Dry cell information

Canrd Technology Co., Ltd

2025/10/11

CANRD

Cell Design Information(NCM)

Project Type		Design Information of dry cell of lithium battery with nickel-cobalt-manganese system									
Cell type		523/graphite 0.8Ah	523/graphite 1Ah	523/graphite 2Ah	622/graphite 1Ah	811/graphite 1Ah	811/graphite 1Ah	Ni90/graphite 1Ah	Ni90/silicon oxygen 1Ah	622/empty copper foil 2Ah	811/empty copper foil 2Ah
Product Code		CU-P0-LA-500101	CU-P0-L1-500101	CU-P0-L2-500101	CU-P0-L1-600101	CU-P0-L1-800201	CU-PO-L1-800101	CU-P0-L1-900101	CU-P0-L1-900201	CU-P0-L2-600101	CU-P0-L2-800101
Cell specification model		425868	425868	425868	425868	425868	425868	425868	425868	425868	425868
Structure		Winding	Winding	Winding	Winding	Winding	Lamination	Lamination	Lamination	Lamination	Lamination
Positive	Material	NCM523	NCM523	NCM523	NCM622	NCM811	NCM811	Ni90	Ni90	NCM622	NCM811
	loading	94.0%	94.0%	94.0%	96.7%	94.5%	94.5%	95.0%	95.0%	96.7%	96.7%
	Press Density (g/cc)	3.35	3.35	3.35	3.35	3.35	3.35	3.40	3.40	3.35	3.35
	Coating Weight (mg/cm2)	13.05	13.05	18.06	15.5	15.10	19.90	16.50	16.50	19.75	19.05
	Specific Capacity (mAh/g)	158.0	158.0	158.0	168.0	190.0	190.0	200.0	200.0	168.0	190.0
Negative	Material	Graphite (common type)-A	Graphite (common type)-A	Graphite (common type)-A	Graphite (common type)-A	Graphite (common type)-A	Graphite (common type)-A	Graphite (common type)-A	Silicon oxygen	/	/
	loading	95.7%	95.7%	96.0%	95.7%	95.7%	95.7%	95.7%	95.7%	The negative pole is copper foil with a thickness of 8um.	
	Press Density (g/cc)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50		
	Coating Weight (mg/cm2)	7.24	7.24	9.71	9.00	9.95	12.70	11.67	9.54		
	Specific Capacity (mAh/g)	340.0	340.0	340.0	340.0	340.0	340.0	340.0	349.0	/	

Cell Design Information(NCM)

Type	Design Information of dry cell of lithium battery with nickel-cobalt-manganese system									
Cell type	523/graphite 0.8Ah	523/graphite 1Ah	523/graphite 2Ah	622/graphite 1Ah	811/graphite 1Ah	811/graphite 1Ah	Ni90/graphite 1Ah	Ni90/silicon carbon 1Ah	622/empty copper foil 2Ah	811/empty copper foil 2Ah
Product Code	CU-P0-LA-500101	CU-P0-L1-500101	CU-P0-L2-500101	CU-P0-L1-600101	CU-P0-L1-800201	CU-PO-L1-800101	CU-P0-L1-900101	CU-P0-L1-900201	CU-P0-L2-600101	CU-P0-L2-800101
Voltage range (V)	3.00-4.20	3.00-4.20	3.00-4.20	3.00-4.20	3.00-4.20	3.00-4.20	3.00-4.20	3.00-4.20	3.00-4.30	3.00-4.30
Recommend injection volume (g)	3.5G	4.0g	7.0g	4.0g	4.0g	4.0g	4.0g	4.0g	6.0g	6.0g
Recommend electrolyte Model	Ternary electrolyte (KLD-1230C)							/	/	/
Using formation equipment	Convert to step:	75℃,0.9MPa; 1)0.2C constant current charging ends for 14min; 2) put aside for 3min; 3)0.5C constant current charging ends at 74min;							Hot pressing is not recommend	
	Step:	25℃,0.2MPa; 1)0.2C constant current constant voltage charging to 4.20V, cut-off current 0.02C 2) put aside for 3min; 3)0.2C constant current discharge to 3.00V; Complete the first round of charge and discharge, calculate the first effect								
Using an electrochemical workstation	Neware test cabinet: 25℃,0.2MPa; 1)0.05C constant current charging to 4.20V; 2) put aside for 3min; 3)0.05C constant current discharge to 3.00V; Complete the first round of charge and discharge, calculate the first effect								Neware test cabinet: 25℃,0.2MPa; 1)0.1C constant current charging to 4.30V; 2) put aside for 3min; 3)0.1C constant current discharge to 3.00V; Complete the first round of charge and discharge, calculate the first effect	
Cyclic test conditions	1)rest for 3min; 2)0.5C CC to 4.20V,CV to 0.02C or 0.05C ;3)rest for 3min; 4)1.0C DC to 3.00V;1~4 steps cycle for XX weeks								/	

