ENOV (HUIZHOU) NEW ENERGY TECHNOLOGY CO., LTD

UAV DRONE BATTERY

HIGH DISCHARGE LI-PO BATTERY(HPD)

PRODUCT DATASHEET

INDUSTRIAL BATTERY

PRODUCT CHARACTERISTICS

- High Discharge C-rate , Bust up to 50C
- High Capacity, Long Endurance
- Wide temperature range work well form: -20℃ to 60℃
- Strong deep discharge, 1C discharge DOD reaches 100%
- Support 2C fast charging: complete charging within 30 minutes

SPECIFICATIONS

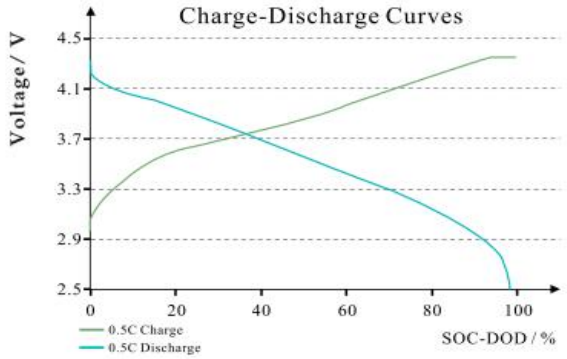
Model	Capacity	Energy	Cont. discharge current	Max discharge current (A/0.3S)	Dimension (L*W*H) mm	Weight (kg)	Energy density (Wh/kg)
EN-12A022B-HPD	12000mAh 22.2V 6S1P	266.4Wh	300A/25C	600A/50C	179*73*65.2mm	1.82kg	147Wh/kg
EN-12A044D-HPD	12000mAh 44.4V 12S1P	532.8Wh	300A/25C	600A/50C	179*73*126.4mm	3.45kg	155Wh/kg
EN-16A022B-HPD	16000mAh 22.2V 6S1P	355.2Wh	128A/15C	288A/30C	182*77*73.6mm	2.16kg	165Wh/kg
EN-16A044D-HPD	16000mAh 44.4V 12S1P	710.4Wh	128A/15C	288A/30C	182*77*143.2mm	4.11kg	173Wh/kg
EN-22A022B-HPD	22000mAh 22.2V 6S1P	488.4Wh	176A/15C	330A/30C	201*99*68.8mm	2.8kg	175Wh/kg
EN-22A044D-HPD	22000mAh 44.4V 12S1P	976.8Wh	176A/15C	330A/30C	201*99*133.6mm	5.39kg	182Wh/kg
EN-22A051H-HPD	22000mAh 51.8V 14S1P	1139.6Wh	176A/15C	330A/30C	201*99*155.2mm	6.22kg	184Wh/kg
EN-27A022B-HPD	27000mAh 22.2V 6S1P	599.4Wh	216A/15C	405A/30C	224*101*70mm	3.29kg	183Wh/kg
EN-27A044D-HPD	27000mAh 44.4V 12S1P	1198.8Wh	216A/15C	405A/30C	224*101*136mm	6.38kg	189Wh/kg
EN-27A051H-HPD	27000mAh 51.8V 14S1P	1398.6Wh	216A/15C	405A/30C	224*101*158mm	7.37kg	190Wh/kg
EN-30A022B-HPD	30000mAh 22.2V 6S1P	666Wh	450A/15C	900A/30C	241*109*68.2mm	3.5kg	191Wh/kg
EN-30A046D-HPD	30000mAh 44.4V 12S1P	1332Wh	450A/15C	900A/30C	241*109*132.4mm	6.8kg	196Wh/kg
EN-30A053H-HPD	30000mAh 51.8V 14S1P	1554Wh	450A/15C	900A/30C	241*109*153.8mm	7.86kg	198Wh/kg
EN-44A022B-HPD	44000mAh 22.2V 6S2P	976.8Wh	176A/15C	330A/30C	201*99*133.6mm	5.39kg	182Wh/kg
EN-44A044D-HPD	44000mAh 44.4V 12S2P	1953.6Wh	176A/15C	330A/30C	201*99*263.2mm 201*200*135mm	10.48kg	187Wh/kg
EN-44A051H-HPD	44000mAh 51.8V 14S2P	2279.2Wh	176A/15C	330A/30C	201*99*306.4mm 201*200*156mm	12.15kg	188Wh/kg

