CONFIDENTIAL

TECHNICAL INFORMATION of 18650 MG1(2.9Ah)

Contents

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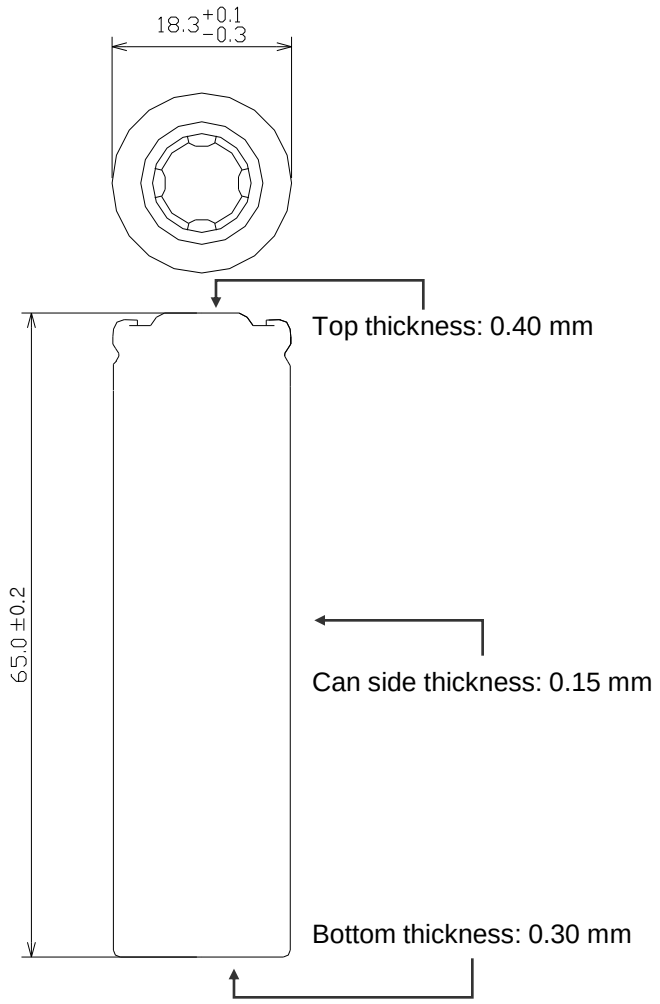
LG Chem
Mobile Energy Division



Can material: Steel (Nickel-plated)
Tube material: Colored PET (t=80 um)

Model 18650 MG1		
0.2C Capacity *	Nominal	2850mAh
	Minimum	2750 mAh
Nominal Energy Density (Wh/kg)		220
Dimensions	Diameter	18.3 + 0.1,-0.3mm
	Height	65.0 ±0.2 mm
Weight		Max. 47.0 grams
Nominal Voltage		3.62V
Internal Impedance		≤ 30mOhm

* ***Charge : 1,000mAh, 4.2V, 100mA End-current (CC-CV)***
Discharge : 560mAh, 2.75V End-voltage (CC)

Test Condition

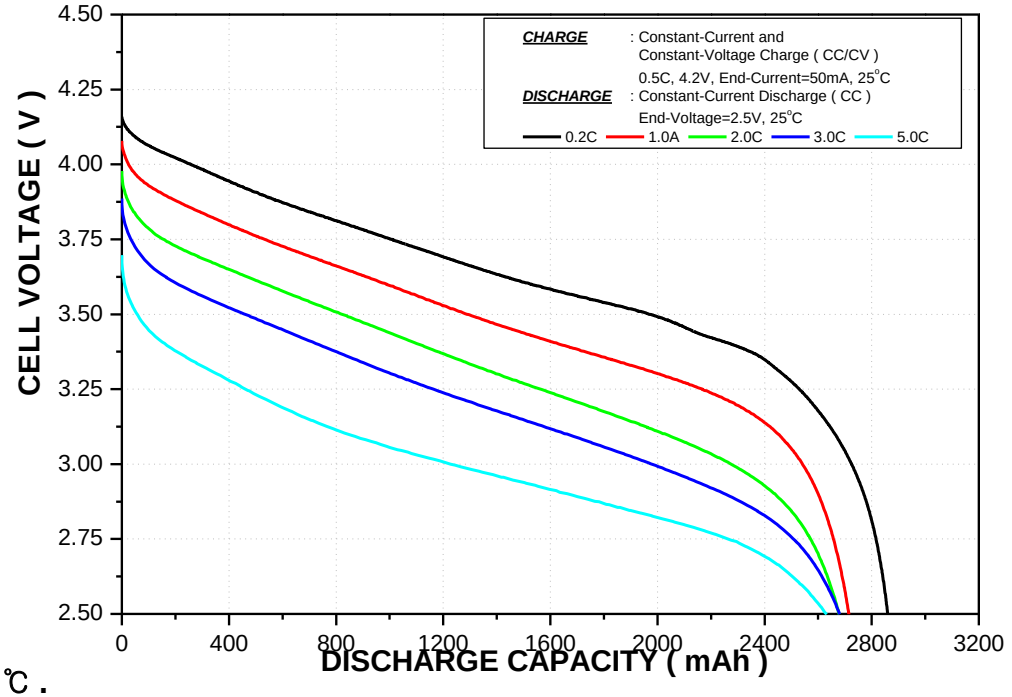
Charge : CC-CV, 0.5C, 4.2V, end-current 50mA, 25±2℃

