



## CEEA SERIES

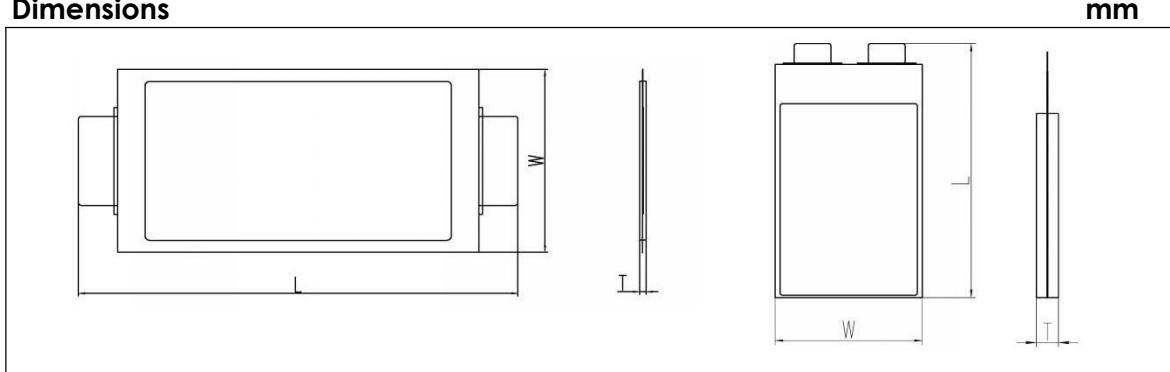
## ■ Features

- Lower ESR ,
- Wider temperature range
- High energy density
- High power density
- RoHS compliant



| Items                        | Characteristics   |                   |                                     |
|------------------------------|---|-------------------|-------------------------------------|
| Rated Voltage                | 2.5V~4.0V   |                   |                                     |
| Operating Temperature Range  | -25 ~+55°C  |                   |                                     |
| Surge Voltage                | 4.35V   |                   |                                     |
| Capacitance Range            | 1000~16000 F  |                   |                                     |
| Capacitance Tolerance (25°C) | -20~+20%  |                   |                                     |
| Temperature Characteristics  | The specifications shall be met at category temperature range from -25°C to 55°C                        | Capacitance range | Within 40% of the value at 25°C     |
|                              |   | ESR <sub>AC</sub> | Less than 400% of the value at 25°C |
| High Temperature Loaded      | The specifications shall be met after rated voltage applied at 55°C for 1000 hours                      | Capacitance range | Within 20% of the initial value     |
|                              |   | ESR <sub>AC</sub> | Less than 200% of the initial value |
| High Temperature Storage     | The specifications shall be met after storage at 55 °C for 1000 hours                                   | Capacitance range | Within 20% of the initial value     |
|                              |   | ESR <sub>AC</sub> | Less than 200% of the initial value |
| Cycle Life                   | The specifications shall be met after 50,000 cycles at 25 °C , cycle of charge/discharge from 2.5~4.0V. | Capacitance range | Within 20% of the initial value     |
|                              |   | ESR <sub>AC</sub> | Less than 200% of the initial value |

## Dimensions



mm

## Standard Ratings for CEEA Series

| U <sub>R</sub><br>(Surge Voltage)<br>Code | Rate<br>d<br>Cap.<br>25°C | Impedance         |                             | Rated<br>Current | Self-discharge<br>(72hrs) | Dimension<br>(L*W*T) | P/N         |
|---|---------------------------|-------------------|-----------------------------|------------------|---------------------------|----------------------|-------------|
|   |                           | ESR <sub>DC</sub> | ESR <sub>AC</sub><br>(1KHz) |                  |                           |                      |             |
| (v)                                       | (F)                       | (mΩ)              | (mΩ)                        | (A)              | (V)                       | (mm)                 |             |
|   | 1000                      | ≤20               | ≤9                          | 5                | ≥3.92                     | 100 x 71 x 3.0       | CEEA4R0108M |
|   | 2000                      | ≤9                | ≤5                          | 10               | ≥3.92                     | 100 x 71 x 5.5       | CEEA4R0208M |
|   | 4.0<br>(4.35)             | 3200              | ≤5.5                        | ≤3               | ≥3.92                     | 100 x 60 x 9.0       | CEEA4R0328M |
| 4R0                                       | 6000                      | ≤3.5              | ≤2.5                        | 30               | ≥3.92                     | 295 x 123 x 3.5      | CEEA4R0608M |
|   | 10000                     | ≤1.8              | ≤1.2                        | 50               | ≥3.92                     | 295 x 123 x 5.5      | CEEA4R0109M |
|   | 16000                     | ≤1.2              | ≤1.0                        | 50               | ≥3.92                     | 295 x 123 x 8.0      | CEEA4R0169M |