

Specification

Product name: MIL 18V li-ion battery	Product model: IP-LI-MIL1850
File number: IP-LI-MIL1850	File version: 1.0

Scope of Application:This product specification applies to the MIL18V 5.0Ah li-ionbattery.

Revision Record

Version number	Revision content	Revision Date	Expurgator
1.0	Editio princeps	2026-5-11	Yang Hao

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Department responsible for drafting: Development Department		Despatch department : <input checked="" type="checkbox"/> quality department <input checked="" type="checkbox"/> PE Section <input checked="" type="checkbox"/> Production Department <input checked="" type="checkbox"/> business department					
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Prepare	Yang Hao	Proofread		Examine and verify		Date	2025-6-30
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I. Technical Specifications

Order number	Project	Specification/Range	Remarks
1.	Cell type	Li-ion 18650	Power Type
2.	Nominal voltage	18V 5 strings	
3.	Nominal capacity	5.0Ah	
4.	Charging Method	CC/CV	
5.	Charging Voltage Limit	21V	
6.	Standard charging current	1000mA	
7.	Fast charging current	2.5A	
8.	Maximum charging current	5A	
9.	Internal resistance	$\leq 100\text{m}\Omega$	Exchange Test Method
10.	Standard discharge current	1000mA	
11.	High-rate discharge	15A	
12.	Maximum discharge current	30A	Continuous discharge
13.		35A	Pulse discharge for 5 seconds
14.	Final discharging voltage	13.75V	
15.	Defensive function	Overcharge Protection	4.225 V \pm 0.025 V (charger protection)
16.		Over-discharge protection	Tool Protection
17.		Temperature detection method	NTC
18.		Short-circuit protection	/
19.	Quiescent dissipation	$< 50\mu\text{A}$	At no load
20.	Work environment	Charging: 0-40°C Discharge: -10 to +40°C Maximum relative humidity: 85%	
21.	Cycle life	≥ 300 times	

II. Performance Testing Methods and Requirements

Order number	Surveillance project	Testing conditions	Ask
1.	Surface	Visualization	The outer shell surface shall be smooth without scratches, burrs, or other mechanical damages; exposed metal parts must not exhibit oxidation, and the adhesive shell must remain undeformed.
2.	Nominal capacity	<p>Environmental temperature: 20±5°C</p> <p>1) Standard charging method: Charge at 0.2C until 21V, then maintain a constant voltage of 21V with a current below 0.01C to complete charging; allow the battery to rest for 30 minutes after charging.</p> <p>2) Discharge at a constant current of 0.2 C to 13.75 V.</p>	Discharge capacity ≥ 90% of nominal capacity
3.	Charge retention capability	At an ambient temperature of 20°C ±5°C, the device was stored for 30 days after standard charging, followed by constant-current discharge at 1C to 13.75 V.	≥70% of the nominal capacity
4.	Transmission Voltage	Before shipment, the product is tested with a voltmeter to measure the voltage across the positive and negative terminals.	≥18V ≤21V
5.	High-temperature resistance	At an ambient temperature of 40°C, charge the battery fully at 0.2C, let it stand for 30 minutes, then discharge it at a constant current of 1C until reaching 13.75 V.	≥80% of the nominal capacity
6.	Low-temperature resistance	Under an ambient temperature of 0°C, charge the battery to full capacity at 0.2C and leave it undisturbed for 30 minutes. Then place the battery in an ambient environment at -20°C and discharge it at a constant current of 1C until reaching 13.75 V.	≥65% of the nominal capacity
7.	Vibration resistance performance	<p>At room temperature, place the fully charged battery on a vibration platform and vibrate it for 30 minutes according to the specified parameters:</p> <p>Displacement amplitude: 0.38 mm (10–30 Hz); 0.19 mm (30–55 Hz)</p> <p>Frequency: 10–55 Hz (1 octave per minute); Directions: X, Y. Inspect the battery's appearance and functionality after testing.</p>	The battery should exhibit no visible damage, show no liquid leakage, emit no smoke, ignite, or explode.

III Product Dimension Diagram



IV. Storage Requirements

- 1) Store the battery in a cool, dry place. The recommended storage temperature range is: -10°C to $+35^{\circ}\text{C}$.
- 2) During battery storage, it must be charged every three months to prevent damage caused by over-discharge.

V. Precautions

- 1) Anti-polar charging is prohibited.
- 2) Do not burn or damage the battery, as this may cause it to explode or release harmful gases.
- 3) Discontinue use if murmurs, elevated temperature, or leakage occurs.
- 4) When power is insufficient, stop using the device to prevent over-discharge and battery damage.
- 5) Do not place the battery in water.
- 6) Do not attempt to disassemble, press, or impact the battery, as this may cause overheating or fire.
- 7) Keep out of reach of children.
- 8) Short circuits, overcharging, or improper charging methods can damage the battery.
- 9) Use the appropriate charger to charge the battery.