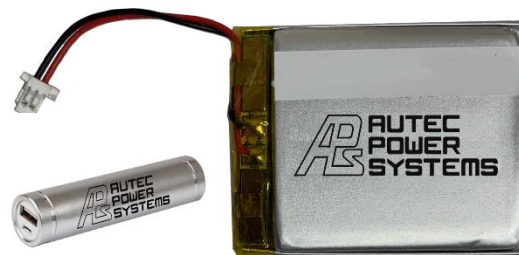


■ Features

- Rechargeable Lithium-Ion(Li-ion) Power Bank
- Nominal capacity 2600mAh
- Nominal voltage: 11.1V
- Discharge Temp. -10°C to 60°C
- Over Charge/Discharge Protection
- Short Circuit Protection
- Dimensions: $\phi 18.4 \times 64.8 \text{mm}$
- 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	Charge Current	Charging Voltage
APS02-LIR18650-2600mAh-11.1V-3M	2600mAh	11.1V	520mA	12.6V

■ Technical Data

Nom. Capacity	2600mAh
Min. Capacity	2470mAh
Energy Capacity	28.86Wh
Nominal Voltage	11.1V
Voltage as of ship	$\geq 11.1 \text{V}$
AC Impedance Resistance	$\leq 250 \text{m}\Omega$ Cell; $\leq 300 \text{m}\Omega$ Pack
Charging Current (Std.)	520mA 0.2CmA
Charging Current (Max.)	2600mA 1.0CmA
Charging Voltage	12.60V
Discharging Current (Std)	520mA 0.2CmA
Discharging Current (Max)	2600mA 1.0CmA
Discharge Cut-off Voltage	9V
Dimensions	$\phi 18.4 \times 64.8 \text{mm}$
Weight	180g(typ.)
Operating Temperature	5°C ~ +40°C Charging, -10°C ~ +60°C Discharging
Storage Temperature	-5°C ~ +40°C < 1 months, -10°C ~ +35°C < 6 months
Charge Mode Full charge	Standard charge mode: 23 \pm 2°C, 0.2C (CC) charge the battery until its voltage reaches 12.6V, then changed at 12.6V (CV) while tapering the charge current 0.02C. Charging time is 8 hours in all.
Discharge Performance	Within 30min after fully charge, discharge at 0.2C continuously down to 9V The discharge capacity is required $\geq 2470 \text{mAh}$. Within 30min after fully charge, discharge at 1.0C continuously down to 9.00V The discharge time is required $\geq 54 \text{min}$
Cycle Performance	30min rest period after standard charge, 0.2C discharge to a cut-off voltage of 9V, 30min rest period; the test shall be terminated when discharging capacity $\leq 80\%$ of the minimum capacity in three consecutive cycles. Standard charge and discharge at 23 \pm 2°C.

■ Technical Data(cont.)

Charged Storage Characteristics	Within 28 days at $20\pm5^{\circ}\text{C}$ after standard charge, at $23\pm2^{\circ}\text{C}$, then discharge at 0.2C to 9.00V. The discharge time is required $\geq 4.25\text{h}$.
Crush Test	After standard charge, a cell is crushed between two flat surfaces. The force for crushing is applied by a hydraulic ram exerting a force of $13\text{KN}\pm1\text{KN}$. Once the maximum force has been applied, the force is released. A cylindrical or prismatic cell is crushed with its longitudinal axis parallel to the flat surfaces of the crushing apparatus. Each cell is to be subjected to a crushing force in only one direction, separate cells are to be used for each test
Drop Test	After standard charge, drop the cell from 1m height onto the cement floor, prismatic cell dropped from each direction, total 6 times, cylindrical cell dropped from longitudinal direction two times and positive and negative direction each time.
Impact Test	The battery to be fully charged with standard charging condition and put a rod with diameter = 15.8mm on the cell, and then heavy block (weight = 9.1Kg) crash on the cell from a certain height (height = 61.0cm)
Short-Circuit Test	After standard charge, the cell is to be short-circuited by connecting the positive and negative terminals with a total external resistance of $80\pm20\text{m}\Omega$. The cells remain on test for 24h or until the case temperature declines by 20% of the maximum temperature rise, whichever is sooner.
Over Charging Test	After standard charge, the cell is subjected to a charging current by connecting it to a dc-power supply. The beginning current is 3.0C, which is to be obtained by connecting a resistor of specified size and rating in series with the cell; the voltage of the dc-power supply is 4.6V. The test time is 7 hours.
Constant Humidity and Temperature Characteristics	Under the temperature of $23\pm2^{\circ}\text{C}$, after charging the cell with 0.2C, then put the cell into the constant temperature and humidity oven with $55\pm2^{\circ}\text{C}$ and 90~95% for 48h, the cell should be no obvious deformation, leakage, rust, smoking and explosion. After testing take out the cell then rest for 2h under the temperature of $20\pm5^{\circ}\text{C}$, discharge with 0.2C to 3.0V. Discharge capacity $\geq 60\%$

