



ENOV (HUIZHOU) NEW ENERGY TECHNOLOGY CO., LTD

# CAR START-STOP LITHIUM BATTERY

## PRODUCT DATASHEET





## PRODUCT CHARACTERISTICS

- 100C ultra-high rate discharge performance.
- Wide temperature range adaptive system(-30℃~65℃) .
- Long-term circulation and low self-discharge characteristics.
- Light weight structure design.
- Full scene power adaptation.
- Bluetooth system can be installed.

## SPECIFICATIONS



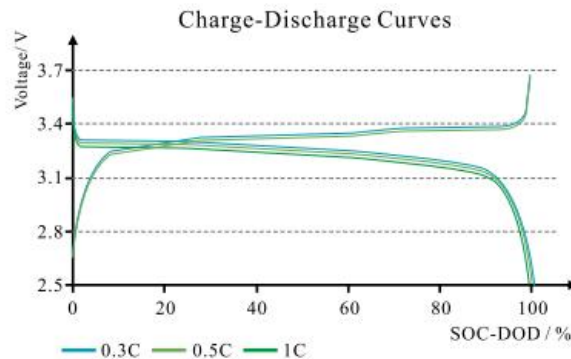
| Model         | Voltage(V) | Capacity(Ah) | Weight(kg) | CCA(Amps) | Size(L*W*H)±2mm | Alternative Battery Model                                      |
|---------------|------------|--------------|------------|-----------|-----------------|----------------------------------------------------------------|
| EN12-C50700   | 12.8       | 50           | 4.5        | 700       | 197*128*200/220 | B19RL                                                          |
| EN12-C60800   | 12.8       | 60           | 5          | 800       | 238*133*198/222 | B24RL、LN1/H4                                                   |
|               |            |              |            |           | 207*175*180     |                                                                |
| EN12-C60900   | 12.8       | 60           | 5.8        | 900       | 230*175*162/183 | 85550                                                          |
| EN12-C701000  | 12.8       | 70           | 7.5        | 1000      | 306*174*200/220 | 95D31、55D23、70D23/Q85、57117-T6、57217/H6、L2-400/H5、80D26/S95    |
|               |            |              |            |           | 230*175*181/200 |                                                                |
|               |            |              |            |           | 230*174*200/220 |                                                                |
|               |            |              |            |           | 278*176*172/190 |                                                                |
|               |            |              |            |           | 244*176*197     |                                                                |
|               |            |              |            |           | 260*175*201/221 |                                                                |
| EN12-C801100  | 12.8       | 80           | 8          | 1100      | 318*176*187     | 58043/H7                                                       |
| EN12-C901100  | 12.8       | 90           | 9          | 1100      | 355*175*188     | 60038/H8                                                       |
| EN12-C1001200 | 12.8       | 100          | 9.5        | 1200      | 230*174*200/219 | 70D23/Q85、L2-400/H5、57217/H6、57117-T6、58043/H7、100D31、60038/H8 |
|               |            |              |            |           | 244*176*197     |                                                                |
|               |            |              |            |           | 278*175*172/189 |                                                                |
|               |            |              |            |           | 318*176*187     |                                                                |
|               |            |              |            |           | 306*174*200/220 |                                                                |
|               |            |              |            |           | 355*175*188     |                                                                |
| EN12-C1101300 | 12.8       | 110          | 10         | 1300      | 398*175*188     | 110A-H9                                                        |
| EN12-C1201500 | 12.8       | 120          | 11         | 1500      | 398*175*188     | 110A-H9                                                        |
| EN12-C1501500 | 12.8       | 150          | 12.5       | 1500      | 398*175*188     | 110A-H9                                                        |

