 mΩ
Total Energy	22.7 Wh
Max. Current ¹	200 A
Leakage Current ²	< 25 mA
Rated voltage of Cells	2.8 V
Capacitance of Cells	350 F
Number of Cells	60 Series

¹ The stated maximum peak current should not be used in normal operation and is only provided as a reference value.

² The module leakage current is based on the calculated value. It may change depending on the cell balancing configuration.

LIFE INFORMATION

Endurance Life (65 °C)	1500hr
Capacitance Change ³	< 20%
ESR DC Change ⁴	< 100%
Projected Life (25 °C)	10 Years
Capacitance Change ³	< 20%
ESR DC Change ⁴	< 100%
Projected Cycle Life (25 °C) ⁵	500,000 Cycles
Capacitance Change ³	< 20%
ESR DC Change ⁴	< 100%
Shelf Life (25 °C) ⁶	4 Years

³ Decrease from minimum initial value.

⁴ Increase from maximum initial value.

⁵ Cycle Life may vary for different working conditions. (e.g. voltage or temperature)

⁶ Stored uncharged state under appropriate storage conditions.

THERMAL SPECIFICATIONS

Max. Continuous Current ΔT=15 °C ⁷	7 A
Max. Continuous Current ΔT=40 °C ⁷	12 A
Thermal Resistance (°C/W) ⁸	1.28 °C/W

⁷Initial state value.

⁸The specification is calculated under limited conditions.

SAFETY INFORMATION

Short Circuit Current ⁹	700 A
Isolation Voltage (DC, Terminal – Case, 60 sec)	2.5 kV
Certification	RoHS, REACH, UL810A

⁹Calculated value. Do not use as an operating current.

MONITORING INFORMATION

Temperature Sensor	NTC thermistor
Communication Interface	Analog
Connector	M5 terminal
Cell Voltage Monitoring	Half voltage monitoring
Cell Balancing	Passive

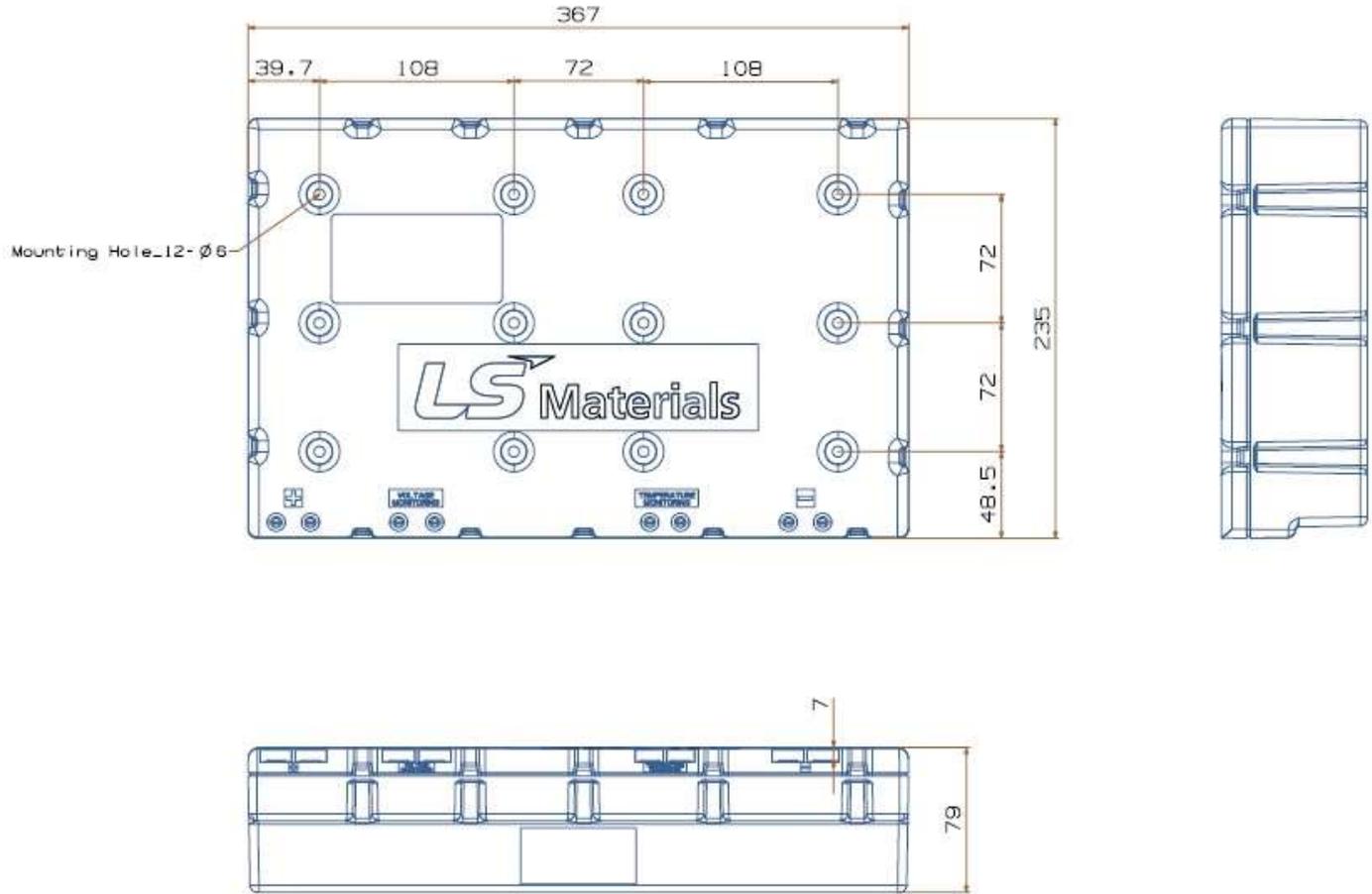
MECHANICAL SPECIFICATIONS

Length	235.0 ± 1.0 mm
Width	367.0 ± 1.0 mm
Height	79.0 ± 1.0 mm
Weight	Max. 6.5 kg

PHYSICAL SPECIFICATIONS

Power Terminals	M5
Recommended Torque (Terminal)	3 Nm
Recommended Torque (Monitoring)	1.5 Nm
Vibration & Shock Protection ¹⁰	IEC 60068-2-6 / IEC 60068-2-27
Environment Protection ¹⁰	IP 54

¹⁰The specifications are for tests with limited conditions and may different under actual conditions.



Markings

- Positive / Negative terminal
- Serial number
- Part number
- Warning marking

Accessories (Not Included)

Notice : Product dimensions and specifications may change without notice. Please contact LS Materials for any technical specifications.