1. Nominal capacity is measures by the discharge at 0.2C to 9.0V end voltage after fully charges according to specification at $23\pm2^{\circ}\text{C}$.
2. Discharged at high rate and high temperature $>45^{\circ}\text{C}$ frequently, battery life will be shorten.

■ PCM List

Location	Description	No. Specification	Size	Qty	ROHS
C1, C3, C4, C5 C6, C7, C8	Capacity	$0.1\mu\text{F}/-20\sim+80\%/50\text{V}$	0603	7	ROHS
RT	NTC	$\text{NTC}/10\text{K}\pm5\%$	0603	/	ROHS
R1, R2, R3, R5, R7, R9	Resistance	$1\text{K}\Omega/\pm5\%$	SOP8	6	ROHS
R10	Resistance	$1\text{M}\Omega/\pm5\%$	SOT-23	1	ROHS
C2	Capacity	$2.2\mu\text{F}/\pm5\%$	0603	1	ROHS
R8, R11	Resistance	$5.1\text{K}\Omega/\pm5\%$	0603	2	ROHS
R6	Resistance	$51\Omega/\pm5\%$	0603	1	ROHS
U2, U3, U4, U5	MOS	AO4407A/SO-8%	SO-8	4	ROHS
U1	Protection	S8254 AAV/TSSOP-16%	SOP-16	1	ROHS
R4	Resistor sensor	$0.010\Omega/\pm5\%$	2512	1	ROHS
PCB	PCB	3S18650-T/49.0*16.3*0.8mm%	49*16.3*0.8mm	1	ROHS

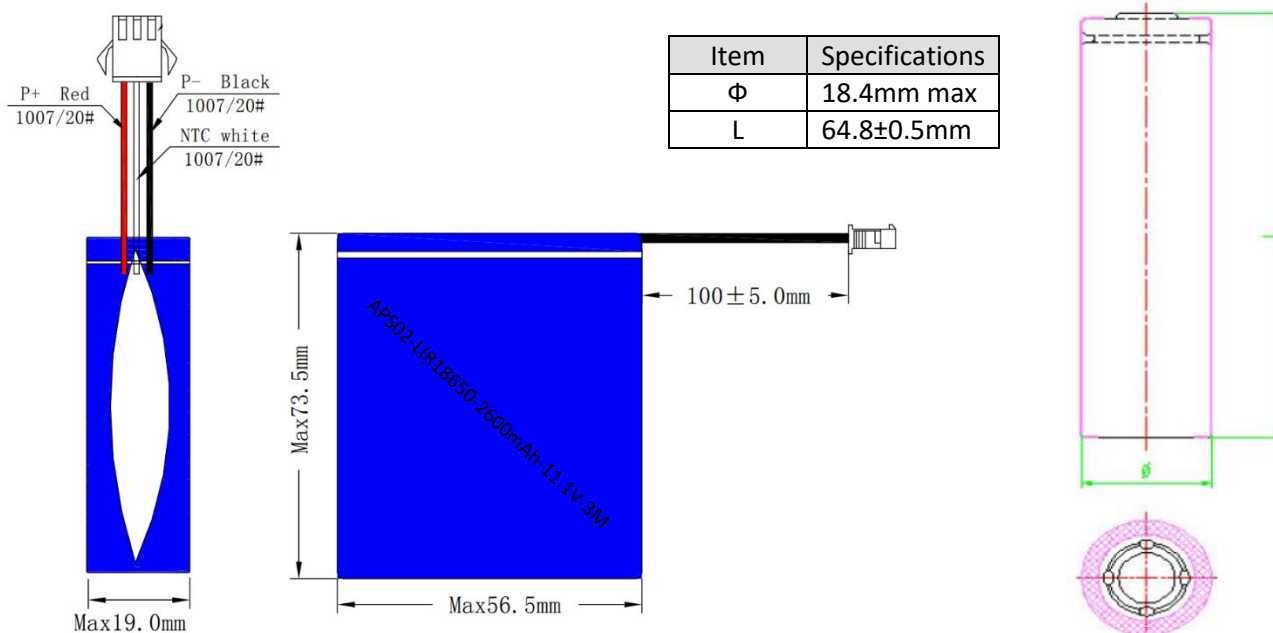
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■ PCM List

