

EVE INR18650/30PL Introduction Report



The background of the left half of the slide is a dark blue, high-contrast image of a microscope. The microscope is positioned vertically, with the eyepiece at the top and the objective lens pointing downwards. The lighting is dramatic, highlighting the metallic and glass components of the instrument. A vertical blue bar is positioned to the right of the microscope, separating it from the white content area.

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01

Cell Specification

1. Cell Specification

INR18650/30PL	No.	Item		Specification
	1	Nominal Capacity	0.2C	3000mAh
	2	Nominal Energy	0.2C	10.95Wh
	3	Dimension	Diameter	18.35±0.10mm
	4		Height	65.15±0.10mm
	5	Weight		44.0±2.0g
	6	Operating Voltage Range		4.2V~2.5V
	7	Impedance	ACR (30SOC)	≤6mΩ
	8		DCR (100SOC)	≤16mΩ
	9	Charge Current	Standard	1.5A
	10		Max.	12A
	11	Discharge Current	Standard	0.6A
	12		Max.	60A
	13	Cycle life (RT, 4.2V~2.5V)		9A/30A 400 th 60%
	14	Operation Temperature Range (Cell surface)	Charge	0~60°C
For reference only	15		Discharge	-20~80°C

02

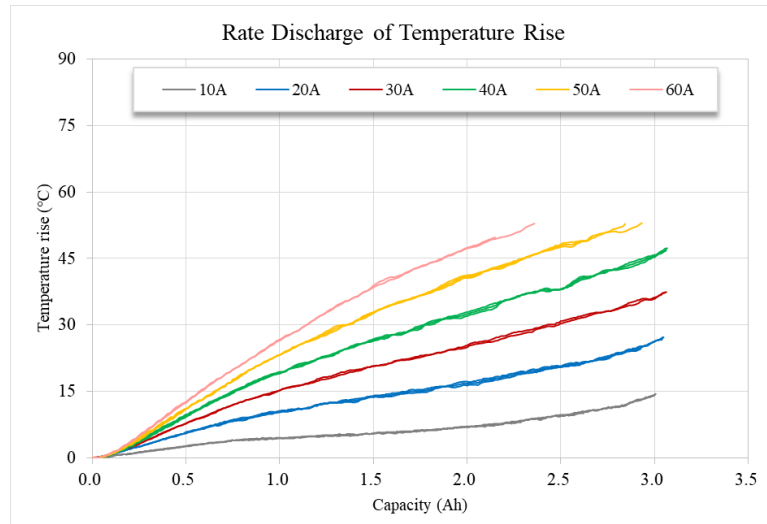
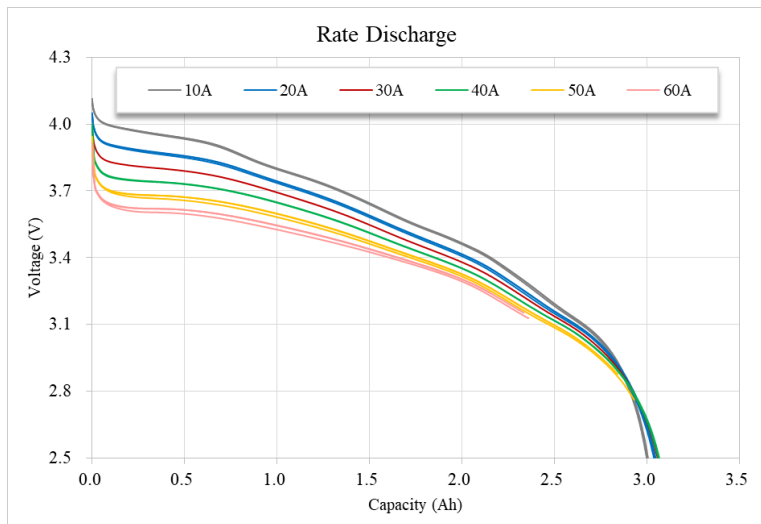
Electrical Performance