Cell Design Information(LFP)

Project Type		LFP system lithium battery dry cell design information					
Cell type		LFP/graphite 160mAh	LFP/graphite 200mAh	LFP/graphite 1Ah	LFP/graphite 1Ah	LFP/graphite 1Ah	LFP/graphite 1.5Ah
Product Code		CU-PO-LB-200101	CU-PO-LC-200101	CU-PO-L1-200101	CU-PO-L1-200201	CU-PO-L1-200111	CU-PO-L2-200101
Cell specification model		402528	402528	425868	425868	703950	425868
Structure		Winding	Winding	Winding	Lamination	Winding	Winding
Positive	Material	LFP	LFP	LFP	LFP	LFP	LFP
	loading	91.5%	91.5%	91.5%	91.5%	96.6%	95.7%
	Press Density (g/cc)	2.10	2.10	2.10	2.10	2.30	2.35
	Coating Weight (mg/cm2)	10.74	15.12	10.74	10.74	15.80	15.04
	Specific Capacity (mAh/g)	142.0	142.0	142.0	142.0	142.0	142.0
Negative	Material	Graphite (common type)-A	Graphite (common type)-A	Graphite (common type)-A	Graphite (common type)-A	Graphite (common type)-A	Fast charging graphite-B
	loading	95.7%	95.7%	95.7%	95.7%	96.12%	96.5%
	Press Density (g/cc)	1.50	1.50	1.50	1.50	1.58	1.65
	Coating Weight (mg/cm2)	4.85	6.76	4.85	4.85	7.20	6.68
	Specific Capacity (mAh/g)	340.0	340.0	340.0	340.0	340.0	350.0

Cell Design Information(LFP)

Type	LFP system lithium battery dry cell design information					
Cell type	LFP/graphite 160mAh(402528)	LFP/graphite 200mAh(402528)	LFP/graphite 1Ah (425868)	LFP/graphite 1Ah (425868)	LFP/graphite 1Ah (703950)	LFP/graphite 1.5Ah (425868)
Product Code	CU-PO-LB-200101	CU-PO-LC-200101	CU-PO-L1-200101	CU-PO-L1-200201	CU-PO-L1-200111	CU-PO-L2-200101
Voltage range (V)	2.00-3.65					
Recommend injection volume (g)	1.2g	1.5g	6.0g	6.0g	5.0g	9.0g
Recommend electrolyte model	Lithium Iron Phosphate Electrolyte (KLD-LFP01)					
Using formation equipment	Convert to step:	45℃,0.9MPa, 1)0.1C constant current charging ends in 18min; 2) put aside for 3min; 3)0.16C constant current charging 140min deadline				
	Step:	25℃,0.2MPa, 1)0.5C constant current constant voltage charging to 3.65V, cut-off current 0.02C; 2) put aside for 3min; 3)0.2C constant current discharge 2.00V; (Complete the first round of charge and discharge, calculate the first effect)				
Using an electrochemical workstation	Neware test cabinet 25℃,0.2MPa, 1)0.05C constant current charging to 3.65V; 2) put aside for 3min; 3)0.05C constant current discharge to 2.00V; (Complete the first round of charge and discharge, calculate the first effect)					
Cyclic test conditions	1. rest for 3min; 2. 0.5C CC to 3.65V,CV to 0.02C or 0.05C ;3. 1.0C DC to 2.00V					

CANRD

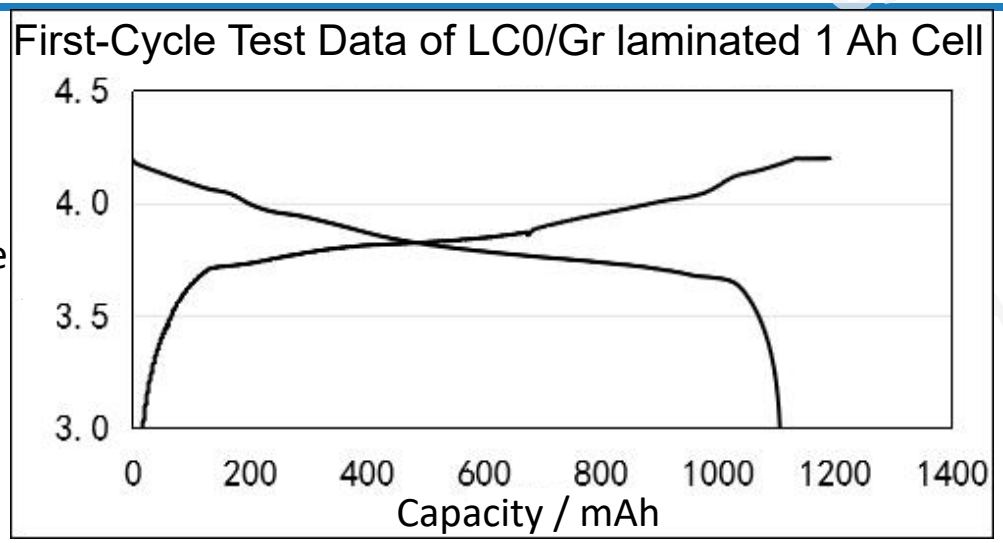
Cell Design Information(LCO)