No	Item	Condition	Specification
1	Input Voltage	B+/B-, input Voltage B+ to B-	-0.3~+12V
2	Overcharge	Detection voltage	4.250±0.025V
3		Release voltage	4.100±0.030V
4		Detection delay time	0.8~1.5S
5	Over discharge	Detection voltage	2.700±0.050V
6		Release voltage	3.000±0.100V
7		Detection delay time	50~150mS
8	Over discharge current	Over current	17~23A
9		delay time	6.0~12mS
10	Short circuit protection	Short detection delay time	≤600uS
11		Release Conditions	Cut off load
12	Normal current consumption	Normal current consumption of PCM	Max 35.00uA
13	0V charger	allowed 0V change	NO
14	Suggest working conditions	Max continuous charge/discharge current	3.00A
15		suggest working temperature	5°C~40°C
16	Thermistor	25°C NTC resistance	10KΩ, ±5%, B=3435
16	IR resistance	IR of PCM	≤65.00mΩ
17	The size of final PCM	The length of final PCM	49.00±0.15mm
18		The width of final PCM	16.3±0.10mm
19		The thickness of final PCM	2.40mm Max

■ Mechanical Diagram


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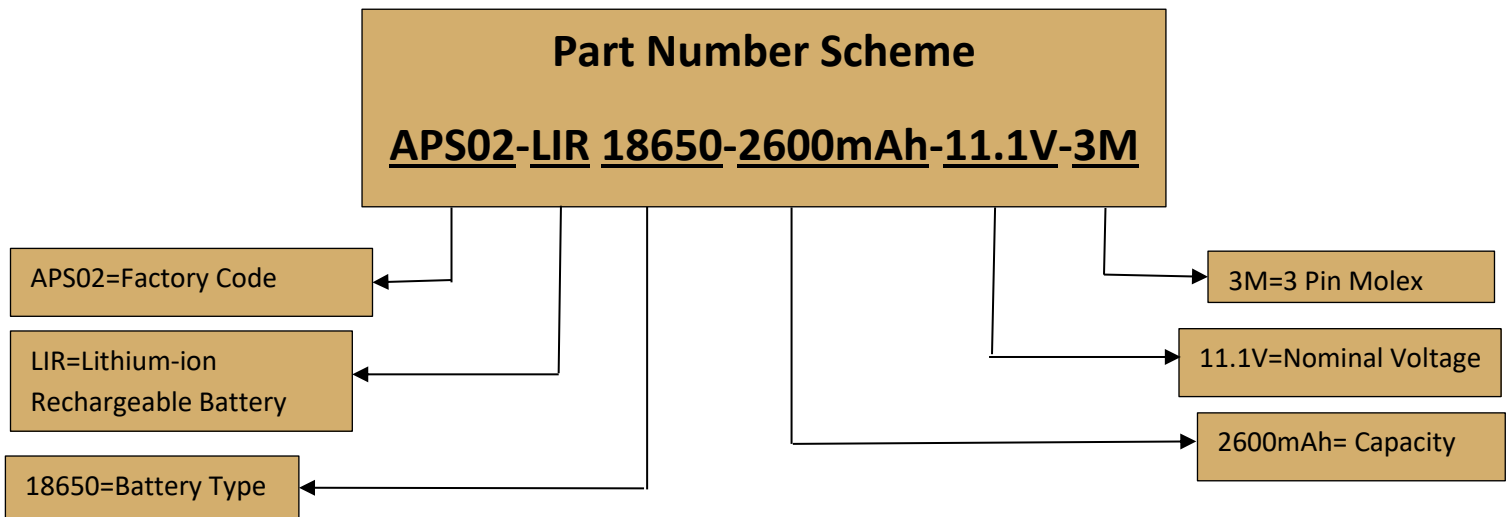
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■ **Warnings**

1. Improper use of power bank will damage the battery and it's life.
2. Do not charge the power bank with an abnormal charger.
3. Keep the power bank dry and ventilated.
4. Improper use of the power bank will cause the bank to rupture, leak, or overheat, causing permanent damage to the power bank. In some cases could even cause a fire or explode.
5. Keep away from fire or temperatures that exceed 80°C.
6. Do not submerge under water, the power bank's protections will be damaged and not work properly.
7. Do not use anything to deform or misshapen the power bank.
8. If the positive and negative poles of the power bank are reversed, it could shorten the power bank's life, could make it overheat, catch fire and cause damage.



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

*Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.