

Specifications

Solid State Battery 3.7V 40Ah

Model No.:HYH-SSB-H9885189B-40Ah

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A0	Sep.25, 2025	New	

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1. Scope

The purpose of this document is to specify the specifications of 3.7V 40Ah Solid State Battery supplied by HYH.

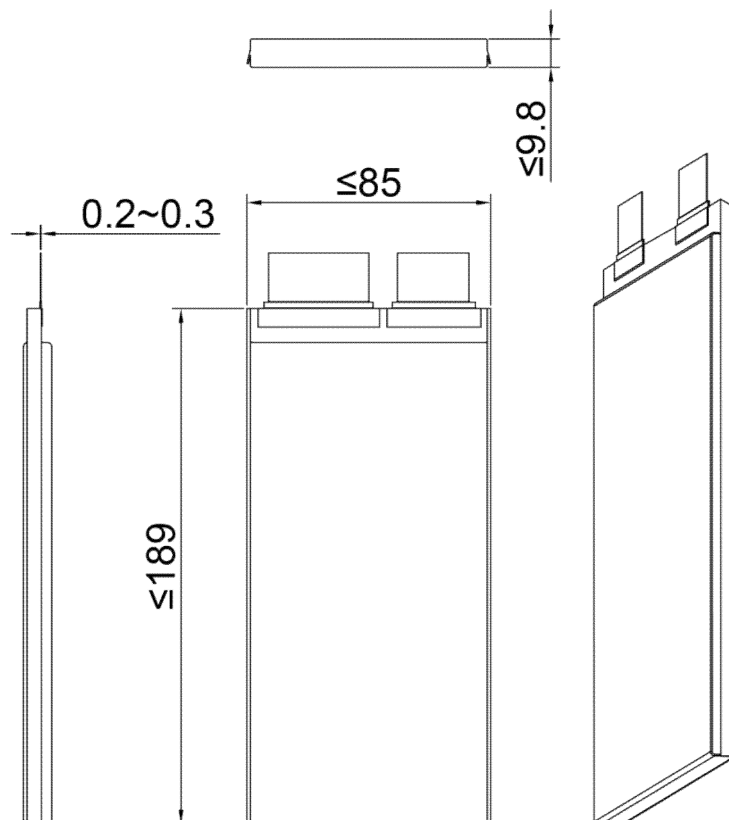
2. Cell Weight: $\leq 370\text{g}$

3. Mechanical Drawing (Units:mm)

3.1 Cell impression drawing(or photo):



3.2 Cell Size: Thickness ≤ 9.8 ; Width ≤ 85 ; Length ≤ 189



4. Energy Density: $\geq 410\text{Wh/kg}$

5. Product Specification

No.	Parameter		Specification	Remarks
5.1	Nominal Capacity		40Ah	25°C±2°C, 0.2C/0.2C Fresh cell
	Minimum Capacity		39Ah	
5.2	Nominal Voltage		3.7V	
5.3	Discharge Energy		148Wh	
5.4	Charge Cut-off Voltage		4.25V	
5.5	Discharge Cut-off Voltage		2.5V	
5.6	Internal Resistance		<2mΩ	AC 1kHz, 25°C±2°C
5.7	Charging Temperature		0°C~45°C	
5.8	Discharging Temperature		-20°C~55°C	
5.9	Standard Charge Current		0.2C	25°C±2°C
	Maximum Charge Current		1C	
5.10	Continuous Discharge Current		0.2C	25°C±2°C
	Maximum Continuous Discharge Current		3C	
	Maximum Pulse Discharge Current		10C	<5s @ 25°C±2°C
5.11	Cycle Life		≥600 cycles	25°C±2°C
5.12	Storage Temperature		-20°C~45°C	<3 months
			-20°C~35°C	<6 months
			-20°C~25°C	<1 year
5.13	Storage Humidity		<85% RH	25°C±2°C
5.14	High/Low Temperature Capacity	55°C/25°C	≥90%	55°C±2°C 0.2C Discharge Capacity
		-20°C/25°C	≥60%	-20°C±2°C 0.2C Discharge Capacity
	High Temperature Storage	Charge Retention Rate	≥75%	Stored for 7 days at 55°C±2°C 0.2C/0.2C.
		Capacity Recovery Rate	≥80%	
	Nominal Temperature Storage	Charge Retention Rate	≥90%	Stored for 28 days at 25°C±2°C 0.2C/0.2C.
		Capacity Recovery Rate	≥95%	

6. Safety Characteristics

No.	Items	Test Methods & Steps	Standard
6.1	Vibration Test	After standard charge, cells are to be tested as following conditions:Amplitude:0.8mm, Frequency: 10~55Hz (sweep: 1Hz/min), Direction: X/Y/Z axis for 90~100min. The battery is to be tested in three mutually perpendicular to each axis.	No leakage. No explosion. No fire.
6.2	Drop Test	Drop cells in the shipment condition (50% charge) from 1.0m height onto 5cm or thicker concrete with p-tile on it 3 times each of X, Y, and Z directions at 25±3°C.	No explosion. No fire.

