

LSUM 048R6C 0166F EA DC

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.



PERFORMANCE SPECIFICATIONS

| | |
|------------------------------|-------------|
| Rated Voltage(Nominal) | 48.6 V |
| Serge Voltage | 51.3 V |
| Max. Series Voltage | 750 V |
| Capacitance | 166 F |
| Capacitance Tolerance | -0% / + 20% |
| Max. ESR DC | 5 mΩ |
| Typical ESR DC | 3.7 mΩ |
| Total Energy | 54.5 Wh |
| Max. Current ¹ | 2,400 A |
| Leakage Current ² | < 5 mA |
| Rated voltage of Cells | 2.7 V |
| Capacitance of Cells | 3000 F |
| Number of Cells | 18 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 | 1,000,000 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 | 80 A |
| Max. Continuous Current ΔT=40 °C ⁷ | 130 A |
| Thermal Resistance (°C/W) ⁸ | 0.47 °C/W |

⁷Initial state value.

⁸The specification is calculated under limited conditions.

SAFETY INFORMATION

| | |
|--|---------------------|
| Short Circuit Current ⁹ | 9,700 A |
| Isolation Voltage (DC, Terminal - Case) | 2.5 kV |
| Certification | ROHS, REACH, UL810A |

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

MONITORING INFORMATION

| | |
|-------------------------|-----------------------------|
| Temperature Sensor | NTC thermistor |
| Temperature Interface | Analog |
| Connector | Deutsch DTM |
| Cell Voltage Monitoring | Over Voltage Alarm (option) |
| Cell Balancing | Active, Passive (option) |

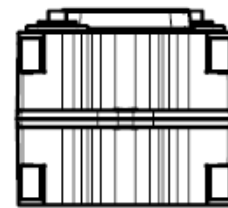
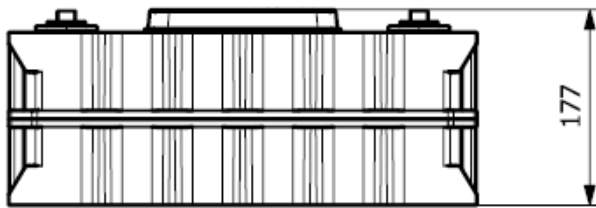
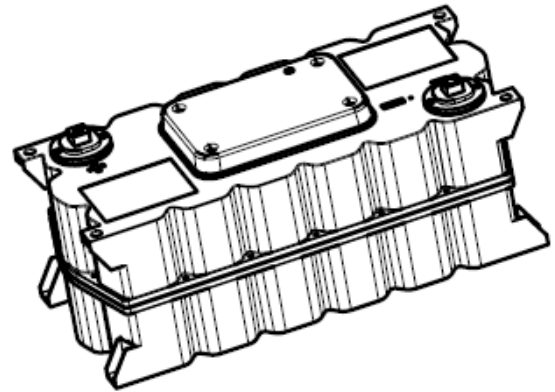
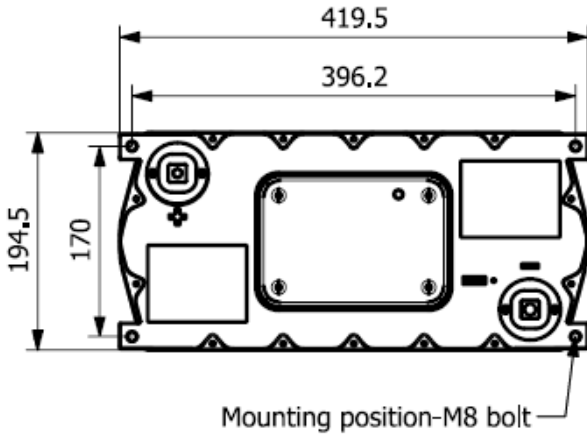
MECHANICAL SPECIFICATIONS

| | |
|--------|----------------|
| Length | 194.5 ± 1.0 mm |
| Width | 419.5 ± 1.0 mm |
| Height | 177.0 ± 1.0 mm |
| Weight | Max. 14.0 kg |

PHYSICAL SPECIFICATIONS

| | |
|--|-------------|
| Power Terminals | M8 / M10 |
| Recommended Torque (Terminal) | 20Nm / 30Nm |
| Vibration & Shock Protection ¹⁰ | IEC61373 |
| Environment Protection ¹⁰ | IP 65 |

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

- 7283704 Alarm mate cable

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