

Pioneer Solid-state Battery ESS

10240M



6000

Cycle Life@25°C



Solid-State

Battery Cells better
safety



1.5C

Faster Discharging



IP 50

Suitable for indoor installation



No DIP Switch

Easy for commission



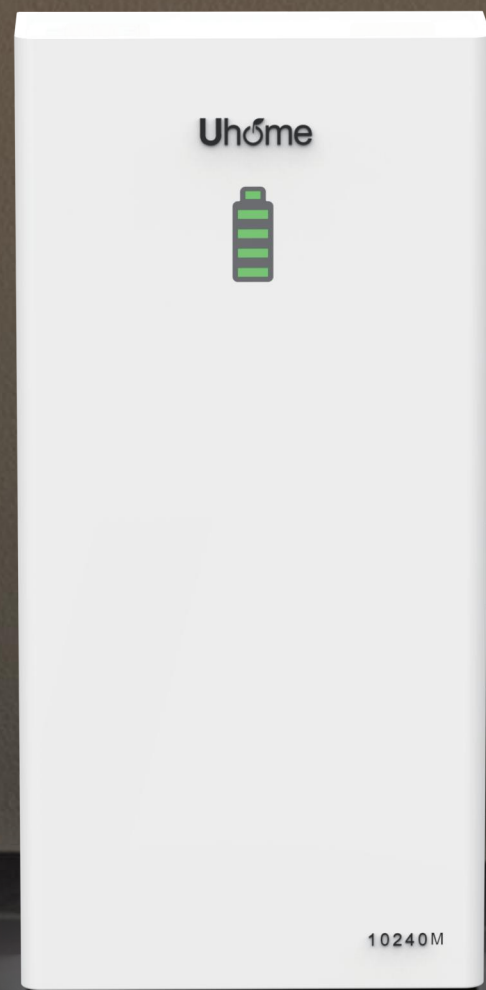
Versatile Installation

Ground/Rack mounted

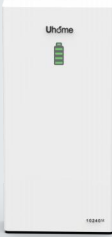


Great Expandability

Supports parallel connection
of 16 units



● Technical Specifications

Product Image			
Model		10240M	
Battery Type		Semi-solid state pouch	
Nominal Energy		10.24kWh	
Usable Energy*		9.52kWh	
Nominal Capacity		200Ah	
Nominal Voltage		51.2V	
Operating Voltage		48~56V	
Under Lead-acid Mode	Recommended Current	50A	
	Recommended Voltage	48~55.2V	
Recommended Charge&Discharge Current		100A/100A	
Max Charge/Discharge Current		100A/120 A	
Peak Discharge Current		150A(3S)	
Peak Discharge Power		8kW(3S)	
Recommended Depth of Discharge (DOD)		93%	
Charging Temp. Range		From 0~55℃	
Discharging Temp. Range		From -20~55℃	
Cycle Life		>6000@25℃	
Scalability		16 Parallel	
WIFI Module		Uhome	
Communication		CAN/ RS485	
IP Rating		IP50 (with cover)	
Recommended Humidity		5%~95%(No condensed water)	
Cooling Type		Natural cooling	
Color		White(optional)	
Installation		Rack/Ground mounted	
Net Weight		88kg	
Dimension(L*W*H)		920*442*165mm	
Protection		Over-current/Over-voltage/Short circuit/ Under-voltage/Over temperature	
Warranty		10 years*	
Certification		UN38.3/CE/IEC62619	

Testing conditions based on temperature 25℃ at the beginning of life.

*Total Energy/Usable Energy measured under specific conditions by Uhome 0.2C CC-CV and based on recommended DOD(93%);

Semi-Solid State Battery Introduction

What is Semi-Solid State Battery

In solid-state lithium-ion batteries, lithium ions travel between electrodes through a solid electrolyte during the charging and discharging processes. However, full solid-state batteries encounter challenges related to limited contact efficiency between the electrodes and the electrolyte. To overcome this issue, a promising solution is to incorporate small amounts of liquid electrolytes, which can optimize battery performance and extend lifespan.

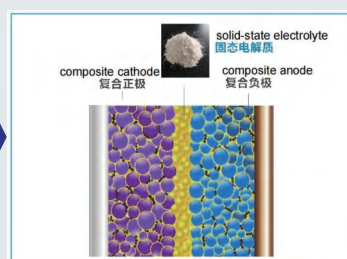
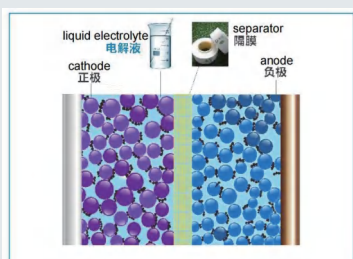
Semi-solid state batteries, the 1st generation of all solid state, offer enhanced safety compared to traditional LFP batteries, as the solid components significantly reduce the risk of leakage. Additionally, the special small amounts inclusion of liquid electrolytes improves ion conductivity, thereby enhancing overall battery performance.



The core and barrier of solid-state LIBs is the innovative development of materials.



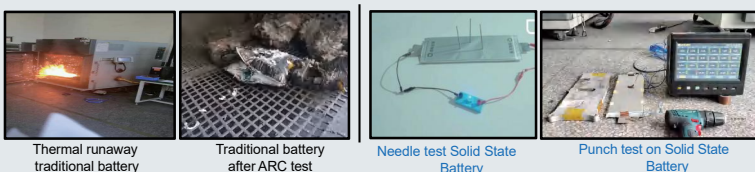
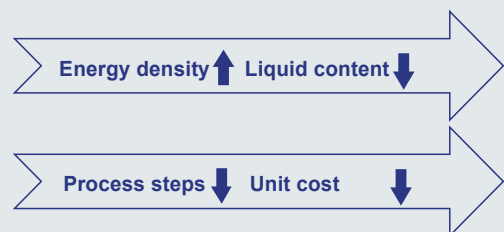
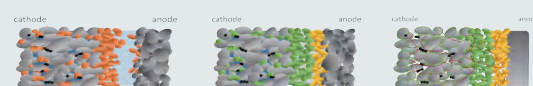
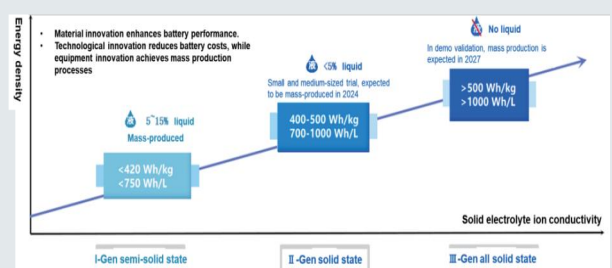
Core Advantages



MUCH SAFER: The liquid electrolyte content of semi-solid state batteries is reduced to 5% -10%, and the semi-solid structure significantly reduces the risk of leakage. The solid-state electrolyte layer suppresses lithium dendrite growth and reduces the probability of thermal runaway.

LONGER SPAN LIFE: Solid electrolytes slow down the corrosion and volume expansion of electrode materials, improving long-term stability.

HIGHER COST-EFFECTIVENESS: The semi-solid state battery adopts in-situ solidification technology, and only requires partial modification of the liquid battery production line to achieve mass production, greatly reducing equipment investment costs.



300°C ARC Test (Accelerating Rate Calorimeter)		
Items	Solid state LFP Battery	Traditional LFP
Max. temperature rise rate (dT/dt) _{max} (°C/S)	0.235	2.129
Temperature point T _{max} (°C)	No thermal runaway	471.4

Note: Definition conditions for thermal runaway, temperature rise rate dT/dt ≥ 1°C/S

