
Technical Report of INR18650-35E



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June, 2015

Cylindrical cell development group
Energy Business Division
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Tentative Specification of INR18650-35E

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Φ max 18.50 mm



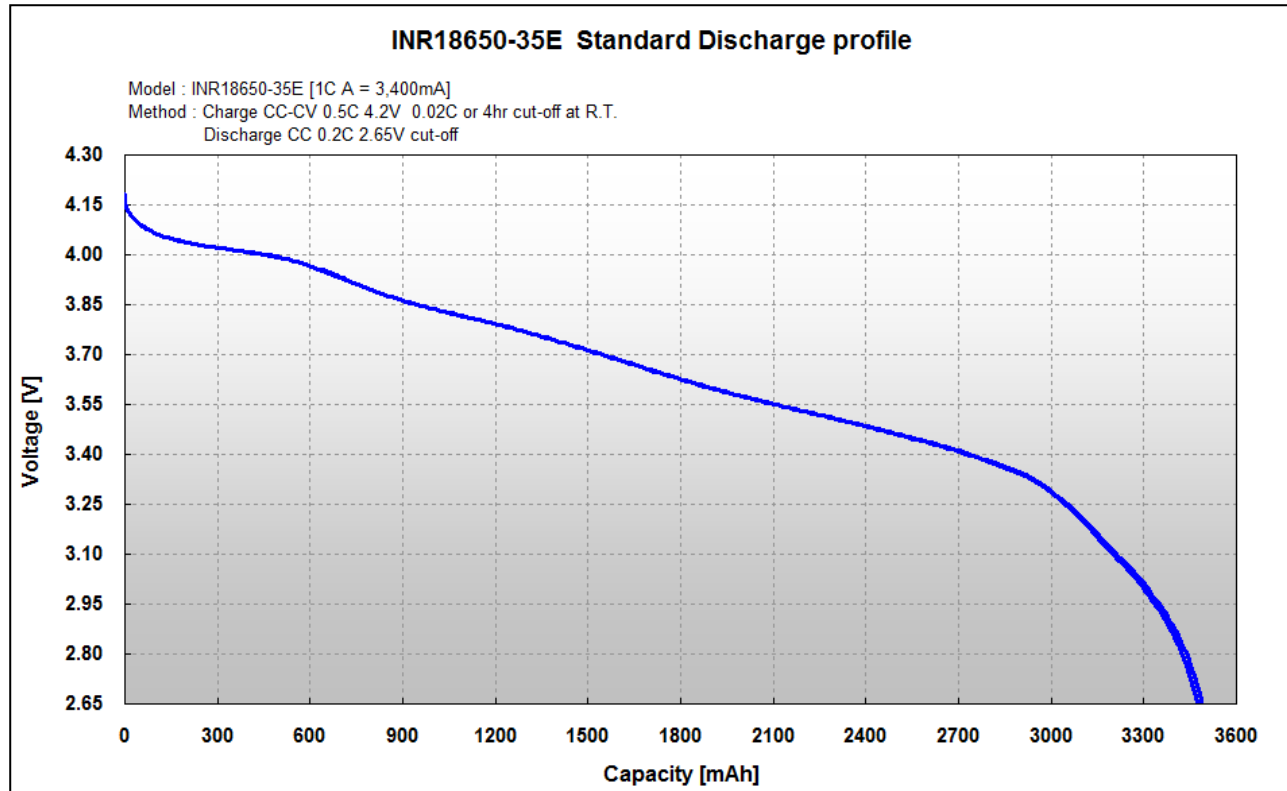
Max
65.25 mm

With Tube

		INR18650-35E
● Capacity (0.2C)	Typical Min.	3450mAh 3350mAh
● Nominal Voltage (0.2C)		3.60V
● Charging Method		CC-CV
● Charging Voltage		4.20V
● Charging Current	Max.	1500mA
● Discharging Cut-off Voltage		2.50V
● Discharging Current (Not for cycle)	Max.	8000mA
● Weight	Max.	50.0g
● Operating Temperature	Charge Discharge	0 ~ 45 °C -10 ~ 60 °C
● Storage Temperature	1 Year 3 Months 1 Month	-20 ~ 25 °C -20 ~ 45 °C -20 ~ 60 °C