Discharge : CC, 0.2~5.0C, 2.5V cut-off, 25±2℃

Discharge rate		0.2 C	1.0 C	2.0C	3.0C	5.0C
Capacity	mAh	2858	2715	2679	2680	2632
	%	100	95	93.7	93.7.	92
Energy	Wh	10.32	9.43	8.88	8.57	7.9
	%	100.0	91.4	86	83	76.6
Max cell Skin Temp.	ºC	25.6	31.3	39	48.7	68.9

*** All ratio's are calculated vs. 0.2C discharge capacity at 25±2℃ .**

Discharge Profile



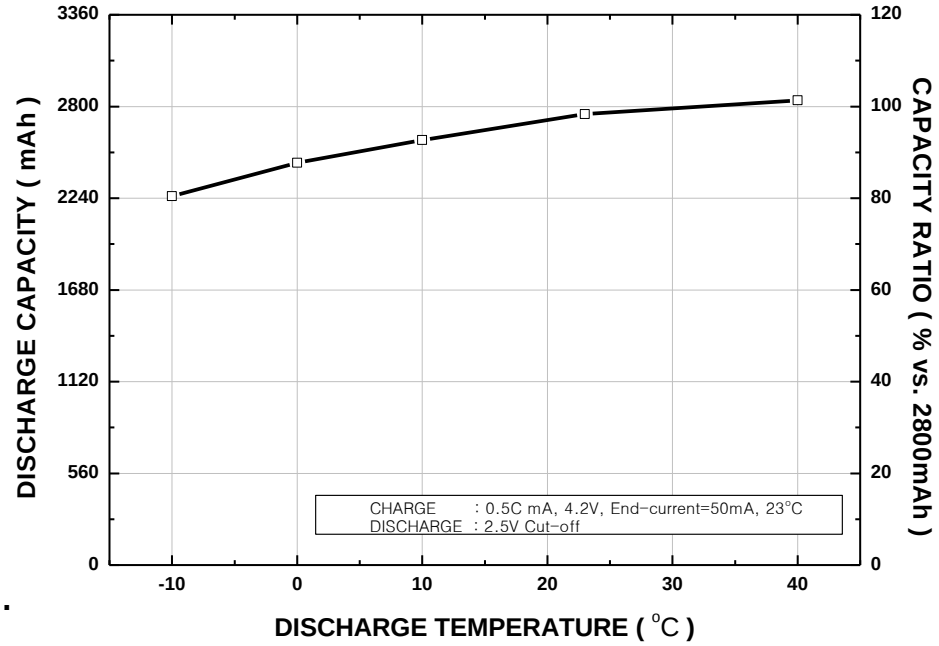
Test Condition

Charge : CC-CV, 0.5C, 4.2V, end-current 50mA, 25±2℃

Discharge : CC, 3A, 2.5V cut-off, -10~40℃

Discharge Capacity/ Temperature	3A	
	mAh	%
-10 ℃	2252	81.8
0 ℃	2457	89.2
10 ℃	2595	94.2
25 ℃	2754	100
40 ℃	2837	103

