

## ■ Features

- Rechargeable Lithium-Ion(Li-ion)
- Nominal capacity 6Ah
- Nominal voltage: 11.1V
- Standard Charge 2.5 hours
- Charge Temp. 0-45°C
- Discharge Temp. -10°C to 60°C
- Over Charge/Discharge Protection
- 10KNTC  $\pm 10\%$
- Short Circuit Protection
- Dimensions:  $\phi 18.2 \times 65 \text{mm}$ (cell),  $68 \times 57 \times 38 \text{mm}$ (pack)
- 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	Discharge cut-off voltage
APS14-LIR18650-6Ah	6Ah	11.1V	2.5 hours	7.5V

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

## ■ Charging Table

C-rate	Time
1C <sub>1</sub>	1h
0.5C <sub>1</sub> or C/2	2h
0.2C <sub>1</sub> or C/5	5h
0.1C <sub>1</sub> or C/10	10h
0.05C <sub>1</sub> or C/20	20h

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

## ■ Technical Data

Nominal Capacity	6000mAh, 0.2C Discharge
Min. Capacity	6000mAh, 0.2C Discharge
Nominal Voltage	11.1V
Charging Current (Max.)	Standard Charge 0.2C
Standard Charging method	0.5C CC(constant current ) charge to 12.6V, then CV(constant voltage 12.6V)charge till charge current decline to $\leq 0.01C$
Charging time	Approx. 2.5 hour
Max. Discharge current	Constant current 2C end voltage 7.5V
Standard Discharge Current	Constant current 0.2 C end voltage 7.5V
Discharge cut-off voltage	7.5V
Charge cut-off Voltage	12.6V
Initial Impedance	$\leq 160 \text{m}\Omega$

**Technical Sales / Customer Service:** +1-818-338-7788 • Email: [sales@autec.com](mailto:sales@autec.com)

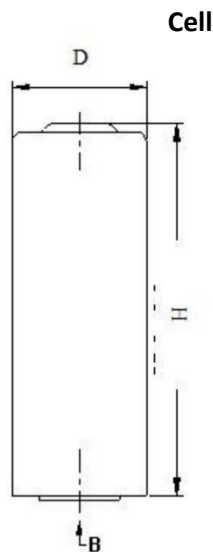
31328 Via Colinas Suite 102 • Westlake Village, CA 91362 USA • [www.autec.com](http://www.autec.com)

August 18, 2022

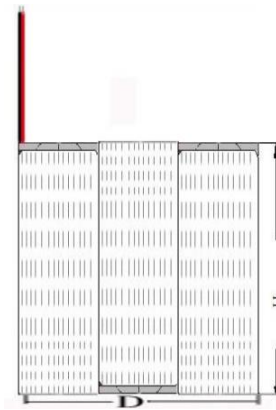
■ Technical Data(cont.)

