RoHS Compliant

Features

- Secondary Lithium-Ion(Li-ion)
- Nominal capacity 500mAh
- Nominal voltage: 7.7V
- Standard Charge 5 hours
- Rapid Charge 1 hours
- Charge Temp. 0-45˚C
- Discharge Temp. -20˚C to 60˚C
- Over Charge/Discharge Protection
- Short Circuit Protection
- Dimensions: 26.5 x17.5x48.5mm
- 5-year Warranty



*Product images are for illustrative purposes only and may vary from actual design.

Applications

- Small portable electronics

Model List*(See part number scheme for model number details)

Model Number	Nominal Capacity	Nominal Voltage	Standard Charge Time	Rapid Charge Time	Charging Voltage
APS-LIR485265-500mAh	500mAh	7.7V	5 hours	1 hours	8.4V

*At 3mA +20˚C, 2V cut off. The capacity restored varies according to current temperature cut off

Charging Table

C-rate	Time
$5C_1$	12 min
$2C_1$	30 min
$1C_1$	1h
$0.5C_1$ or C/2	2h
$0.2C_1$ or C/5	5h
$0.1C_1$ or C/10	10h
$0.05C_1$ or C/20	20h

Table 1: C-rate and service times when charging and discharging batteries of 1Ah (1,000mAh)

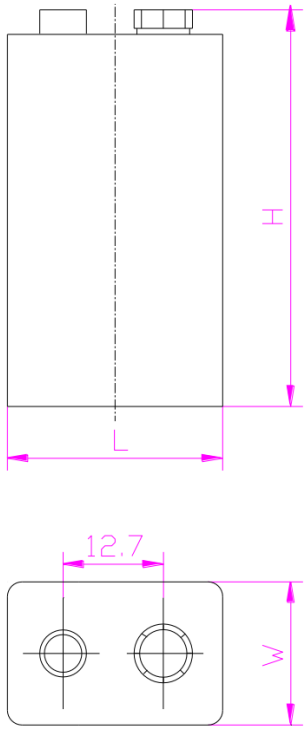
Technical Data

Nominal Capacity	500mAh(typ.), 480mAh(min.), Discharge: 0.2CmA
Charging Voltage	4.2V±0.03V
Nominal Voltage	7.7V mean operation voltage
Voltage at end of Discharge	6V discharge cut-off voltage
Charging Voltage	8.4±0.1V
Internal Impedance	≤300mΩ, Internal resistance measured at AC 1KHZ after 50% charge
Standard charge	Constant Current 0.2C Constant Voltage 8.4V 0.01C cut-off
Standard discharge	Constant current 0.2C end voltage 6V
Rapid charge	Constant Current 1C Constant Voltage 8.4V 0.01C cut-off
Rapid Discharge	Constant current 1.5C end voltage 6V

■ Technical Data(cont.)