——OEM or ODM is available

## BATTERY CELL PERFORMANCE TEST(LFP)

### ◆ BASIC CHARGE AND DISCHARGE PERFORMANCE

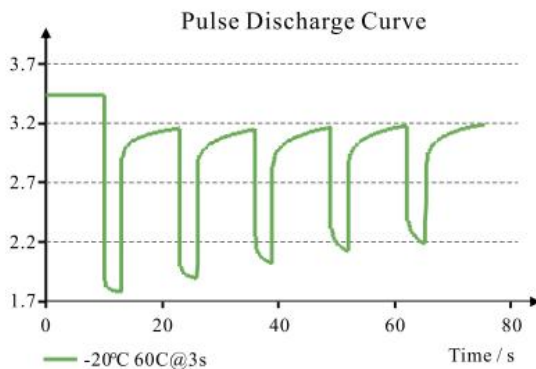
**Test method:** at room temperature, 0.5C constant current constant voltage charge to 3.68V, cut-off current 0.05C; The electric discharge was constant at 0.3C, 0.5C and 1C to 2.5V, respectively.



Note: Due to the ultra-high rate battery, there is almost no difference between 0.3C and 1C capacity.

### ◆ LOW TEMPERATURE PULSE DISCHARGE -20°C

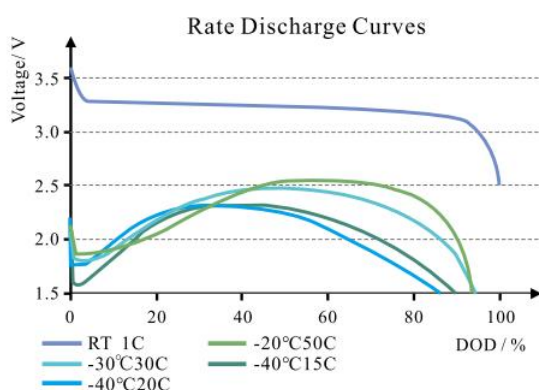
**Test method:** at room temperature, 0.5C constant current constant voltage charge to 3.68V, cut-off current 0.05C; It was shelved at -20 °C for 4 to 8h and discharged at 60C pulse for 3s.



| Pulse magnification @ time | Inflection point voltage/V |
|----------------------------|----------------------------|
| 60C@3S                     | 1.786                      |

### ◆ LOW TEMPERATURE PERFORMANCE

**Test method:** Under normal temperature, 0.5C constant current constant voltage charge to 3.68V, cut-off current 0.05C; Set aside at the test temperature for 4~8h, and discharge to 1.5V at the corresponding magnification respectively.

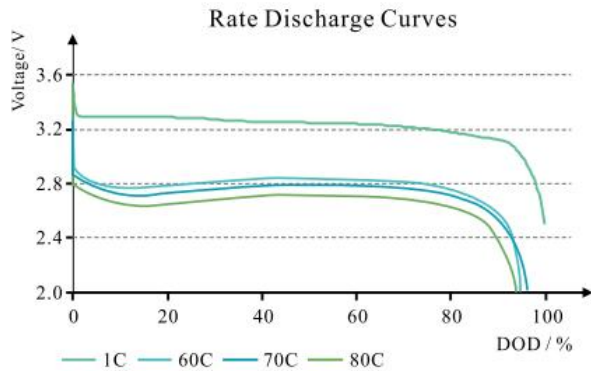


| Temperature / °C | Magnification | Median voltage /V | The inflection point /V | Capacity retention rate /% |
|------------------|---------------|-------------------|-------------------------|----------------------------|
| RT               | 1C            | 3.255             | —                       | 100.0                      |
| -20°C            | 50C           | 2.519             | 1.844                   | 93.9                       |
| -30°C            | 30C           | 2.482             | 1.789                   | 94.2                       |
| -40°C            | 15C           | 2.287             | 1.725                   | 86.5                       |
| -40°C            | 20C           | 2.320             | 1.574                   | 89.8                       |