2. Electrical Performance -- Summary

No.	Item		Unit	INR18650/30PL	Page	Remark
1	Capacity@0.2C		mAh	3060	/	
2	Impedance	ACR	mΩ	2.86	/	
3	Rate Discharge 2.5V or 75°C cutoff	10A	%	99.09	7	
4		20A	%	99.44	7	
5		30A	%	99.95	7	
6		40A	%	99.86	7	
7		50A	%	91.93	7	
8		60A	%	74.53	7	
9	Low Temperature Discharge@-20°C	20A	V	2.95	8	>2.5V for first 30s
10	Cycle Life @ 25°C	(9A/15A)600 th	%	83.10	9	
11		(9A/30A)600 th	%	82.10	10	
12		(9A/40A)600 th	%	79.74	11	
13	Storage (60°C 30D)	Cap. Retention	%	89.85	12	
14		Cap. Recovery	%	95.73	12	

2. Electrical Performance --Rate Discharge

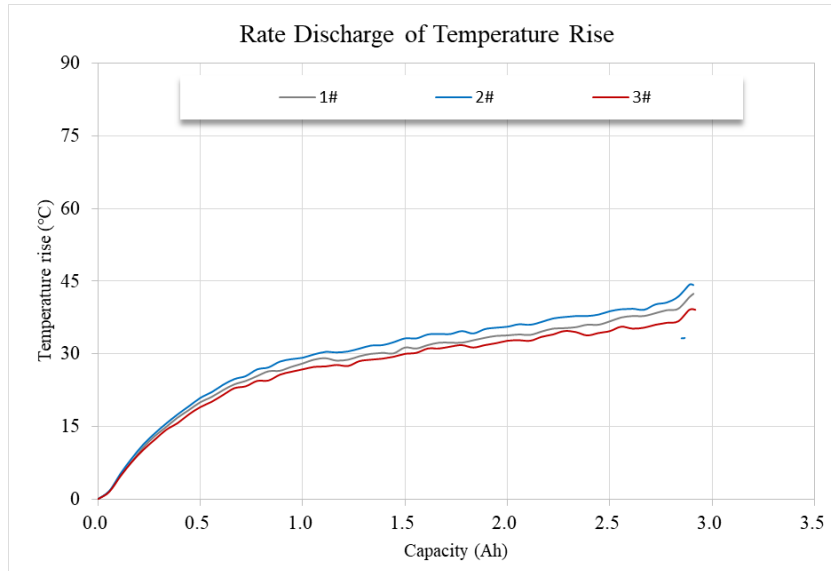
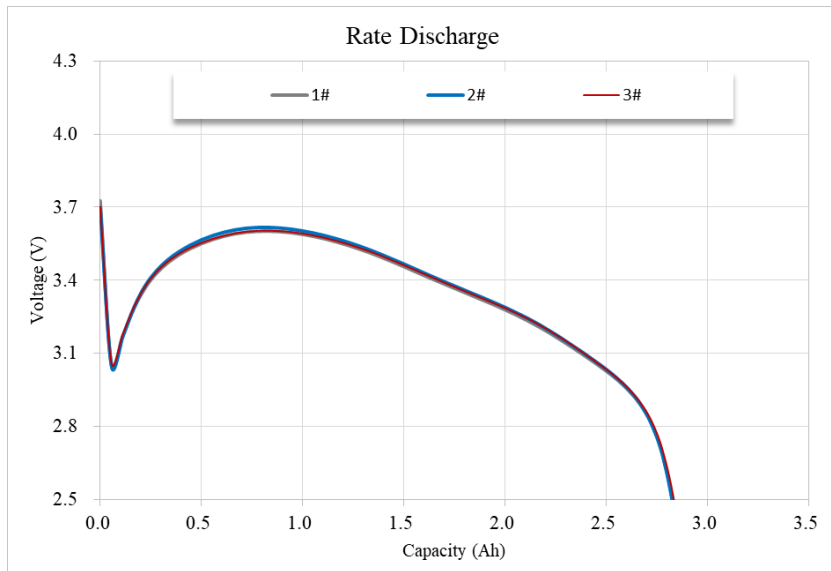
- At $25\pm 2^{\circ}\text{C}$, charge by CC=9A and CV=4.2V, 0.5A cut off. Rest for 30min.
- At $25\pm 2^{\circ}\text{C}$, discharge by 10A/20A/30A/40A/50A/60A to 2.5V or 75°C cutoff. Rest for 30min.