Weight	Approx. 400g
NTC	SMD 0603 10KNTC $\pm 10\%$
Operating temperature	Charging: $0^{\circ}\text{C}\sim 45^{\circ}\text{C}$ Discharging: $-10^{\circ}\text{C}\sim 60^{\circ}\text{C}$
Storage temperature	$0^{\circ}\text{C}\sim 35^{\circ}\text{C}$
Storage Humidity	$\leq 75\% \text{ RH}$
Standard environmental condition	Temperature: $23\pm 5^{\circ}\text{C}$ Humidity: 45-75%RH Atmospheric Pressure: 86-106Kpa
Cycle Life	Constant current 0.5C charge to 12.6V, then constant voltage charge to current declines to 0.01C, let rest for 10min, constant current 0.2C discharge to 7.5V, rest 10min. Repeat above steps till continuously discharging capacity Higher than 80% of the Initial Capacities of the Cells; $\geq 400$ times
Capacity Retention	After standard charge, rest the battery for 28 days, discharging at 0.2C to capacity Higher than 80% recording the discharge time.
Discharge at elevated temperature	After standard charge, rest the Cells 4h at $60\pm 2^{\circ}\text{C}$ , then discharge at 1C to the voltage 7.5V, recording the discharging time, $\geq 54\text{min}$
Discharge at low temperature	After standard charge, rest the Cells 16h at $-20\pm 2^{\circ}\text{C}$ , then discharge at 0.2C to voltage 7.5V, recording the discharging time, $\geq 210\text{min}$
Thermal shock	Put the battery in the oven. The temperature of the oven is to be raised at $5\pm 2^{\circ}\text{C}$ per minute to a temperature of $130\pm 2^{\circ}\text{C}$ and remains on for 30 minutes.
Overcharge testing	At $23\pm 5^{\circ}\text{C}$ , charging batteries with constant current 3C to voltage 5V, then with constant voltage 5V until current declines to 0. Stop test till batteries' temperature is $10^{\circ}\text{C}$ lower than max temperature.
Over discharge testing	At $23\pm 5^{\circ}\text{C}$ , According to the requirements of standard charge, the battery will be discharged to cut-off voltage, then connected with external load of 30 ohm for 24 hours
Short-circuit testing	At $23\pm 5^{\circ}\text{C}$ , After standard charging, connect batteries' anode and cathode by wire which impedance less than $50\text{m}\Omega$ , keep 6h.

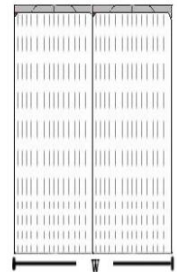
## ■ Mechanical Diagram



Item	Measurements
H	65mm $\pm$ 0.5mm
D	18.2mm $\pm$ 0.2mm



Pack



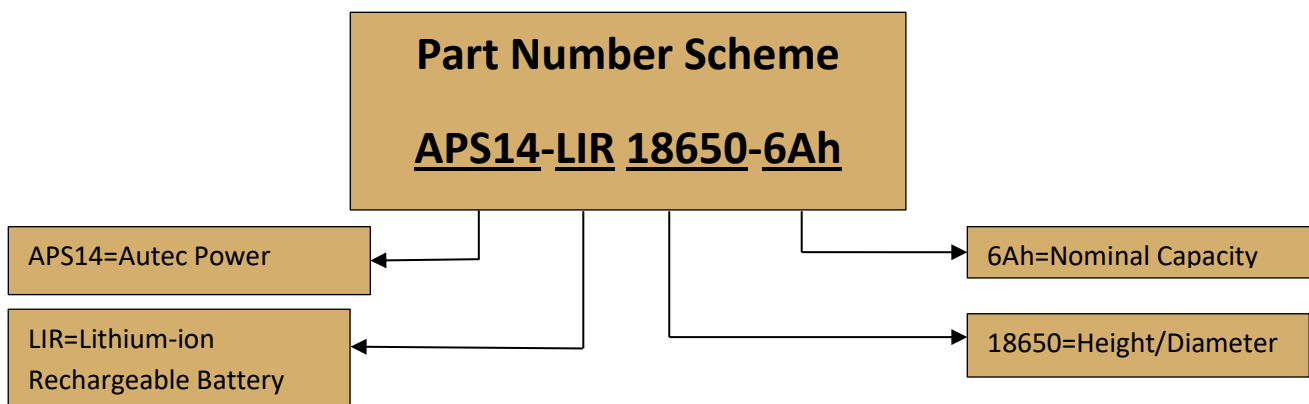
Item	Measurements
H	68mm $\pm$ 2mm
D	57mm $\pm$ 2mm
W	38mm $\pm$ 2mm

## ■ 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.

## Part Number Scheme

**APS14-LIR 18650-6Ah**



\*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.

Technical Sales / Customer Service: +1-818-338-7788 • Email: [sales@autec.com](mailto:sales@autec.com)

31328 Via Colinas Suite 102 • Westlake Village, CA 91362 USA • [www.autec.com](http://www.autec.com)

August 18, 2022