

Lithium-ion Rechargeable Battery Product Specification

**Product Name: Lithium-ion Battery Pack
Product Specification : 36V10.4Ah**

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1. Preface

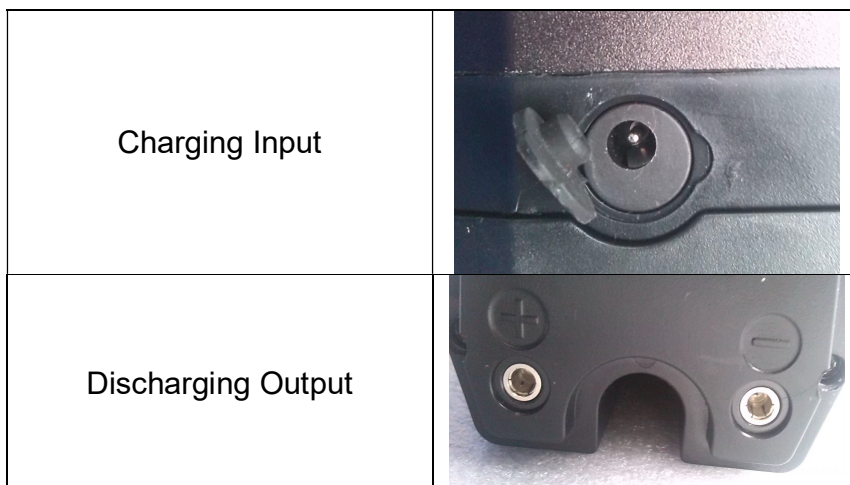
This specification describes the type and size, performance, technical characteristics, warning and caution of the ULIN10H004R4 Lithium-Ion rechargeable pack. The specification only applies to ULIN10H004R4 Lithium-Ion rechargeable pack supplied by manufacture

2. Product and Model

2.1 Product: Lithium-Ion Battery Pack

2.2 Model: ULIN10H004R4

2.3 Picture and Output Wire



3. Battery Pack Specifications

Items	Standard	Comments
Nominal voltage	36V	
Typical capacity	10.4 ± 0.5Ah	At 0.2C discharge rate
Standard continuous discharge current	10A	
Max continuous discharge current	15A	
Max Instantaneous discharge current	20 A	
Discharge cut-off voltage	About 30.0 V	
Charge voltage	42±0.1V	Charge mode: CC/CV, Use a constant current, constant voltage (CC/CV) Lithium-Ion battery charge controller.
Charge current	≤2A	
Inner resistance	≤150mΩ	Between positive and negative polar
Operation temperature range	Charge	0°C~+45°C
	Discharge	- 20°C~+60°C
		When the environment temperature is higher than 45°C, please pay attention to ventilation and heat rejection.
Storage temperature range	0°C~40°C (Capacity 80%)	Recommended long-term storage temperature is 15~25°C
Humidity	5%≤RH≤85%	
Shell material	Aluminium alloy	
Weight	Approx : 2.9 ± 0.1 Kg	
Size(L*W*H)	(405±2)*(78±2)*(88±2)mm	
Protection function	Over charge protection, Over discharge protection, Over current protection, Short circuit protection, Temperature protection, Balanced function	

4. Standard Test Conditions

Battery test must within 1 month after production. All test in this specification should be in standard atmospheric conditions: temperature: $25 \pm 5^\circ$, Relative Humidity: $65 \pm 20\%$.

5. Characteristics

5.1 Standard charge

Charge the battery with Lithium ion battery special test cabinet, supply 42V voltage, constant-current 0.2C(A) current until current down to 0.02C (A).

5.2 Standard Discharge

Discharge the battery at 0.2C (A) to 30 V or the battery cut off Voltage.

5.3 Electrical Performance

Test Items	Test Methods	Test Standards
Capacity Retention Rate	After standard charge under 5.1 specified conditions, store the cells for 28 days, then discharge at 0.2C(A) to cut-off voltage.	Capacity retention rate $\geq 80\%$
Cycle Life	1) Standard charge at 2C(A). 2) Rest 0.5~1 h 3) Discharge at 0.2C to cut off voltage 4) Rest 0.5~1h repeat the above steps until 500 cycles.	Capacity retention rate $\geq 80\%$

6. Cautions

6.1 Charging current should be less than maximum charge current specified in the Product Specification. Charging current bigger than recommended current may damage the battery.

6.2 Discharging current should be less than maximum discharge current specified in the Product Specification, Discharging current bigger than recommended current may damage the battery.

6.3 It should be noted that the cell would be possible to be at a over-discharged state by its self-discharge characteristics in case the cell is not used for long time. In order to prevent over-discharging, the cell shall be charged periodically to maintain between 39V and 40V (2 month one cycle, Over-discharging may causes loss of cell performance, characteristics, or battery functions.

6.4 Please charge the battery within 12 hours after use.

6.5 Battery storage environment follow the above conditions and in standard atmosphere, should be without strong magnet, no power, no static.

6.6 Do not reverse the polarity of the battery pack for any reason.

6.7 Do not short circuit the battery pack.

6.8 Do not reverse polarity charging.

6.9 Do not immerse the battery pack in water or sea water, or get it wet.

6.10 Do not disassemble battery.

6.11 Do not expose the battery to extreme heat or flame.

6.12 Please use special charger for charging.

6.13 Do not combine the battery pack in series or in parallel.