Capacity (mAh)	10A	20A	30A	40A	50A	60A
1#	3.000	3.043	3.058	3.062	2.665	2.149
2#	3.006	3.048	3.063	3.067	2.842	2.334
3#	2.999	3.038	3.054	3.060	2.932	2.359
Avg.	3.002	3.043	3.058	3.063	2.813	2.281

2. Electrical Performance --Low Temperature Discharge

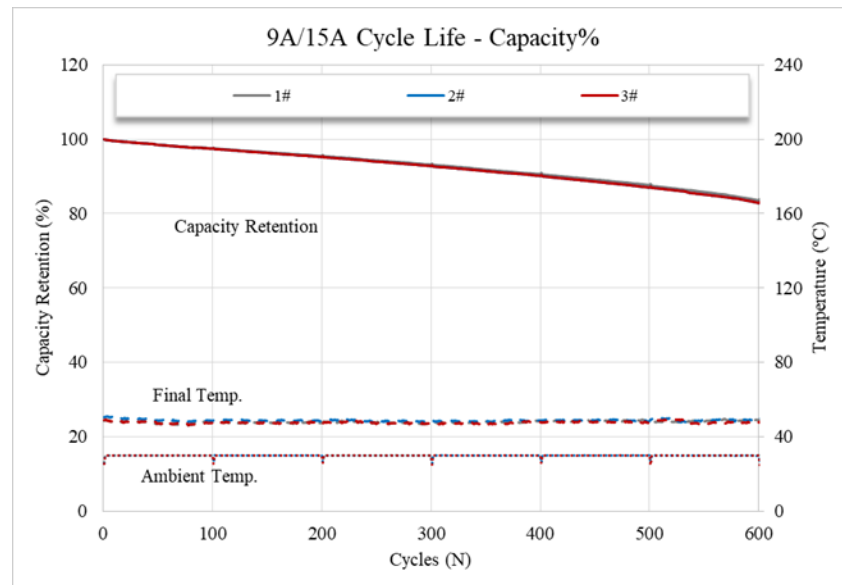
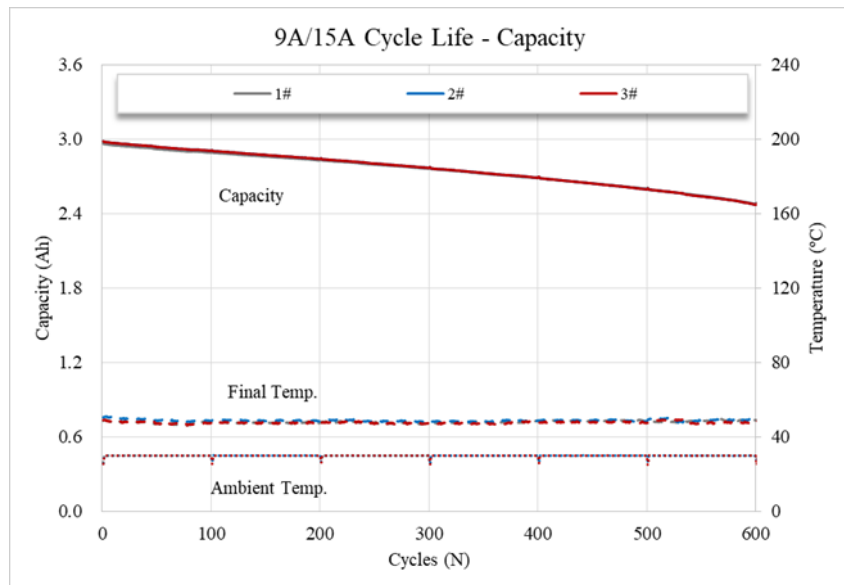
- At $25\pm 2^{\circ}\text{C}$, charge by $\text{CC}=6\text{A}$ and $\text{CV}=4.2\text{V}$, 0.1A cut off. Rest for 30min.
- $-20\pm 2^{\circ}\text{C}$ rest 4h, discharge by 20A to 2.5V .



