

Technical Information of LG 18650HE2

July 30, 2013

Cylindrical Cell Development



Summary

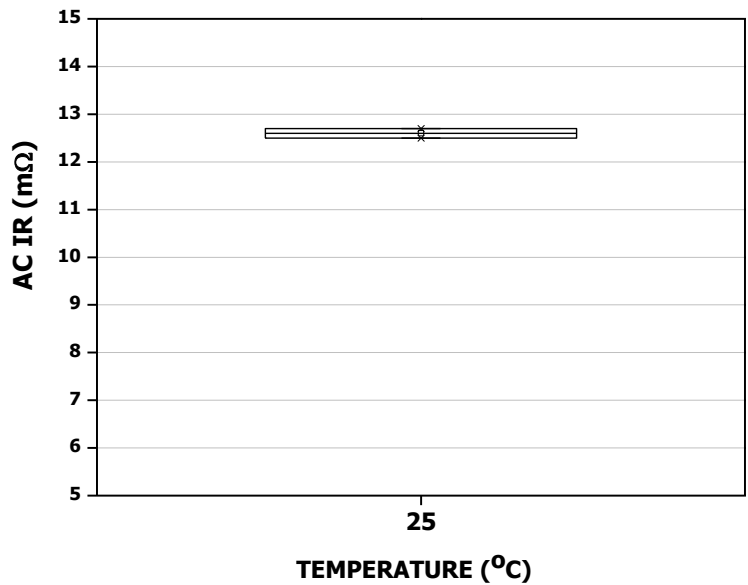
Type		Specification	Actual
Chemistry		Li[NiMnCo]O ₂ (H-NMC) / Graphite + SiO	
Dimensions (mm)	Diameter	18.3 +0.2/-0.3 mm	
	Height	65.0 ± 0.2 mm	
Weight (g)		Max. 48	43 ~ 44
Initial IR (mΩ AC 1kHz)		Max. 15	12 ~ 13
Initial IR (mΩ DC)		Max. 30	21 ~ 22
Nominal Voltage (V)		3.6	
Charge Method		Nominal : 1.25A 4.2V, 50mA End-current (CC-CV)	
		Fast : 4A 4.2V, 100mA End-current (CC-CV)	
Charge Time	Nominal (min)	145	
	Fast (min)	65	
Charge Current	Nominal Current (A)	1.25A	
	Max. Current (A)	4A	
Discharge	End Voltage (A)	2V	
	Max. Current (A)	20A (Continued discharge current)	
0.2C Capacity	Nominal (Ah)	2.5 Ah	
Energy Density	Nominal (Wh/kg)	211	

ACIR & DCIR

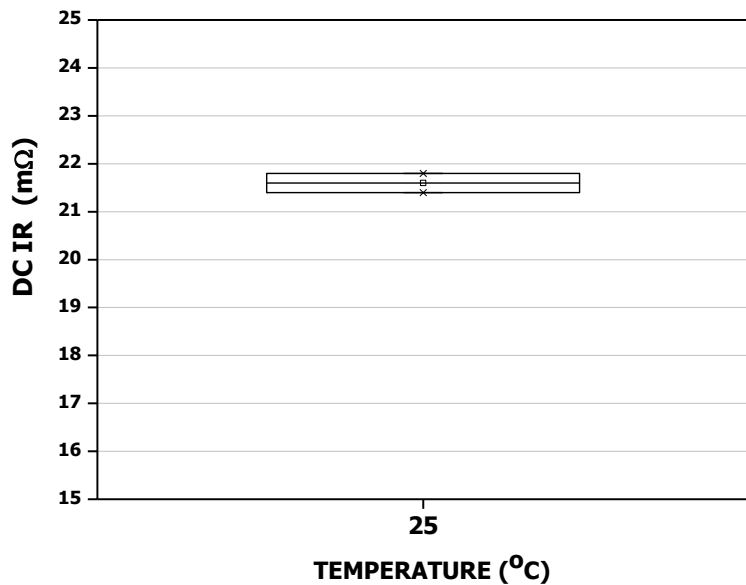
Test Conditions

- ACIR : 1KHz, SOC100%
- DCIR : 2A/10A (V1-V2)/(I2-I1)

