## **LITHIUM-ION RECHARGEABLE BATTERY**

## SPECIFIC ATIONS

<b>SPECIFICATIONS</b>		
Model :	LI18650 (2000)	
Description :	Lithium-Ion rechargeable battery	
Nominal Capacity :	2000 mAh (Min. 1900) at 400mA continuous of	discharge (new cell, temp. 20±5°C)
Nominal Voltage :	3.70 Volt (After charge)	
Cut-Off Voltage :	3.00 Volt	
	46g (bare cell) <60mΩ per cell (bare cell with 1KHz AC testi	ng at full abarga)
Cycle Life :	Typ. 500 standard charge/discharge cycles, ~7	
Charging :	Using dedicated CC/CV (4.2+/-0.03V) battery	
	Charging with CC (Constant Current) to 4.2V.	
	charge with CV (Constant Voltage) till charge	
	Standard - 400 mA x 6 hours (Ref.)	
	Quick - Max. 1000 mA x 3.5 hours (Ref.)	
Discharging :	Max. discharge current 2000mA	
	Discharge capacity varies with discharge curr	
Operating Temperature :	Standard charge 0°C to 45°C (battery perform Discharge -20°C to 60°C (battery performance	
Storage Conditions :	$-20^{\circ}$ C to $35^{\circ}$ C, RH $65\pm15\%$ (within 1 months)	e varies with temperature)
	$20\pm5^{\circ}$ C, RH 50-70% (long term)	
Battery Maintenance :	Battery without PCM to be recharged every 6 more	
	Battery with PCM to be recharged every 3 months	S
IQC Recommendations :		
	IQC Date : within 30 days after shipment of batter	
	Outer Dimensions : with caliper (Sampling S-4 A Appearance : visual (Sampling G-II AQL 2.5)	QL 2.3)
	Open Circuit Voltage : voltmeter (Sampling S-4 A	OL 0.65)
	Capacity : 400mA continuous discharge after stan	
Channa Chanasta	vistion	
Charge Characte		
~ 4.0		Ε
ک س 3.5	900 = 60	E T C
€ 40 8.5 9.5 0.6 0.6		$\left  \begin{array}{c} \dot{\mathbf{Q}} \\ \dot{\mathbf{Q}} \end{array} \right $
\$ <sup>3.5</sup> 2.5	CC/CV 4.2V, 1000mA x 3.5 hrs Temp. 20+5% BH 60+15% 200	8.2+/-0.3mm
2.0	1500         100         Image: Constraint of the second se	18.
0 1.0 2.0 3.0 4.0 5.0 Charge Time (hours)		
Discharge Characteristics		
3.0 -20°C		
		).5
2.5 Discharge current : 400m/ RH 60±15%		35+/-0.5mm
0 50 100 1	50200250300350	65
<b>`</b>	ge Time (minutes)	
Cycle Life Chara	cteristics	
Image: Second state sta		
		<b>Y</b>
Charge : CC/CV (400mA/4 Rest 30mins after charge		18.2+/-0.3mm
0 40 Discharge : 400mA to 30 0 0 Temp. 20±5°C, RH 60±15%	cutoff	
0 200	400 600	Single cell (with sleeve)
Information is for reference only and is not construed as warranties either expressed or implied, of future performance. Performance varies with time, usage and storage condition. 1 year limited guarantee against manufacturing defects. Other problem caused by		
misuse, mishandling of cell, or malfunction of equipment, is not under the warranty.		
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Model: L118650 (2000) Version: 2.60		G919PBA

## **LITHIUM-ION RECHARGEABLE BATTERY**

## **PROPER USE AND HANDLING**

performance and safety.	attery should employ appropriate cautions in order to obtain optimum
Charging	<ul> <li>Charging current should less than the maximum charging current specified in the specification</li> <li>Charging voltage must up to the voltage specified in the specification</li> <li>Do not charge battery over the specified time in the specification</li> <li>Charging temperature should be within the specified range in the specification</li> <li>Reverse charging should be strictly prohibited</li> <li>Improper charging may generate heat, smoke, rupture or flame, and cause damage to the battery</li> </ul>
Discharging	<ul> <li>Discharging current should be less than the maximum discharging current specified in the specification</li> <li>Discharging temperature should be within the specified range in the specification</li> <li>Do not over discharge the battery below 2.75V/cell</li> <li>Over discharge may occur by self-discharge if the battery is left for a very long time without any use</li> <li>Improper discharge may cause loss of performance</li> </ul>
Storage	: Storage temperature should be within the specified range in the specification Storage is recommended in low humidity, nop corrosive gas atmosphere Long term storage may cause loss of capacity
Cycle Life	: Cycle life differs by conditions of charging, discharging, operating temperature and/or storage condition Level of capacity differs by cycles of battery used
Product Design	<ul> <li>Do not solder directly on bare cell Battery should be positioned far from heat source and heat components Appropriate shock absorber should be equipped to minimize shock on the battery Protection circuit against overcharge, over discharge, over current should be equipped to insure safety in case of misuse Battery should be designed to connect only to specified charger and system Reverse connection of battery should be avoided in system design Improper product and system design may cause loss of battery performance</li> </ul>
Product Assembly	<ul> <li>Battery cell should be inspected visually before product assembly to avoid usage of damaged cell (for example, sleeve damage, battery distortion, or leaking)</li> <li>Excessive force on the battery terminals and battery surface should be avoided</li> <li>Precaution should be taken when battery is moved / transported to other place</li> <li>Do not disassembly, short-cutcuit, incinerate, immersion in water, and mix use of battery</li> <li>Battery should be disposed in discharged state</li> <li>Improper handling may cause loss of battery performance</li> </ul>
Warning	: The battery may present risk of fire and chemical burn if mistreated. Keep away battery from children.

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