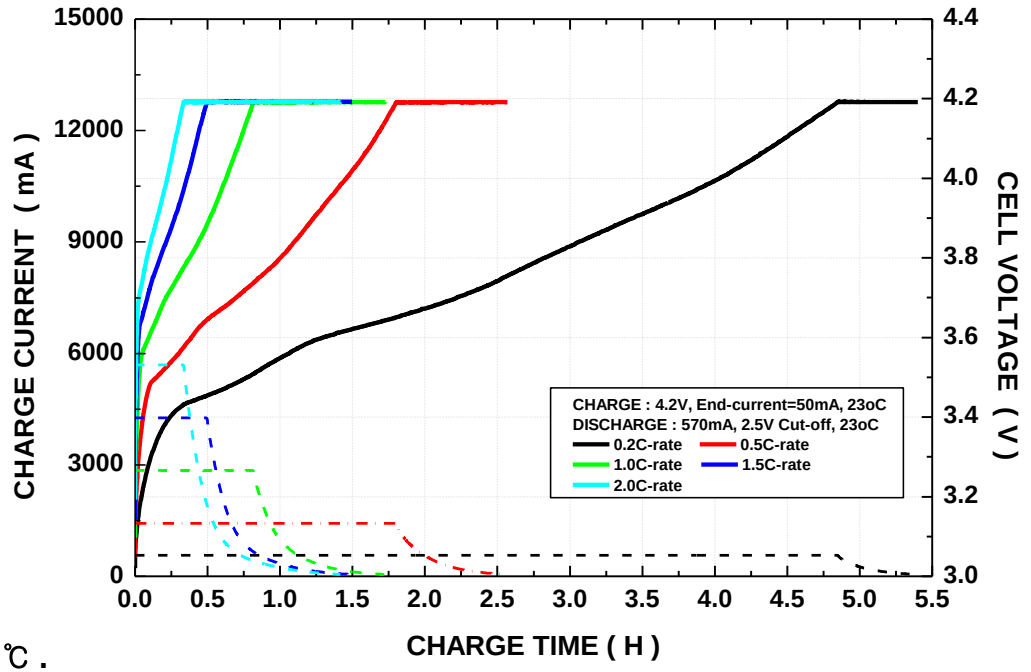
*** All ratio's are calculated vs. 0.2C discharge capacity at 25±2℃.**



Test Condition

Charge : CC-CV, 0.2~2.0C, 4.2V, end-current 0.05C, 25±2℃

Discharge rate		0.2C	0.5C	1.0C	1.5C	2.0C
CC-CV	Time (Hr)	5.34	2.57	1.72	1.50	1.42
	Capacity (mAh)	2865	2857	2860	2865	2862
	%	100	99.7	99.8	100	99.9
CC	Time (Hr)	4.85	1.80	0.82	0.50	0.34
	Capacity (mAh)	2760	2567	2324	2123	1913
	%	100	93	84.2	76.9	69.3
CV	Time (Hr)	0.55	0.76	0.91	0.99	1.08

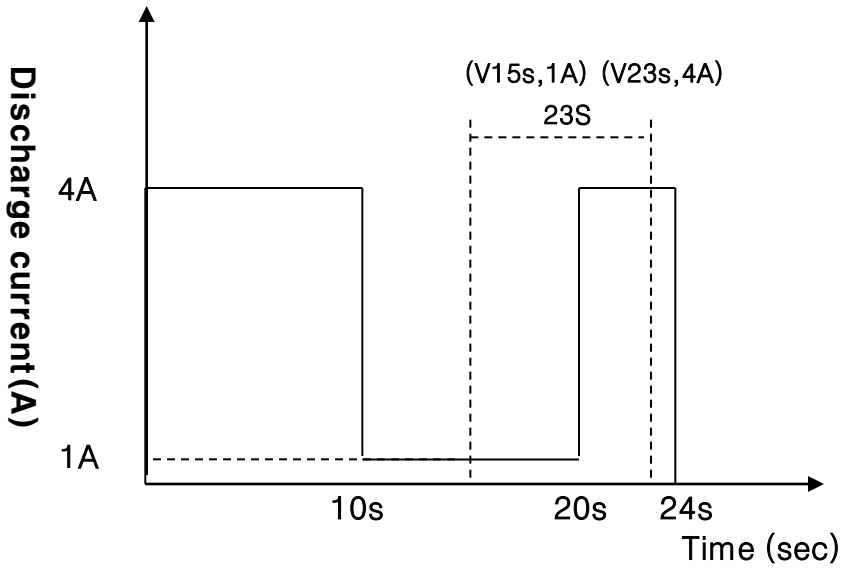


*** All ratio's are calculated vs. 0.2C discharge capacity at 23±2℃ .**

Test Temperature : 23±2℃
Charge : CC-CV, 0.5C, 4.2V, end-current 100mA
Discharge : discharge the cell as a current curve as shown.