Note: Above testing of safe characteristics must be with protective equipment.

7. Safety Precautions

In order to avoid the dangers of leakage, heated, combustion and explosion of cells, please pay attention to:

- 7.1 Don't immerse the battery in water and seawater. Please put it in cool and dry environment if no using.
- 7.2 Do not discard or leave the battery near a heat source as fire or heater.
- 7.3 Being charged, using the battery charger specifically for that purpose.
- 7.4 Don't reverse the positive and negative terminals.
- 7.5 Don't connect the battery to an electrical outlet directly.
- 7.6 Don't connect the positive and negative terminal directly with metal objects such as wire. Short terminals of battery is strictly prohibited, it may damage battery.
- 7.7 Do not transport and store the battery together with metal objects such as necklaces, hairpins.
- 7.8 Do not strike , throw or trample the battery.
- 7.9 Do not directly solder the battery and pierce the battery with a nail or other sharp object.
- 7.10 Do not use lithium ion battery and others different lithium polymer battery model in mixture.
- 7.11 Prohibition of use of damaged cells.
- 7.12 Don't bend or fold sealing edge. Don't open or deform folding edge. Don't fillet the end of the folding edge.
- 7.13 Don't fall, hit, bend battery body.
- 7.14 Battery pack designing and packing prohibition injury batteries.
- 7.15 Never disassemble the cells.
- 7.16 The battery replacement shall be done only by either cells supplier or device supplier and never be done

by the user.

7.17 Keep the battery away from babies.

7.18 Any components contacting these two edges, they must be insulated.

7.19 Do not use or leave the battery at very high temperature conditions (for example, strong direct sunlight or a vehicle in extremely hot conditions). Otherwise, it can overheat or fire or its performance will be degenerate and its service life will be decreased.

7.20 Do not use it in a location where is electrostatic and magnetic greatly, otherwise, the safety devices may be damaged, causing hidden trouble of safety.

7.21 If the battery leaks, and the electrolyte get into the eyes. Do not wipe eyes, instead, rinse the eyes with clean running water, and immediately seek medical attention. Otherwise, eyes injury can result.

7.22 If the battery gives off an odor, generates heat, becomes discolored or deformed, or in any way appear abnormal during use, recharging or storage, immediately remove it from the device or battery charge and stop using it.

7.23 In case the battery terminals are dirt, clean the terminals with a dry cloth before use. Otherwise power failure or charge failure may occur due to the poor connection with the instrument.

7.24 Be aware discharged batteries may cause fire; tape the terminals to insulate them.

8. Disclaimer

8.1 If the product demand company is not used according to the regulations in the specification, the social influence is caused, and the reputation of the HYH Technology is influenced, the HYH Technology will be investigated for the responsibility of the requirement unit. According to the degree of influence on the HYH Technology, the product demand company needs to provide compensation for the HYH Technology.

8.2 HYH Technology reserves the right to modify the specifications and performance parameters of the product. The buyer needs to confirm the latest status of the HYH Technology in advance before ordering the HYH Technology product.

9. Hazard Warning

9.1 Waring Statement

WARNING

CELLS ARE POTENTIALLY DANGEROUS AND PROPER PRECAUTIONS MUST BE OBSERVED IN HANDLING AND MAINTENANCE.

RUNNING TESTS ON THE CELLS IMPROPERLY MAY RESULT IN SEVERE PERSONAL BODY INJURY OR PROPERTY DAMAGES.

WORK ON CELLS MUST BE PERFORMED ONLY WITH PROPER TOOLS AND PROTECTIVE EQUIPMENT MUST BE USED.

CELL MAINTENANCE MUST BE CARRIED OUT BY PERSONNEL KNOWLEDGEABLE OF CELLS AND TRAINED IN THE SAFETY PRECAUTIONS INVOLVED.

FAILURE TO OBSERVE THE ABOVE MAY CAUSE VARIOUS HAZARDS.

9.2 Types of Hazards

Customer acknowledges the following potential hazards in connection with the usage and handling of the products:

9.2.1 Working with battery can expose the handler to chemical, shock and/or arcing hazards. Although a person's body might react to contact with direct current voltage differently than from contact with alternate current voltage, Customer shall take a conservative position and consider the risk of shock or electrocution to be the same for both alternate current and direct current exposures greater than 50V.

9.2.2 Batteries expose its handler to chemical hazards associated with the electrolyte used in the cell.

9.2.3 When selecting work practices and personal protective equipment, customer and its employees should consider potential exposure to these hazards and therefore prevent accidental short-circuit that can result in electrical arcing, explosion, and/or "thermal runaway" of the batteries.