Standard Capacity_0.2C

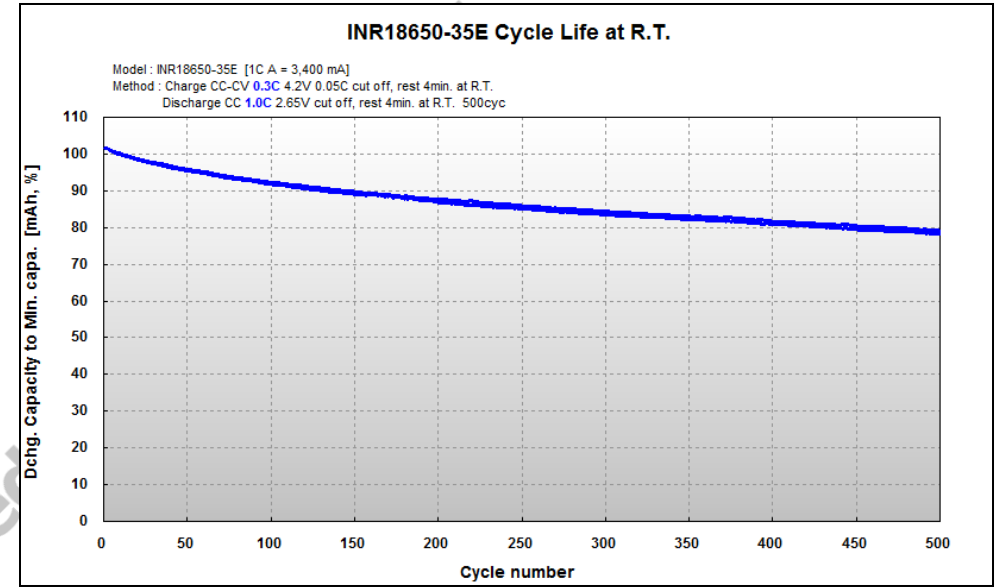
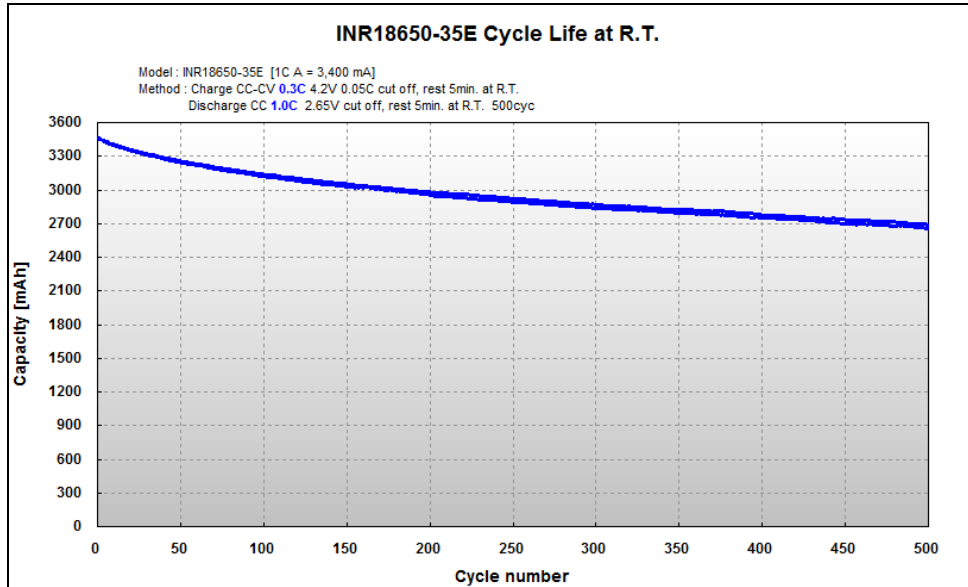
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capacity (mAh)	Energy (Wh)
3,482	12.62