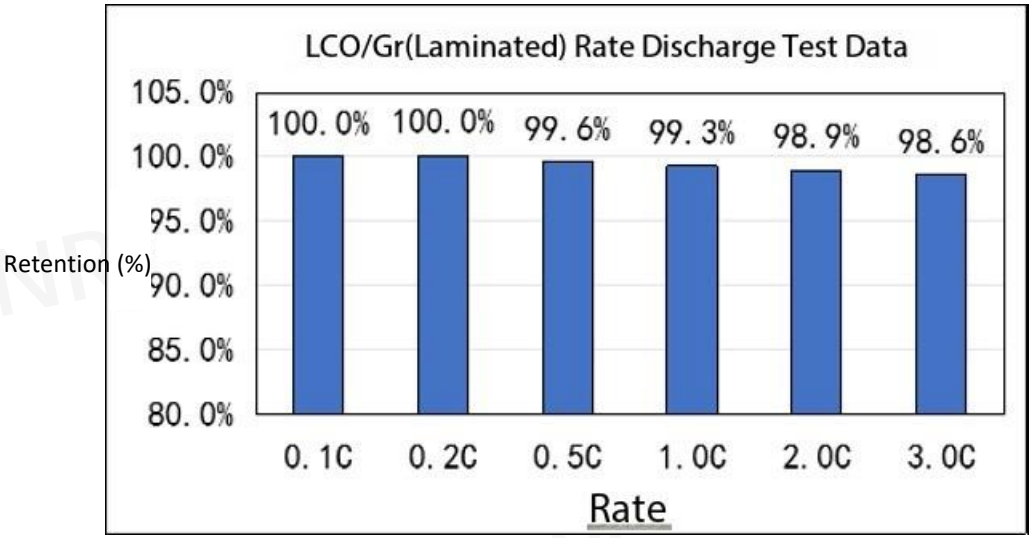
Project Type		LCO system lithium battery dry cell design information	
Cell type		LCO/graphite 1Ah	LCO/graphite 1.2Ah
Product Code		CU-PO-L1-100101	CU-PO-L1-100201
Cell specification model		425868	425868
Structure		Winding	Lamination
Positive	Material	4.20V LCO	4.45V LCO
	loading	94.0%	96.7%
	Press Density (g/cc)	4.00	4.10
	Coating Weight (mg/cm2)	10.74	12.60
	Specific Capacity (mAh/g)	135.0	188.0
Negative	Material	Graphite (common type)-A	Fast charging graphite-B
	loading	95.7%	96.9%
	Press Density (g/cc)	1.50	1.50
	Coating Weight (mg/cm2)	4.85	7.86
	Specific Capacity (mAh/g)	340.0	350.0

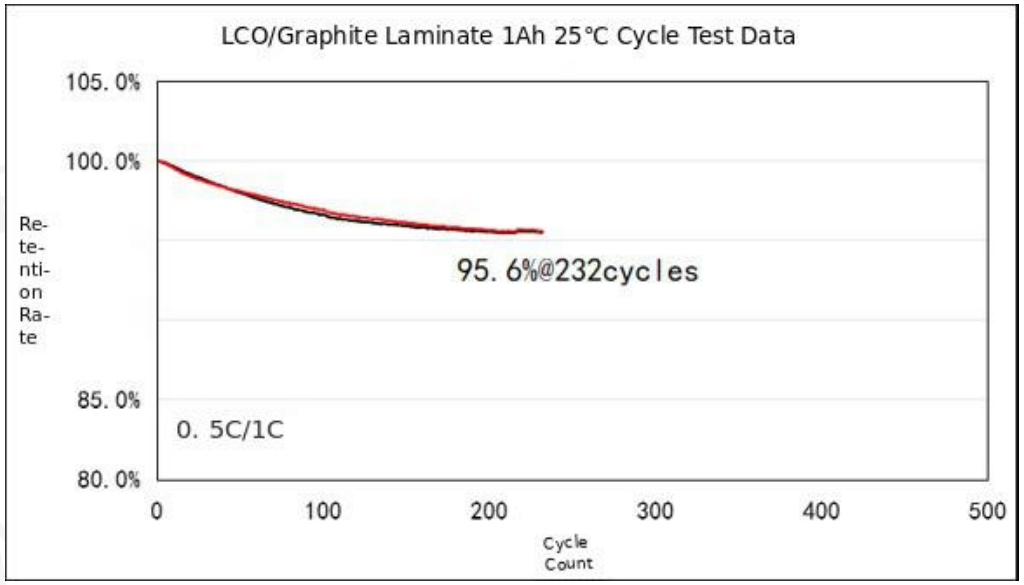
Cell Design Information(LCO)