No.	1#	2#	3#	Avg.
Voltage(V)	2.95	2.93	2.96	2.95

2. Electrical Performance --9A/15A Cycle Life@25°C

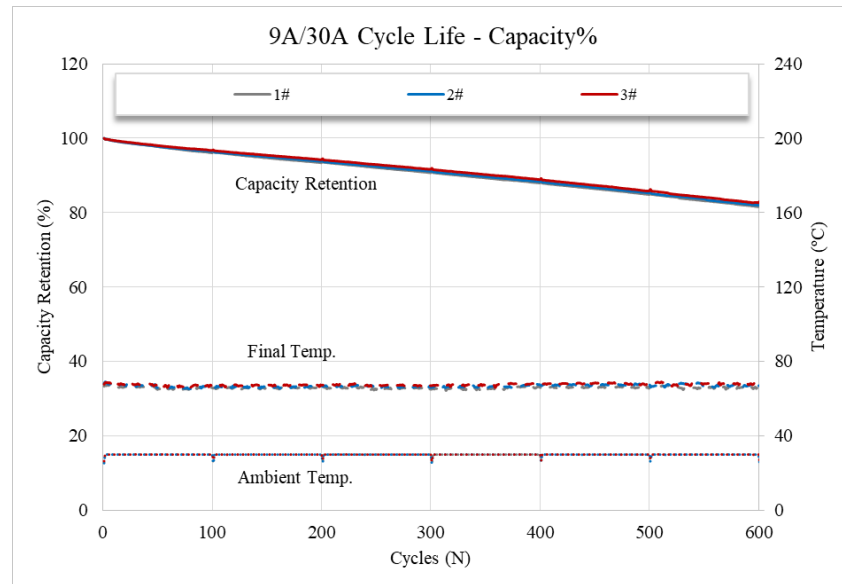
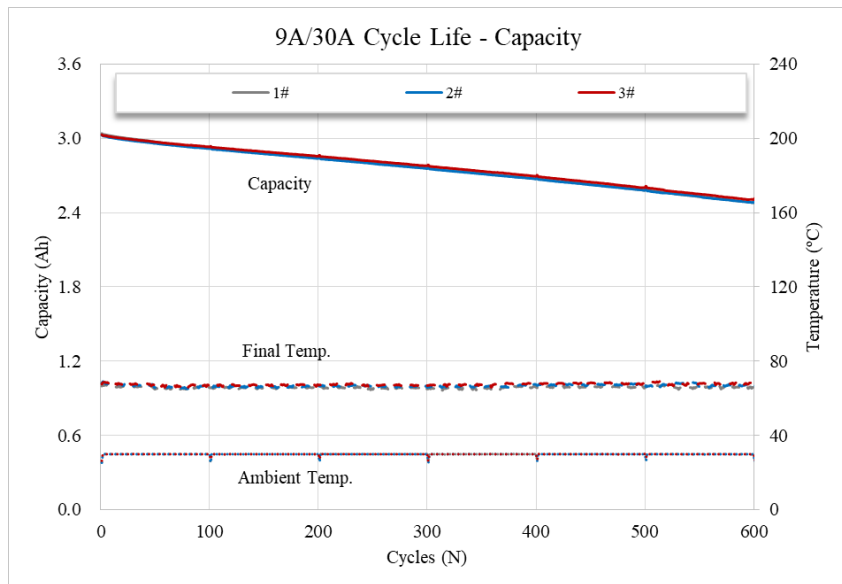
- At $25\pm 2^{\circ}\text{C}$, charge by CC=9A and CV=4.2V, 0.25A cut off. Rest for 30min.
- Discharge by CC=15A to 2.5V or 80°C cut off. Rest for 30min. Cycle for 600 times.



