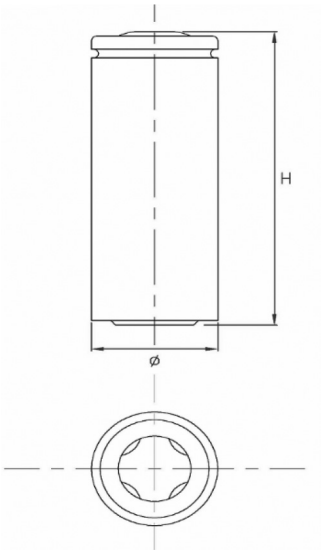
Lithium Battery
Rechargeable

multicomp PRO

RoHS Compliant

Diagram



Item	Dimension
Cap Diameter	10 ±0.2
Diameter (Φ)	26.4 ±0.3
Height (H)	66 ±0.5

Major Technical Parameters

No.	Item		Standard	Note
1	Nominal Capacity		400mAh	0.2C, (current value of 4000mA at1C)
2	Minimun Capacity		3950mAh	0.2C
3	Standard Voltage		3.2 V	
4	Alternating Internal Resistance		≤25mΩ	
5	Charge Conditions	Upper Limit Voltage	3.65±0.03V 0.01C	constant-current charge to 3.65V at 0.5C, constant voltage charge to stop until 0.01C mA
		Upper Limit Current		
		Standard Charge Current	0.2C	0°C to 45°C
		Rapid Charge Current	0.5C	10°C to 45°C
		Max. Charge Current	1C	

6	Discharge Cut-off Voltage	2.0V	
	Standard Discharge Current	0.2C	-20°C to 60°C
	Rapid Discharge Current	0.5C	0°C to 60°C
	Max Discharge Current	3C	
	Max Pulse Current	5C	
7	Cycle Characteristic	2000 times	100% DOD, the residual capacity is no less than 80% of rated capacity at 1C rate.
8	Working Temperature	Charge:0°C to 45°C Discharge:-20°C to 60°C	Rafer to standard charge and discharge current, and the battery surface temperature <80°C
9	Storage Temperature	0°C to 35°C	
10	Battery Weight	40±2 g (Approx.)	
11	Shipping Voltage	3.15-3.25V	According customer request adjustment

Safety Characteristics

NO.	Item	Test Method	Standard
1	Overcharge	After normal charge, test the batteries' initial state and capacity. Charge to 10.0V at 3C, then charge at CV mode to 0.01C. Observe battery's variation of appearance.	No explosion, No fire.
2	Over Discharge	After normal charge, test the batteries' initial state. When the batteries are normal, Discharge to 0V at 0.5C. Observe battery's variation of appearance.	
3	External Short-circuit	After normal charge, test the batteries initial state, Keep the battery into explosion protection cover, short-circuit the positive and negative terminals directly (general resistance shall be less than or equal to 50mΩ). Stop the test when the temperature falls to 10°C lower than the peak value. Observe the variation of the batteries' appearance and temperature.	
4	Thermal Abuse	Test the batteries' initial state and capacity. Standard charge. Put battery into oven, increase the temperature to 130±2°C at rate of (5±2°C)/min, and keep it for 30min. Observe the variation of batteries' appearance.	
5	Drop	After normal charge, test the batteries' initial state and capacity. Then let it fall from a height of 1m (the lowest height) to a smooth cement floor, twice.	
6	Heavy Impact	A diameter of 15.8 mm steel rod is placed in the middle of the fully charged battery, then the weight of 10Kg hammer from 1.0m height free falls to the battery upper	
7	Extrusion Test	Place the battery in between the pressing surface of extrusion apparatus, parallel the axes of cylindrical battery to the pressing surface, and gradually increase pressure up to 13KN, keeping the pressure for 1min	

Environmental Adaptability

NO.	Item	Test Method	Standard
1	Temperature Cycle	Store the battery for 48 hours at 75±2°C after standard charge, then store the battery at -20°C for 6 hours, and at room temperature for 24 hours. Observe the batteries' appearance.	No leakage, No smoke, No fire, No explosion.
2	Static Humidity	Put the battery at 40°C±5°C and 95%RH chamber for 48h, then get it out and store it for 2h at room temperature. Observe the appearance and discharge at 0.5C to 2.5V, then test the final capacity.	Discharge capacity after storage is more than 90% of rated capacity. No obvious outside damage, No corrosion, No smoke, No explosion
3	Vibration	Standard charge. Equip it to the vibration platform, prepare the test equipment according to following vibration frequency and relevant swing, doing frequency sweeping from X, Y, Z three directions, each from 10Hz to 55Hz for 30 minutes of recycling, rating of which is 1oct/min: A)vibration frequency:10Hz to 30Hz Displacement breadth (single swing): 0.38mm B)vibration frequency:30Hz to 55Hz Displacement breadth (single swing): 0.19mm. Observe the final state after scanning.	Residual Capacity≥90% Rated Capacity Voltage Decrease Rate ≤0.5% Internal Resistance Increase Rate≤20% No obvious outside damage, No leakage, No smoke, No explosion
4	Normal Storage	Test the batteries' initial state and capacity; store the battery for 30 days after standard charge, test the final state. Discharge at 0.5C to 2.5V, then test batteries' residual capacity. Then after normal charge, discharge at 0.5C to 2.5V, then test the batteries' recovery capacity, Three cycles are permitted for this test, If one of the three cycles can reach the standard, it represents the battery has reached the standard.	Residual Capacity ≥90% Initial Capacity Recuperative Capacity ≥95% Initial Internal Resistance Increase Rate ≤30%

Storage and Others

Long Time Storage

If the battery is stored for a long time (more than three months), the battery should be stored in dry and cool place. The battery should be charged and discharged every there months. The batteries' storage voltage should be 3.3 to 3.4V and the battery should be stored in a condition as NO 9.

Others

Any matters that this specification does not cover should be consulted between the customer and the manufacturer.

Notice in Using Battery

Please pay attention to followings in case of battery will have leakage, heat etc.

- Do not immerse the battery in water or seawater, and keep the battery in a cool dry surrounding if it stands by.
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- Do not place in pocket.
- Do not use or leave the battery at high temperature as fire or heater. Otherwise, it can overheat or fire or its performance will be degenerate and its service life will be decreased.
- Do not reverse the position and negative terminals.
- Do not connect the battery electrodes to an electrical outlet.
- Do not short circuit. Otherwise it will cause serious damage of the battery.

- Do not transport or store the battery together with metal objects such as hairpins, necklaces, etc.
- Do not strike, trample, throw, fall and shock the battery.
- Do not directly solder the battery and pierce the battery with a nail or other sharp objects.
- Do not use the battery in a location where static electricity and magnetic field is great, otherwise, the safety devices may be damaged, causing hidden trouble of safety.

Use the battery charger specifically when recharging.

- If the battery leaks and the electrolyte gets into the eyes, do not rub the eyes, instead, rinse the eyes with clean water, and immediately seek medical attention. Otherwise, it may injure eyes.
- If the battery gives off strange odor, generates heat, becomes discolored or deformed, or in any way appears abnormal during use, recharging or storage, immediately stop charging, using, and remove it from the device.
- In case the battery terminals are dirty, clean the terminals with a dry cloth before use. Otherwise poor performance may occur due to the poor connection with the instrument.
- Tape the discarded battery terminals to insulate them.
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Part Number Table

Description	Part Number
Lithium Battery, 3.2V, 3.8Ah	MP013875

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