Cycle Life_1C cycle

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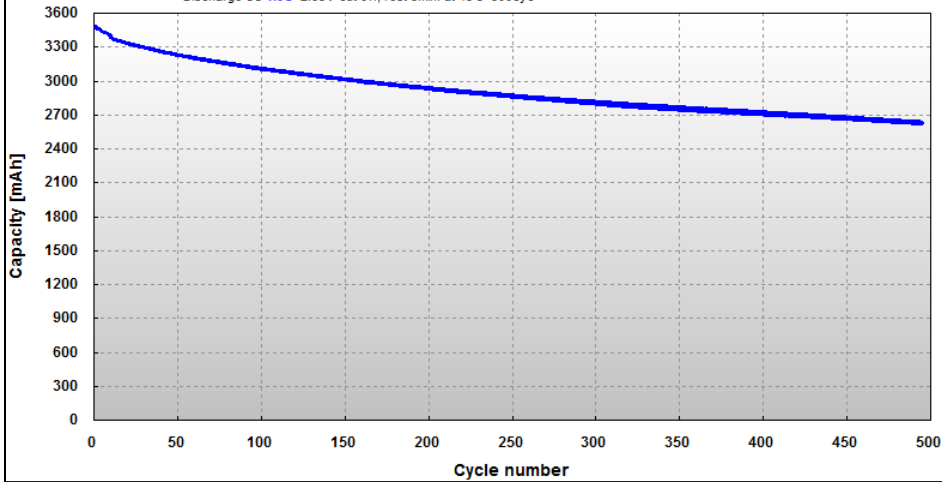
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Cycle Life_1C cycle at 45°C

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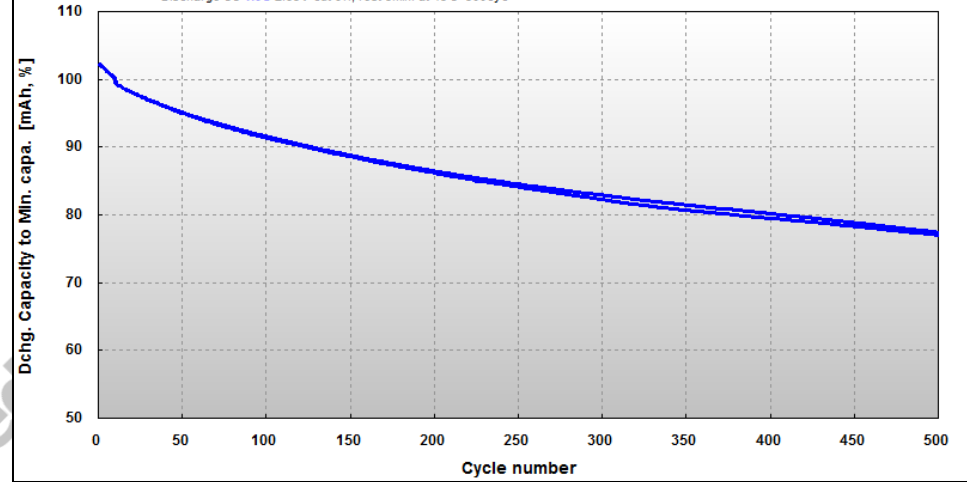
INR18650-35E Cycle Life at 45 °C

Model : INR18650-35E [1C A = 3,400 mA]
Method : Charge CC-CV 0.3C 4.2V 0.05C cut off, rest 5min. at 45°C
Discharge CC 1.0C 2.65V cut off, rest 5min. at 45°C 500cyc