Discharge current curve

: R_{DC} = [V(15s) – V(23s)] / 3A



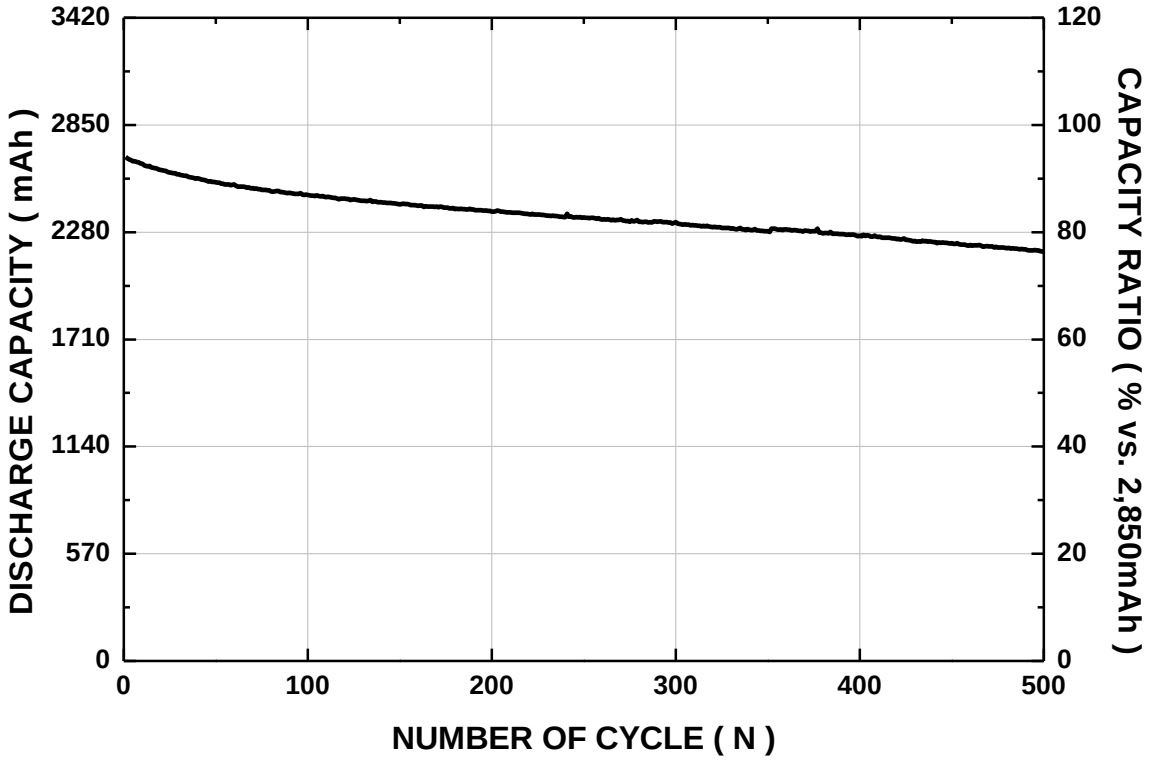
Test Result

Cell No.	Rdc [mΩ]	Cell No.	Rdc [mΩ]
1	37.3	5	38.3
2	39.7	6	39.3
3	37.3	7	38.7
4	38.0	8	39.3

Test Condition :

Charge : CC-CV, 1A, 4.2V, 100mA cut off, 25±2℃

Discharge : CC, 6A, end voltage 2.75V, 25±2℃



No	Item	Test Method		Criteria	Result
		Condition	SOC		
1	Drop	Height 1.2m, metal board, 1cycle (3 direction)	100%	No Leakage	Meet
2	Vibration	Vibration along axial and radial direction of 8g for 3h	100%	No Leakage	Meet
3	Overcharge	Over charge with 1C, for 3h	50%	No Fire, Explosion	Meet
4	External short	External short with R < 0.1Ω –wire	100%	No Fire, Explosion	Meet
5	Hot Oven	Heating rate : 5°C/ min , holding :140°C, 1h	100%	No Fire, Explosion	Meet
6	Crush	Applied force 13kN (flat surface)	100%	No Fire, Explosion	Meet
7	Impact	15.8 mm Diameter ,9.1 kg Weight bar Height : 610±25 mm	100%	No Fire, Explosion	Meet