Capacity Retention (%)	1#	2#	3#	Avg.
600 cycles	83.57	82.86	82.86	83.10

2. Electrical Performance --9A/30A Cycle Life@25°C

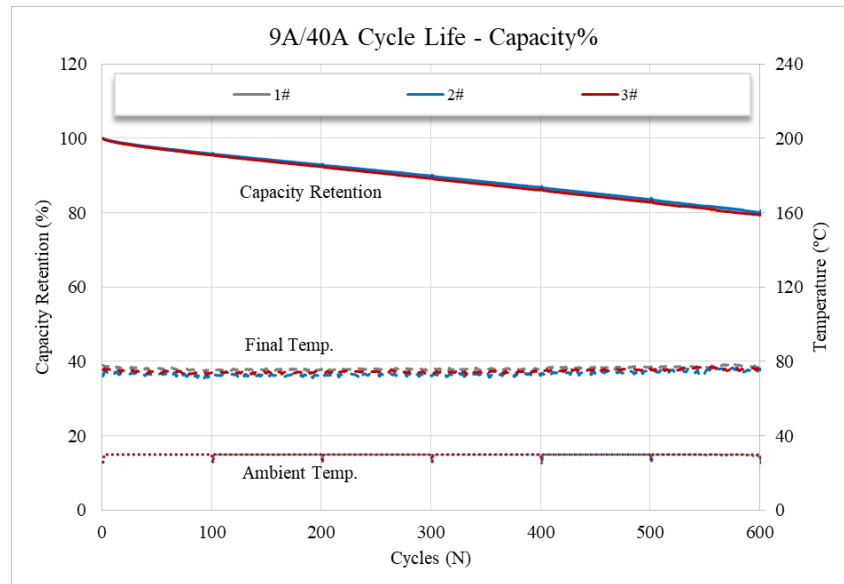
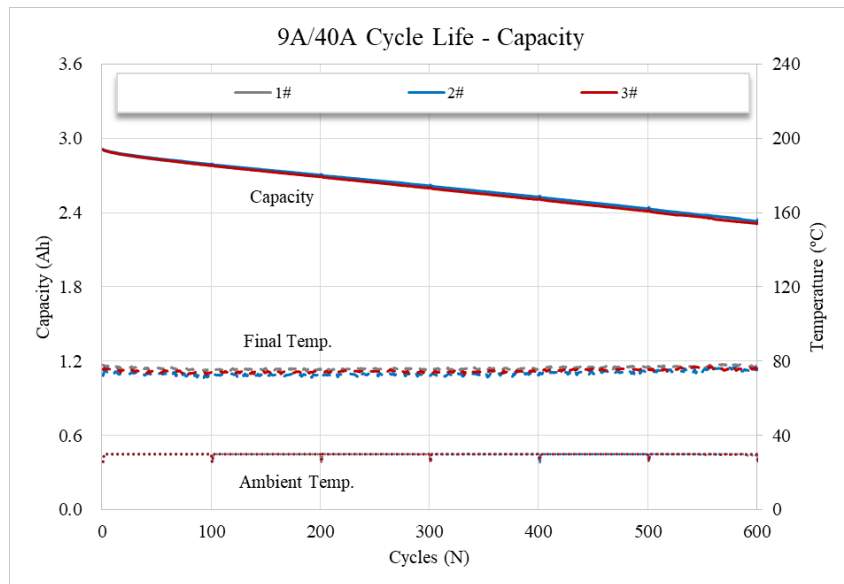
- At $25\pm 2^{\circ}\text{C}$, charge by CC=9A and CV=4.2V, 0.25A cut off. Rest for 30min.
- Discharge by CC=30A to 2.5V or 80°C cut off. Rest for 30min. Cycle for 600 times.