ACIR



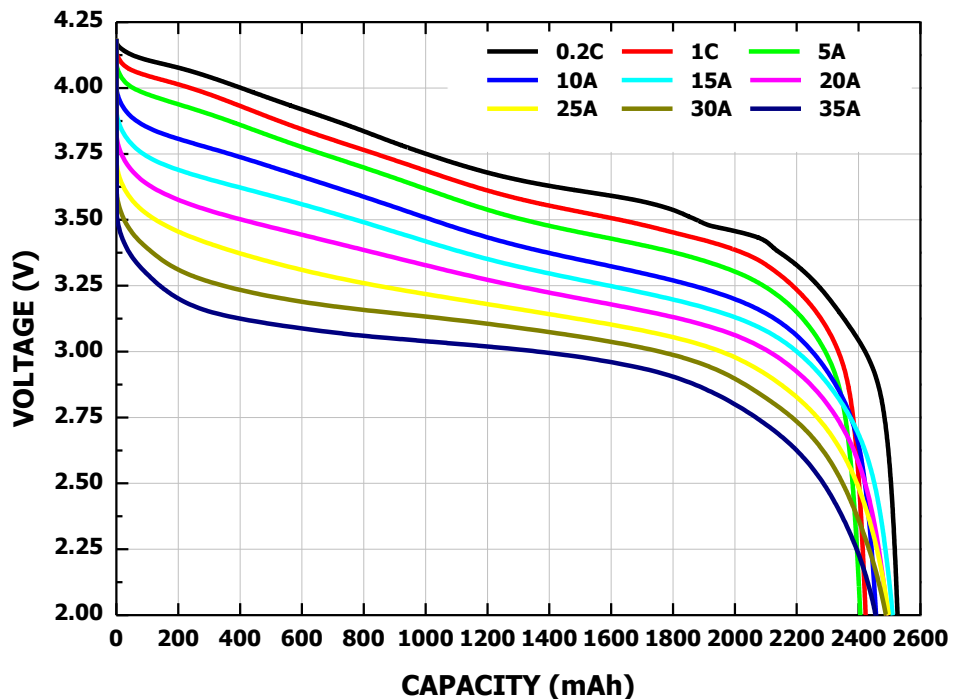
DCIR



Rate Performance

Test Conditions

- Charge (CC/CV) : 0.5C charge to 4.2V, 100mA cut-off
- Discharge (CC) : 2.0V cut-off

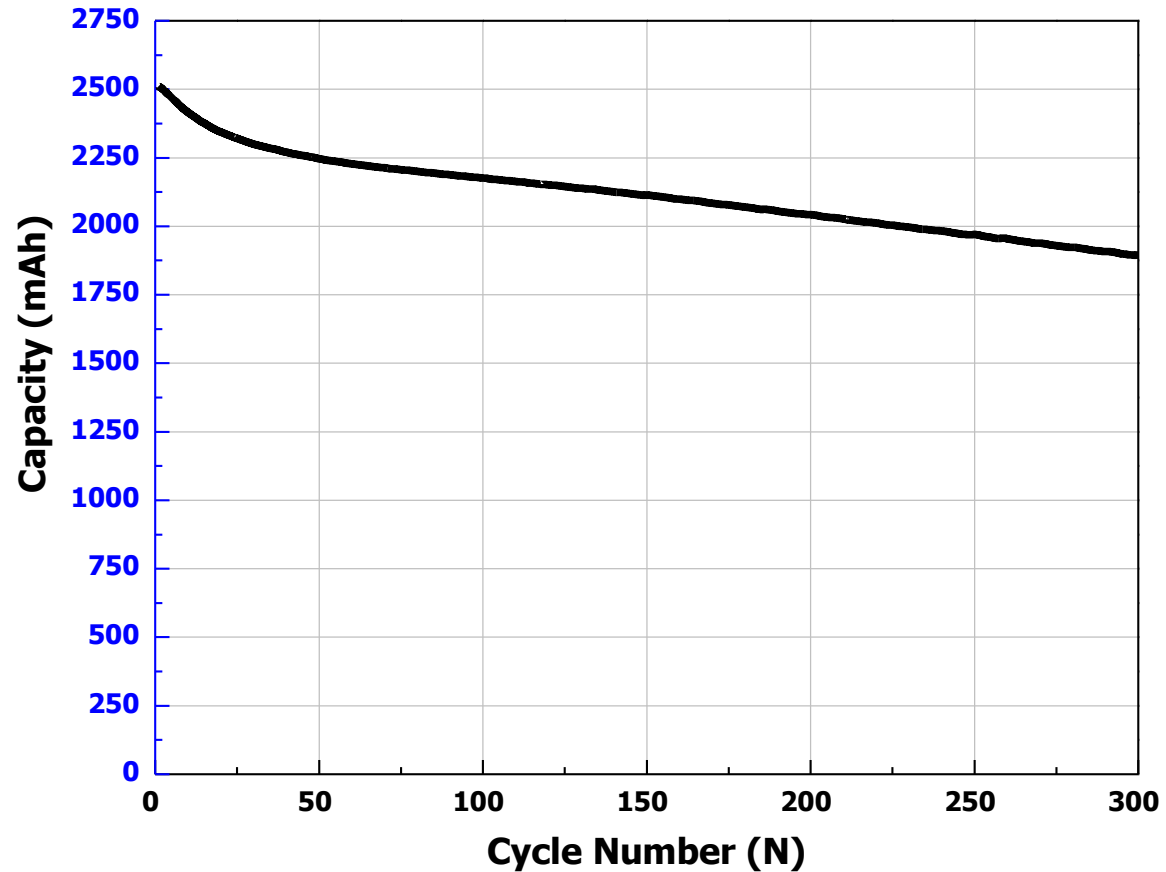


Discharge Current	Capacity (mAh)	% of 1C Capacity
0.2C	2526	-
2.5A	2423	100.0
5A	2406	99.3
10A	2456	101.4
15A	2510	103.6
20A	2494	102.9
25A	2496	103.0
30A	2493	102.9
35A	2455	101.3

15A Cycle Life

▪ Test Conditions

- Charge (CC/CV) : 4A charge to 4.2V, 100mA cut-off
- Discharge (CC) : 15A discharge, 2.0V cut-off



20A Cycle Life

▪ Test Conditions

- Charge (CC/CV) : 4A charge to 4.2V, 100mA cut-off
- Discharge (CC) : 20A discharge, 2.0V cut-off