——OEM or ODM is available

BATTERY CELL PERFORMANCE TEST

BASIC CHARGE AND DISCHARGE PERFORMANCE

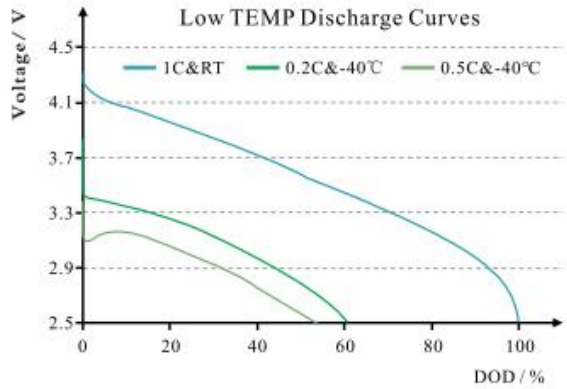
Test method: Under normal temperature, 0.5C constant current constant voltage charge to 4.35V, cut-off current 0.05C; Let it sit for 10min and then drain it to 2.5V at 0.5C.



Item	0.5C charging capacity /Ah	0.5C discharge capacity /Ah	Charge and discharge efficiency /%
Test value	32.1	31.6	98.5

LOW TEMPERATURE DISCHARGE -40°C

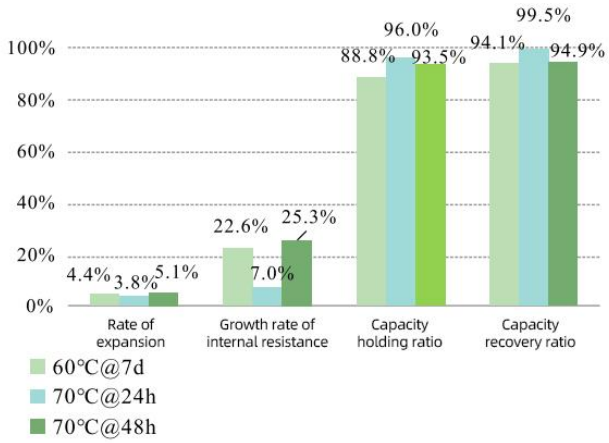
Test method: Under normal temperature, 0.5C constant current constant voltage charge to 4.35V, cut-off current 0.05C; At -40°C for 4~6h, and then at 0.2C, 0.5C constant discharge to 2.4V.



Temperature	Rate of multiplication	Capacity/Ah	Median voltage /V	Capacity retention rate /%
RT	1C	31.65	3.569	100.00
-40℃	0.2C	19.82	3.103	62.62
-40℃	0.5C	18.43	2.939	58.23

HIGH TEMPERATURE STORAGE

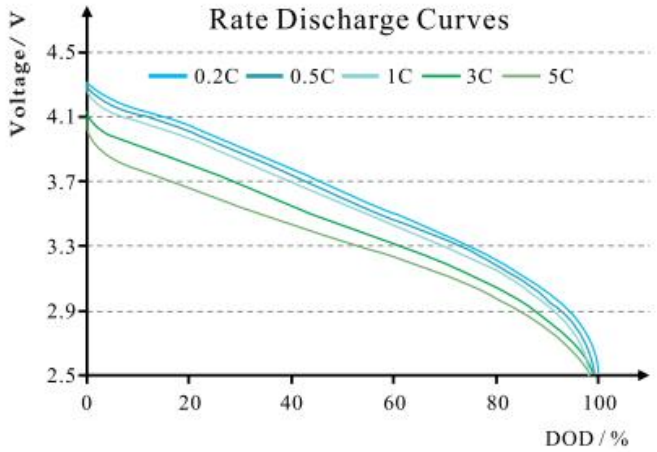
Test method: At room temperature, 0.5C constant current constant voltage charge to 4.2V, cut-off current 0.05C; After being stored at 60℃ for 7d, 70℃ for 24h and 70℃ for 48h, the current was discharged to 3.0V at 1C. Then charge 1C at 0.5C, cycle 3 times, record ACR, thickness, capacity before and after storage.