## BATTERY CELL PERFORMANCE TEST (LFP)

### ◆ ROOM TEMPERATURE RATE PERFORMANCE

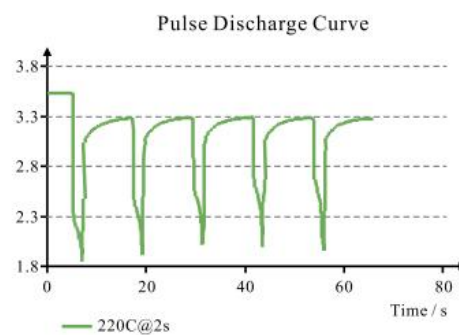
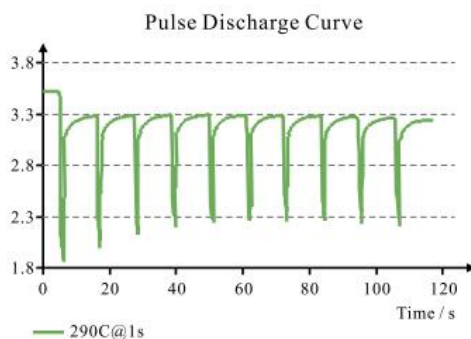
**Test method:** Under normal temperature, 0.5C constant current constant voltage charge to 3.68V, cut-off current 0.05C; Constant discharge to 2.0V at 1C(up to 2.5V), 60C, 70C and 80C respectively.



| Magnification | Median Voltage /V | Capacity Retention Rate /% |
|---------------|-------------------|----------------------------|
| 1C            | 3.248             | 100.0                      |
| 60C           | 2.840             | 94.6                       |
| 70C           | 2.793             | 96.0                       |
| 80C           | 2.715             | 93.6                       |

### ◆ PULSE DISCHARGE PERFORMANCE AT ROOM TEMPERATURE

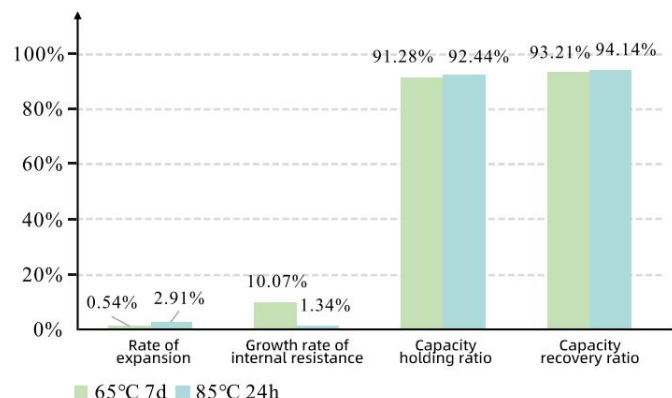
**Test method:** Under normal temperature, 0.5C constant current constant voltage charge to 3.68V, cut-off current 0.05C; Discharge at 290C pulse for 1s and 220C pulse for 2s.



| Pulse magnification @ time | Low head voltage /V |
|----------------------------|---------------------|
| 290C@1S                    | 1.875               |
| 220C@2S                    | 1.861               |

### ◆ HIGH TEMPERATURE STORAGE

**Test method:** at room temperature, charge to 3.68V with 0.5C constant current and constant voltage, cut-off current 0.05C; After storing at 65 ° C for 7 days and 85 ° C for 24 hours, the voltage was discharged to 2.5V at 1C. Then charge and discharge at 0.5C and 1C, cycle 3 times, and record the internal resistance, thickness and capacity of the battery core before and after storage.



## WARRANTY PERIOD OF CELL

Enov provides a two-years warranty on the battery (starting from the date of manufacture). During the warranty period, if there is a performance failure or complete failure of the battery caused by non-human, it is confirmed by our technical department that it is a quality problem such as raw material defects and production process defects, and there is no abnormal use such as private disassembly, improper storage (ambient temperature over 60°C or below -20°C), physical impact, liquid immersion, etc. Customers can apply for free replacement of new battery units of the same model through the official customer service channels with valid purchase vouchers and complete product serial number labels.