Capacity Retention (%)	1#	2#	3#	Avg.
600 cycles	81.59	82.02	82.68	82.10

2. Electrical Performance --9A/40A Cycle Life@25°C

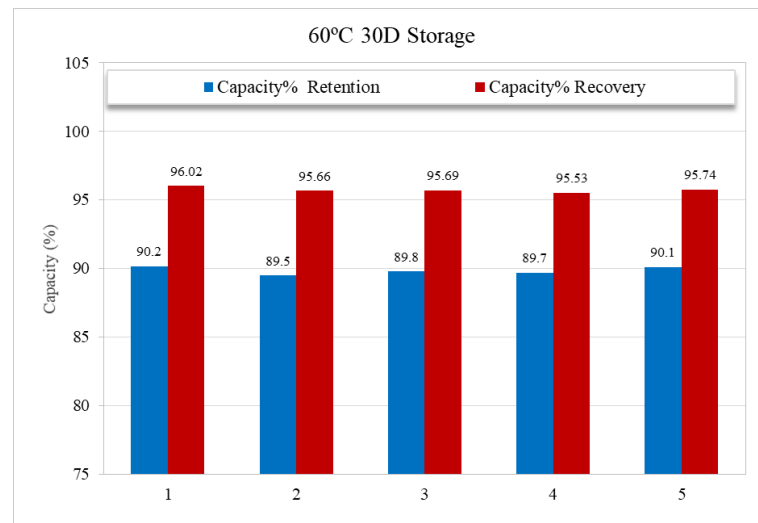
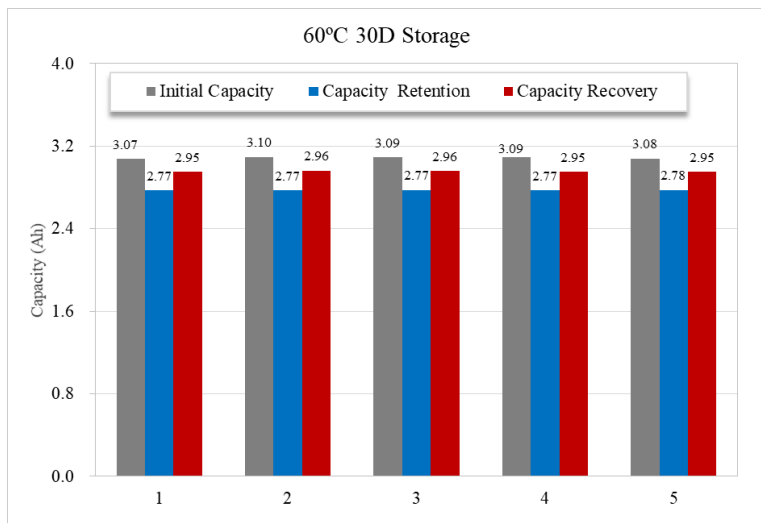
- At $25\pm 2^{\circ}\text{C}$, charge by CC=9A and CV=4.2V, 0.25A cut off. Rest for 30min.
- Discharge by CC=40A to 2.5V or 80°C cut off. Rest for 30min. Cycle for 600 times.



Capacity Retention (%)	1#	2#	3#	Avg.
600 cycles	79.48	80.00	79.73	79.74

2. Electrical Performance --Storage

- At $25\pm 2^{\circ}\text{C}$, Charge by $\text{CC}=9\text{A}$ and $\text{CV}=4.2\text{V}$, 0.5A cut off. rest 60mins. Discharge by 0.6A to 2.5V , record initial capacity.
- Stored at $60\pm 2^{\circ}\text{C}$ for 30days. Discharge by 0.6A to 2.5V , record retention capacity, repeat step1 for 3 cycles and record recovery capacity.



	1#	2#	3#	4#	5#	Avg.
Capacity% Retention	90.17	89.48	89.78	89.70	90.09	89.85
Capacity% Recovery	96.02	95.66	95.69	95.53	95.74	95.73

03

Safety Performance

3. Safety Performance -- Summary

No.	Item	Test Condition	Specification	Standard	Conclusion
1	Overcharge	3C charge to 4.6V for 7h	No fire, no explosion	UL1642	Pass
2	Short Circuit at RT	100mΩ/80mΩ/60mΩ/40mΩ /20mΩ/10mΩ/5mΩ	No fire, no explosion	IEC62133	Pass
3	Force Discharge	1C discharge 90min	No fire, no explosion	IEC62133	Pass
4	Heating Test	130±2°C 30min	No fire, no explosion	UL1642	Pass
5	Vibration Test	7Hz-200Hz-7Hz, 12 times	No fire, no explosion, no leakage	UN38.3	Pass
6	Drop Test	Drop three times from a height of 1m onto a concrete floor	No fire, no explosion	IEC62133	Pass

THANK YOU

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