



Name: LiSOCL2

Model: AKYGA ER34615-1S2P WC2E

SPEC: 3.60V / 38000mAh



## 1 Scope

This specification is applied to the reference battery in this Specification that manufactured by Akyga battery

## 2 Product Specification

Table 1

No.	ltem		Specification
1	Voltage		3.6 V
	Capacity (Discharge to 2.0V @2mA/Upright)	Standard Cap	38 Ah
2		Min. Cap	35 Ah
3	Max Discharge current	Continuity	400 mA
		Plus	800 mA
4	Termination Vol.		2.0 V
5	CCV@20 <b>Ω</b>		3.25 V
6	Weight		Approx. 210g
7	Work Temp		-20 °C to 85 °C
8	Storage Temp		-10 °C to 40 °C
9	Storage Humidity		≪65%
10	Guarantee Period		10 年



#### 3 Performance And Test Conditions

### 3.1 Standard Test Conditions

Test should be conducted with new batteries within one week Unless otherwise specified, test and measurement shall be done under temperature of  $23\pm2\,^{\circ}\mathrm{C}$  and relative humidity of 45~85%. If it is judged that the test results are not affected by such conditions, the tests may be conducted at temperature 15~30 $^{\circ}\mathrm{C}$  and humidity 25~85%RH.

#### 3.2 Measuring Instrument or Apparatus

#### 3.2.1 Dimension Measuring Instrument

The dimension measurement shall be implemented by instruments with equal or more precision scale of 0.01mm.

#### 3.2.2 Voltmeter

Standard class specified in the national standard or more sensitive class having inner impedance more than  $10k\,\Omega\,/V$ 

### 3.2.3 Ammeter

Standard class specified in the national standard or more sensitive class. Total external resistance including ammeter and wire is less than 0 01  $\Omega$ 

- 3.3.Standard Discharge
- : Cells shall be discharged at a constant current of 2mA to 2.0 volts
- 3.4 Appearance There shall be no such defect as flaw, crack, rust, leakage, which may adversely affect commercial value of battery.

Item	Test Method and Condition	Requirements
(1) Open-Circuit Voltage	Measure with DC Voltage meter	≥3.6V
(2) Minimal Rated Capacity	Discharge to 2.0V2mA	Discharge Capacity
1 3		≥38Ah
(3) Quickly Discharge Capacity	Discharge to 2.0V 400mA	Discharge Capacity
Capacity		≥12Ah



### 3.6 Temperature Dependence of discharge capacity

Cells shall be discharged per 3.3 and discharged @3mA to 2.0 volts. Except to be discharged at temperatures per Table 3. Cells shall be stored for 3 hours at the test temperature prior to discharging and then shall be discharged at the test temperature. The capacity of a cell at each temperature shall be compared to the capacity achieved at  $23\pm2$  °C and the percentage shall be calculated. Each cell shall meet or exceed the requirements of Table 3.

Table 3

Discharge Temperature	-40℃	0℃	<b>23</b> ± <b>2</b> ℃	50℃	<b>72</b> ℃
Discharge to 2.0V 3mA	45%	60%	100%	95%	90%

### 4. Mechanical characteristics and Safety Test

Гable 4	(Mechanical characteristics)

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No.	Items	Test Method and Condition	Criteria		
1	Vibration Test	Fixed the cell to vibration table and subjected to vibration cycling that the frequency is to be varied at the rate of 1Hz per minute between 10Hz an 55Hz, the excursion of the vibration is 1.6mm. The cell shall be vibrated for 30 minutes per axis of XYZ axes.	No leakage  no weight loss  no short circuit  No fire  No explosion,		
2	Altitude Simulation Test	The batteries should be stored at the pressure of 11.6 KPa or less for at least six hours at ambient temperature $23\pm2$ °C.	No leakage  no weight loss  no short circuit  No fire  No explosion,		



Table 4 (Mechanical characteristics)

No.	Items	Test Method and Condition	Criteria
3	Short circuit	Each test sample battery, in turn, is to be short-circuited by connecting the (+) and (-) terminals of the battery with a Cu wire having a maximum resistance load of 0.1 $\Omega$ . Tests are to be conducted at room temperature(23 $\pm$ 2 $^{\circ}$ C).	No explosion  No fire
4	Impact	A 56mm diameter bar is inlayed into the bottom of a 10kg weight. And the weight is to be dropped from a height of 1m onto a sample battery and then the bar will be across the center of the sample.	No leakage  no short circuit  No fire  No explosion,
5	Free fall	Fresh batteries; Height: 1.2m, 6 times; Each direction two times; Concrete floor	No leakage no short circuit No fire No explosion,
6	Over discharge	Complete discharged battery, connected in series with two fresh cells and resistor load 30hm for 36h or cell temperature returned to ambient.	No explosion  No fire



#### 5. Environment requirement

The product does not contain controlled substances of level 1.

### 6. Producing standard and certification

The batteries are produced according with the IEC standard.

### 7. Transportation

- The Batteries should be stored away from solarization, fire, rain, water, and never put together with corrosive during transportation.
- -Vibration and shock during transportation and load-and-unload should be restrict to a minimum level.
- The height should not exceed 1.5m for cardboard packages.
- The batteries if transported by sea should be stored away from ship engines during prolonged transit, and not left for long periods in unventilated environment during summer.

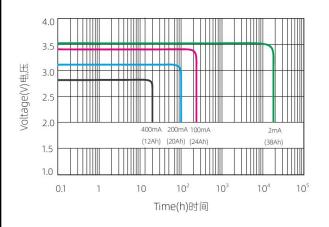
### 8. Information for safety

### ! Danger

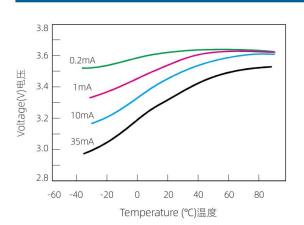
- -Do not overheat batteries or dispose of batteries in fire.
- -Do not put batteries together with metalwork such as necklace, coins, etc. in one bag, or store them together.
- -Do not short-circuit batteries.
- —Do not inset batteries in reverse. Observe the + and markings on battery and equipment.
- -Do not disassemble batteries.
- -Do not weld or solder directly to batteries.
- —Do not use deformed batteries or batteries with serious scar.
- —Do not throw the battery onto the ground or wall.
- Read the guide carefully before using batteries. Unsuitable operation will make batteries
  overheat, fire, explode, destroy or reduce battery's capacity.



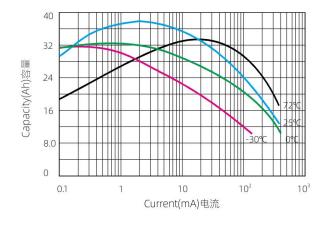
### Discharge characteristice 放电特性 (25℃)



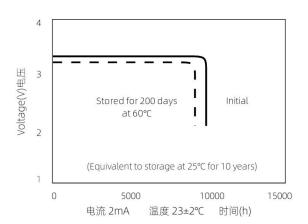
### Voltage vs temperature 电压vs温度



### Capacity vs current 容量vs电流



### Storage characteristics 存储特性





## 11. Battery Dimension