## STORAGE AND SHIPMENT REQUIREMENT

| Item                | Requirement                                                                                         | Remark                                                       |
|---------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Storage temperature | $\leq 1$ month: -20°C~45°C<br>$\leq 3$ month: -20°C~30°C<br>$\leq 1$ year: $23 \pm 2^\circ\text{C}$ | The best temperature in shipment is $23 \pm 5^\circ\text{C}$ |
| Humidity            | $\leq 75\% \text{RH}$                                                                               | /                                                            |
| Charged Capacity    | 50%-100%                                                                                            | Voltage 13.2-14.6V                                           |

- 1.The storage temperature should be controlled at -20°C~40°C, away from open flame, corrosive substances and humid environment.
- 2.Do not charge in a sealed, high temperature ( $> 40^\circ\text{C}$ ) or low temperature ( $< -5^\circ\text{C}$ ) environment to avoid abnormal reaction of the electrolyte.
- 3.Do not reverse connect the positive and negative terminals; otherwise, short circuit or device damage may occur.
- 4.If the volume of the lithium battery is smaller than that of the original battery, secure the battery using the provided base or foam to ensure stable installation.
- 5.When storing, it is important to avoid external vibrations and collisions as much as possible to avoid short circuits inside the battery or damage to the metal casing.

## USE WARNINGS AND CAUTIONS

### WARNINGS!

The cell will fire, explode or leak if not strictly observing this item described below.

- ◆ Do not immerse the cell in water or seawater, and keep the cell in a cool dry environment during stands by period.
- ◆ Do not mix using the cell with one-off cell (such as dry cell) or different performance together.
- ◆ Keep all batteries out of the reach of little children. Consult a doctor immediately if a cell is swallowed.
- ◆ Do not use or leave the cell near a heat source such as fire or heater
- ◆ When re-charging , use the cell charger specifically for that purpose.
- ◆ Do not reverse the positive (+) and negative (-) terminals.
- ◆ Do not connect the cell to an electrical outlet.
- ◆ Do not dispose the cell in fire or heat.
- ◆ Do not short-circuit the cell by directly connecting the positive (+) and negative (-) terminals with metal objects such as wire.
- ◆ Do not transport or store the cell together with metal objects such as necklaces, hairpins etc.
- ◆ Do not strike or throw the cell against hard surface.
- ◆ Do not directly solder the cell .
- ◆ Do not pierce the cell with a nail or other sharp object.
- ◆ Never disassembling the cell in any way.

### CAUTIONS!

- ◆ Do not use or leave the cell at very high temperature (for example, at strong direct sunlight or in a vehicle in extremely hot weather). Otherwise, it can overheat or fire or its performance will be degenerate and its service life will be shortened.
- ◆ Do not use it in a location where static electricity is rich, otherwise, the safety devices may be damaged, causing a harmful situation.
- ◆ In case the electrolyte getting into the eyes due to the leakage of cell, do not rub the eyes! Rinse the eyes with clean running water, and seek medical attention immediately. Otherwise, it may injure eyes or cause a loss of sight.
- ◆ If the cell gives off an odor, generates heat, becomes discolored or deformed, or in anyway appear abnormal during use, recharging or storage, immediately remove it from the device or cell charger and place it in a contained vessel such as a metal box.
- ◆ In case the cell terminals are contaminated, clean the terminals with a dry cloth before use. Otherwise power failure or charge failure may occur due to the poor connection between the cell and the electronic circuitry of the instrument.
- ◆ Be aware discarded batteries may cause fire, 100%discharged the cell and tape the cell terminals to insulate them before disposal.

## APPLICATION SCENARIO

|                                                                                   |                                                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |
| RV                                                                                | MOTORCYCLE                                                                        | ENGINEERING TRANSPORT VEHICLES                                                      |
|  |  |  |
| PASSENGER CARS                                                                    | COMMERCIAL VEHICLES                                                               | MARINE POWER SYSTEMS                                                                |

## CERTIFICATION

|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |
| ISO 14001                                                                           | ISO 9001                                                                            | ROHS                                                                                | CE                                                                                   | FC                                                                                    |

## CONTACT US



**Address:** Room 403, 4th Floor, Building B1, No. 108 Dongxin Avenue, Dongxing Area, Dongjiang Hi-Tech Zone, Huizhou, China



**Email:** info@enovbattery.com



**Whats app/Skype:** +86-177 2295 9228