INR18650-35E Cycle Life at 45°C

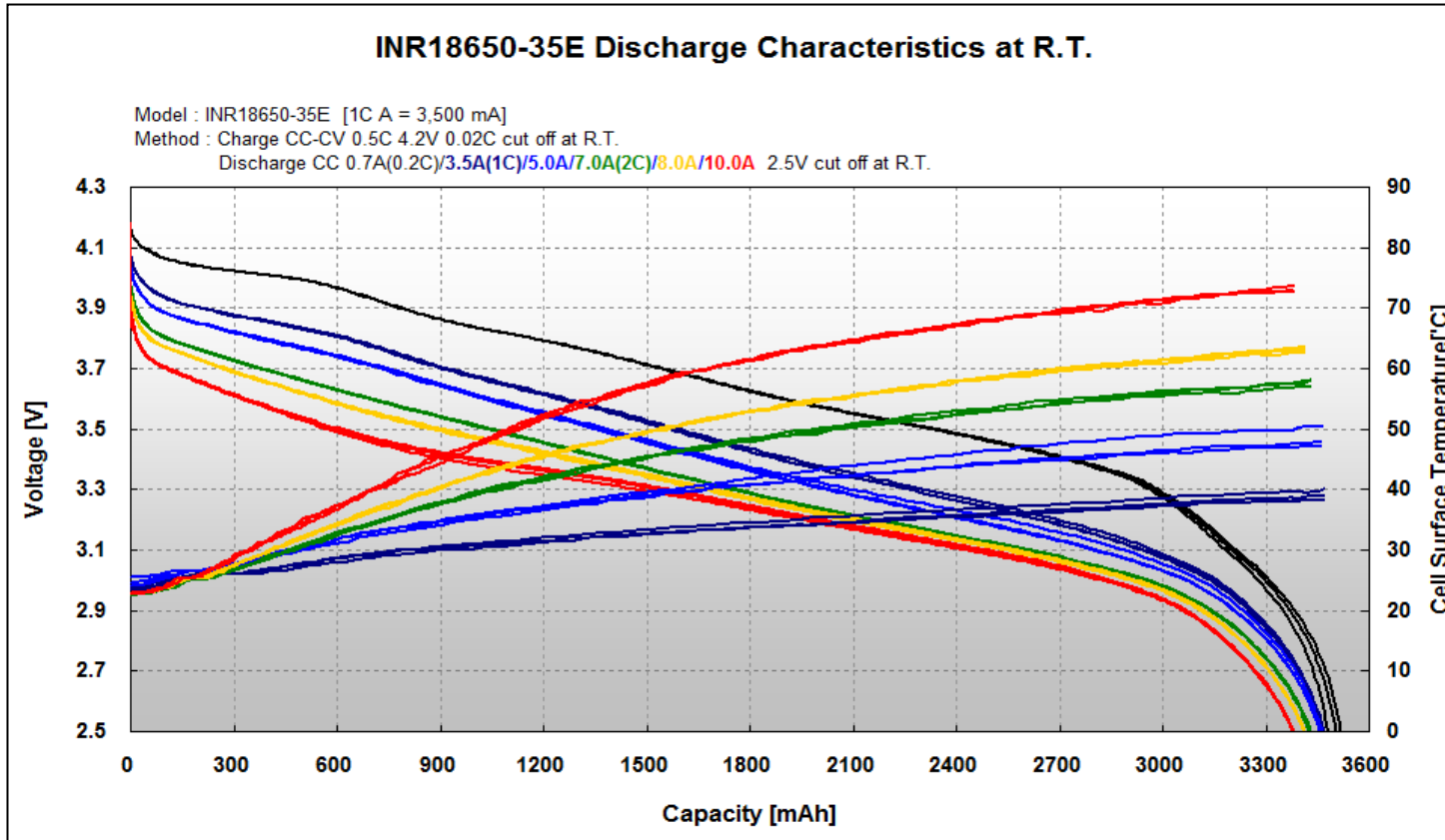
Model : INR18650-35E [1C A = 3,400 mA]
Method : Charge CC-CV 0.3C 4.2V 0.05C cut off, rest 5min. at 45°C
Discharge CC 1.0C 2.65V cut off, rest 5min. at 45°C 500cyc



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Room Temperature Discharge (23°C)