BATTERY CELL PERFORMANCE TEST

◆ RATE DISCHARGE RT

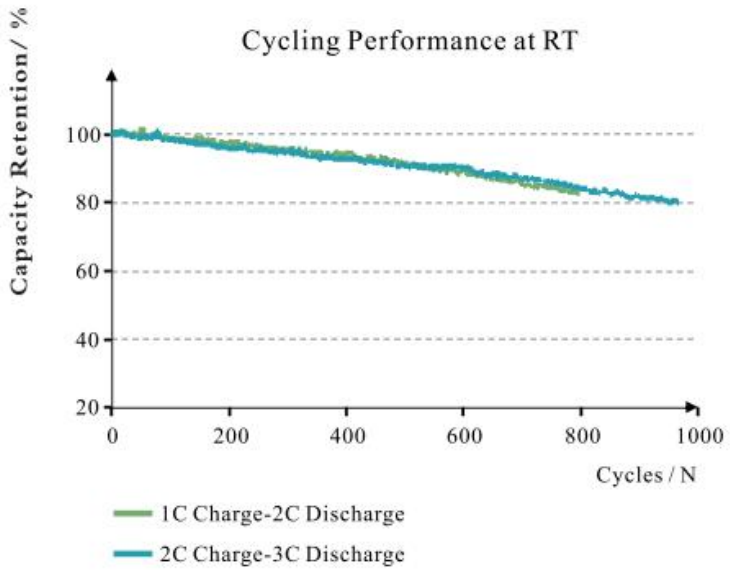
Test method: Under normal temperature, 0.5C constant current and constant voltage charge to 4.35V, cut-off current 0.05C; Put it on for min, and then discharge it to 2.5V at 0.2C, 0.5C, 1C, 3C and 5C.



Rate of multiplication	Capacity /Ah	Median voltage /V	Capacity retention rate /%
0.2C	32.22	3.619	100.00
0.5C	31.88	3.603	98.9
1C	31.71	3.569	98.4
3C	31.93	3.430	99.1
5C	31.77	3.339	98.6

◆ LOOP PERFORMANCE RT

Test method a: Under normal temperature, 1C constant current and constant voltage charge to 4.35V, cut-off current 0.05C: leave for 15min, then 2C constant discharge to 2.75V, do cycle test.
Test method a: Under normal temperature, 2C constant current and constant voltage charge to 4.35V, cut-off current 0.05C: leave for 15min, then 3C constant discharge to 2.75V, do cycle test.



Cycle number	1C charge 2C discharge	2C charge 3C discharge
1	100.0	100.0
100	99.0	98.6
200	98.0	95.9
300	95.6	95.1
400	94.6	93.0
500	91.5	91.1
600	89.7	90.3
700	85.8	86.8
800	82.9	84.2
900	/	81.
1000	/	80.3(966th)

WARRANTY PERIOD OF CELL

Enov provides a one-year 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℃ or below -20℃), 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	≤1 month:-20℃~45℃ ≤3 month:-20℃~30℃ ≤1 year:23±2℃	The best temperature in shipment is 23±5℃
Humidity	≤75%RH	/
Charged Capacity	50%-100%	Voltage13.2-14.6V

1.The storage temperature should be controlled at -20℃~40℃, away from open flame, corrosive substances and humid environment.

2.Do not charge in a sealed, high temperature (> 40℃) or low temperature (< -5℃) 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 colisions as much as possible toavoid 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 obiects such as necklaces, hairpins etc.
- Do not strike or throw the cell against hard surface.
- Do not directly solder the cell .
- Dot 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 beforeuse. 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

		
EXPLORATION UAV	eVTOL	PLANT PROTECTION UAV
		
LOGISTICS TRANSPORT UAV	MAPPING UAV	FPV UAV

CERTIFICATION

ISO 14001 | ISO 9001 | ROHS | CE | FC

CONTACT US

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