Maximum Continuous Charge Current	1C
Maximum Continuous Discharge Current	1C
Operation Temperature Range	Charge: 0~45℃, Discharge: -20~60℃; 60±25%R.H. Bare Cell
Storage Temperature Range	Less than 1 year: -20℃~25℃, less than 3 months: -20~40℃, Less than 7 day: -20℃~65℃; 60±25%R.H. at the shipment state
Pack Dimension	26.5(+0/-2)x17.5(+0/-2)x 48.5(+0/-2)mm
Voltmeter	>10kΩ/V
Ammeter	<0.01Ω
Standard Charge	0.2C=70mA, the cell shall then be charged at constant voltage of 8.4 volts while tapering the charge current. Charging shall be terminated when the charging current has tapered to 0.01C. Charge time: Approx. 7.0h, The cell shall demonstrate no permanent degradation when charged between 0℃ and 45℃.
Standard Discharge	0.2C=70mA, Cells shall be discharged at a constant current of 0.2C to 6 volts @25°C± 5°C
Open-Circuit Voltage	≥8.2V, The open-circuit voltage shall be measured within 24 hours after standard charge.
Internal impedance	≤300mΩ, Internal resistance measured at AC 1KHz after 50% charge.
Minimal Rated Capacity	The capacity on 0.2C5A discharge till the voltage tapered to 6.0V shall be measured after rested for 30min then finish standard charge. Discharge Capacity: ≥480mAh
Discharge Temperature/Discharge Capacity (0.2C)	-10℃(50%), 0℃(80%), 23℃(100%), 60℃(95%)
Cycle Life	500cycle
Leakage-Proof	After full charge with standard charge, store at 60±3℃, 60±10%RH for 1 month
Vibration Test	After standard charging, fixed the cell to vibration table and subjected to vibration cycling that the frequency is to be varied at the rate of 1Hz per minute between 10Hz an 55Hz, the excursion of the vibration is 1.6mm. The cell shall be vibrated for 30 minutes per axis of XYZ axes.
Drop Test	The cell is to be dropped from a height of 1 meter twice onto concrete ground.
Crush Test	Crush between two flat plates. Applied force is about 13kN(1.72Mpa) for 30min.
Short Circuit(25°C)	Each test sample battery, in turn, is to be short-circuited by connecting the (+) and (-) terminals of the battery with a Cu wire having a maximum resistance load of 0.1Ω. Tests are to be conducted at room temperature(25±2℃).
Short Circuit(60°C)	Each test sample battery, in turn, is to be short-circuited by connecting the (+) and (-) terminals of the battery with a Cu wire having a maximum resistance load of 0.1Ω. Tests are to be conducted at temperature(60±2℃).
Impact	A 56mm diameter bar is inlayed into the bottom of a 10kg weight. And the weight is to be dropped from a height of 1m onto a sample battery and then the bar will be across the center of the sample.
Forced Discharge	Discharge at a current of 1C for 3.0h

■ Mechanical Diagram

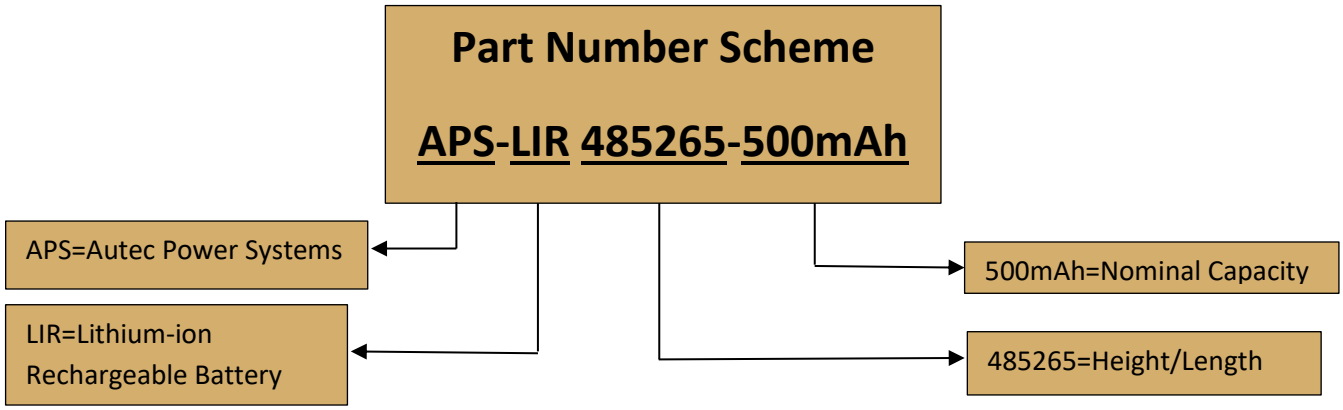


Item	Unit
L	26.5mm
H	48.5mm
W	17.5mm

Note:
Test should be conducted with new batteries within one week after shipment from our factory and the cells shall not be cycled more than five times before the test. Unless otherwise specified, test and measurement shall be done under temperature of 25±5℃ and relative humidity of 45~85%. If it is judged that the test results are not affected by such conditions, the tests may be conducted at temperature 15~30℃ and humidity 25~85%RH.

■ Warnings

1. **Install batteries correctly.**
2. **Ensure the contact points to be clean and conductive.**
3. **Do not mix different types or brands of batteries in any application.**
4. **Do not expose the batteries to heat or fire.**
5. **Keep away from small children.**
6. **Please check the manufacturing date code.**



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