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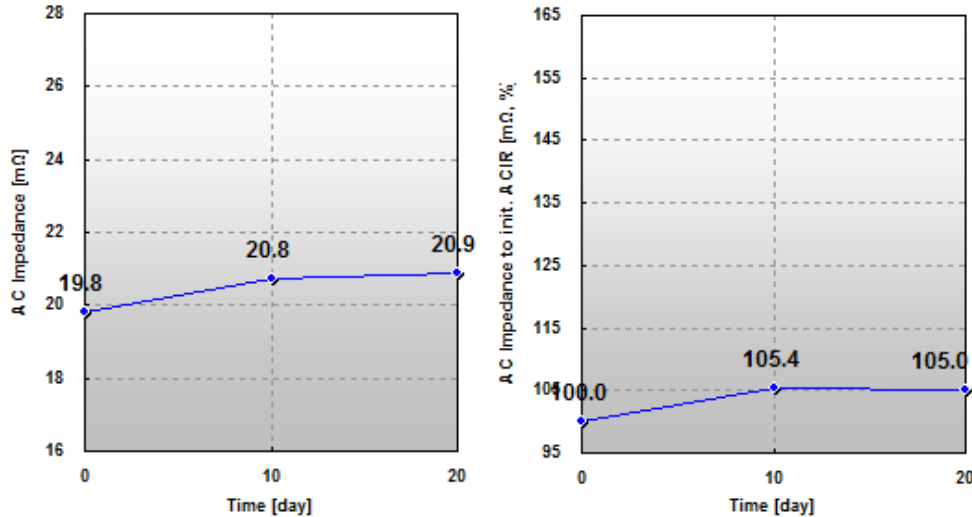
	3.5A	7.0A	10.0A
Capacity (mAh)	3,468	3,429	3,379
Energy (Wh)	11.94	11.37	10.98

Storage at 60°C (SOC100)

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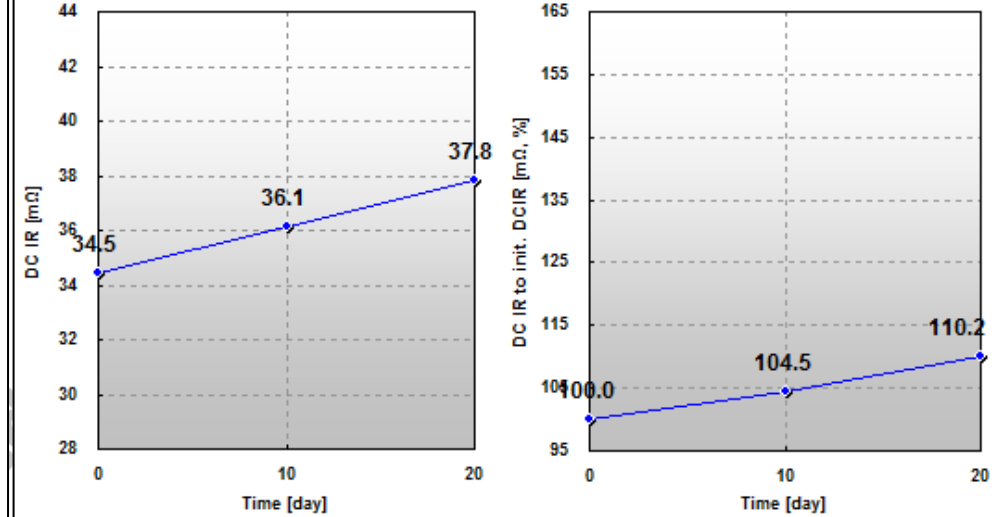
AC-IR

Change in AC Impedance during Storage at 60°C



DC-IR

Change in DC IR during Storage at 60°C



Storage day	Initial		After storage		Ratio		
	AC-IR	DC-IR	AC-IR	DC-IR	AC-IR	DC-IR	Recovery
10	19.8	34.5	20.8	36.1	105.4	104.5	98.0
20			20.9	37.8	105.0	110.2	97.4

Safety Test Results

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Tests	Requirements	Results	OK/NG
Overcharge (1C, 3hr)	L1	4L0	OK
Hot oven (140 °C)	L1	3L1	OK
Crush (13 kN)	L3	10L1	OK
Impact (φ15.8, 9.1kg, 610mm)	L3	10L0	OK
External short Circuit @55 °C (20mΩ)	L1	5L0	OK
Forced-Discharge	L3	5L0	OK

Level	Criteria
L0	No change
L1	Leak
L2	Smoke, <200 °C
L3	Smoke, >200 °C
L4	Fire
L5	Explosion

- Thank you -

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