

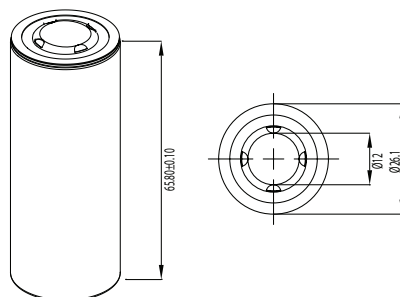
Product Specification

Model: LFP-26650-2500-16C

1. Specification

Description	Cylindrical Rechargeable Lithium-ion Battery
Dimension	$\varnothing = 26.21\text{mm}$ $H = 65.8 \pm 0.1\text{mm}$
Weight	$81 \pm 1\text{g}$
Nominal Voltage	3.2V
Nominal Capacity	2500mAh
Standard Charge Method	Charge at 1C constant current (CC) until the voltage reaches 3.7V; Then constant voltage (CV, 3.7V) charge till charge current decline to 0.02C.
Cycle Life	$\geq 1\ 500$ cycles ($23 \pm 2^\circ\text{C}$, 5C charge/5C discharge, Capacity $\geq 80\%$)
Internal Impedance	9-13m Ω
Charge cut-off Voltage	$3.65 \pm 0.05\text{V}$
Temperature Range	Charge -0 ~ +45 °C Discharge -20 ~ +55 °C Storage -10 ~ +35 °C

2. Outline Dimension



3. Appearance

Appearance of the battery shall be free from any remarkable scratches, flaws, rust, discoloration or electrolyte leakage.

4. Standard Test Conditions

Unless otherwise specified, all tests stated in this product specification are conducted within the temperature range of $23 \pm 2^\circ\text{C}$ and the humidity range of 5-95%.

The galvanometer and voltmeter should have an accuracy of $\pm 0.05\text{A}$ and $\pm 0.05\text{V}$.

5. Reliability Test Procedure and Criteria

Item	Test Procedure	Criteria
Standard Charge	1) 1C charge till the voltage reaches 3.7V; 2) CV (3.7V) charge till charge current decline to 0.02C.	N/A

Quick Charge	1) Charge at 5C current till the voltage reaches 3.7V; 2) CV (3.7V) charge till charge current decline to 0.02C.	N/A
Open Circuit Voltage (as shipment)	Voltmeter (50% SOC)	≥ 3.28V
Nominal Capacity	1) 1C discharge to 2.0V before standard charge; 2) Standard charge and then lay for 10 minutes; 3) 1C discharge till the voltage reaches 2.0V.	≥ 100% Nominal Capacity
Quick Discharge Capacity	1) 1C discharge to 2.0V before standard charge; 2) Standard charge and then lay for 10 minutes; 3) 5C discharge till the voltage reaches 2.0V.	≥ 95% Nominal Capacity
High-rate Discharge Capacity	1) 1C discharge to 2.0V before standard charge; 2) Standard charge and then lay for 10 minutes; 3) 16C discharge till the voltage reaches 2.0V.	≥ 90% Nominal Capacity, discharge voltage ≥ 2.70V
Cycle Life	1) Fully discharged and then lay for 10 minutes; 2) 5C charge and then lay for 10 minutes; 3) 5C discharge till the voltage reaches 2.0V, repeat procedure 2) and 3) until the discharge capacity lower than 80% of nominal capacity.	≥ 1500 Cycles
-20°C Discharge Capacity	Standard charge at 23±2°C, and lay for more than 6 hours at -20°C, then 0.5C discharge till the voltage reaches 2.0V.	≥ 55% Nominal Capacity
-20°C Charge Capacity	0.5C discharge at 23±2°C, and lay for more than 6 hours at -20°C, then 0.2C charge till the voltage reaches 3.7V.	≥ 40% Nominal Capacity
55°C Discharge Capacity	SOC 100% battery lay for 6h at 55°C, then 1C discharge at 23±2°C till the voltage reaches 2.0V.	≥ 100% Nominal Capacity

6. Safety Test Procedure and Criteria

Item	Test Method	Criteria
Vibration	SOC 100% battery vibrate for 2h on the vibration platform; Frequency: 30-35Hz; Acceleration: 30m/s ²	No fire, explosion, vent or leak. The variation of internal resistance < 0.5mΩ
Drop	The battery is to be dropped from a height of 1m onto a 5cm thick hard wood floor. Each plane (direction) shall be tested for 2 times.	No fire, explosion, vent or leak. The variation of internal resistance < 0.5mΩ
Heating	Put the SOC 100% battery into the oven with circulating air or gravity-convection. The temperature of the oven is to be raised at a rate of 5±2°C/min to a temperature of 135±2°C and remain for 10 minutes at the temperature.	No fire or explosion
Short Circuit	Connect the positive and negative terminals of the SOC 100% battery with a maximum resistance load of 50 mΩ at room temperature. Monitor the temperature of the cell until it is 10°C lower than the maximum temperature.	No fire or explosion. The temperature of the exterior battery shall below 150°C.
Abnormal Charge	1) Standard charge and then lay for 10 minutes; 2) 3C charge to 10.0V.	No fire or explosion
Impact	1) Put a ø15.8mm bar across the center of the battery;	No fire or explosion

	2) Drop a 10Kg weight from a height of 1.0m onto the sample.	
Nail Pricking	Penetrate an \varnothing 2.5mm steel nail into the cell directly.	No fire or explosion

7. Storage

The open circuit voltage should be above 3.28V after 28 days of storage at 50% SOC; Supplementary charge is necessary after 90 days of storage to guarantee the battery life.

8. Cautions

To ensure proper use of the battery, please read the manual carefully before handling.

- Place the battery out of the reach of children and infants.
- Do not carry batteries loose in pocket or purse.
- Do not place the battery in microwave ovens or other similar appliances.
- Do not remove the product label.
- Replace all used batteries at the same time.
- Do not attempt to open or service the battery pack.
- The operating temperature of the battery shall be in the following range:
When charging: 0°C - 45 °C (32F to 113F);
When discharging: -20°C - 55 °C (-4F to 131F).
- Do not expose to temperatures above 60°C (140F).
- Do not disassemble, alter, weld, or solder the battery directly to an object.
- Do not short-circuit the positive and negative terminals of the battery with wire or other metallic objects. Do not transport or store the battery with metallic items.
- Do not expose the battery to direct heat or flame, and do not use or store it near a fire or a location, subject to high temperatures. In addition, do not immerse or dampen the battery in water, saltwater, or any other liquid.
- Do not puncture the battery with any sharp objects, hit it with a hammering device or similar device, step on it, drop it or subject it to strong shock.
- Do not use battery if it is damaged or deformed.
- Immediately cease use of the battery if it produces strange smells or smokes or becomes abnormally hot.
- If the battery fluids leak and come into contact with an eye, do not rub the eye and immediately flush it with plenty of water before seeking medical assistance.

9. Notes

AA Portable Power Corp reserves the final explanations of the items in this specification.

AA Portable Power Corp

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