Type		LCO system lithium battery dry cell design information	
Cell type		LCO/graphite 1Ah	LCO/graphite 1.2Ah
Structure		Winding	Winding
Voltage range (V)		3.00-4.20	3.00-4.45
Recommend injection volume (g)		4.0g	5.0g
Recommend electrolyte model		KLD-1376	KLD-5V06
Using formation equipment	Convert to step:	75℃,0.9MPa; 1)0.2C constant current charging ends for 14min; 2) put aside for 3min; 3)0.5C constant current charging ends at 74min;	
	Step:	25℃,0.2MPa; 1)0.2C constant current constant voltage charging to 4.20V, cut-off current 0.02C 2) put aside for 3min; 3)0.2C constant current discharge to 3.00V; Complete the first round of charge and discharge, calculate the first effect	25℃,0.2MPa; 1)0.2C constant current constant voltage charging to 4.45V, cut-off current 0.02C 2) put aside for 3min; 3)0.2C constant current discharge to 3.00V; Complete the first round of charge and discharge, calculate the first effect
Using an electrochemical workstation		Neware test cabinet: 25℃,0.2MPa; 1)0.05C constant current charging to 4.20V; 2) put aside for 3min; 3)0.05C constant current discharge to 3.00V; Complete the first round of charge and discharge, calculate the first effect	Neware test cabinet: 25℃,0.2MPa; 1)0.05C constant current charging to 4.45V; 2) put aside for 3min; 3)0.05C constant current discharge to 3.00V; Complete the first round of charge and discharge, calculate the first effect
Cyclic test conditions		1. 0.5C CC to 4.20V,CV to 0.02C or 0.05C ;2. rest for 3min;3. 1C DC to 3.00V	1. 0.5C CC to 4.45V,CV to 0.02C or 0.05C ;2. rest for 3min;3. 1C DC to 3.00V

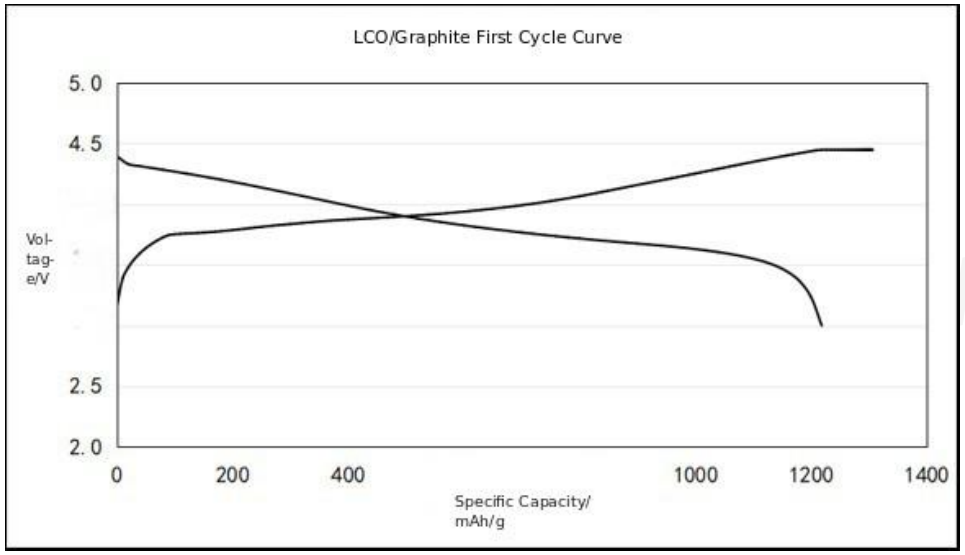
Test data(LCO-CU-PO-L1-100101)

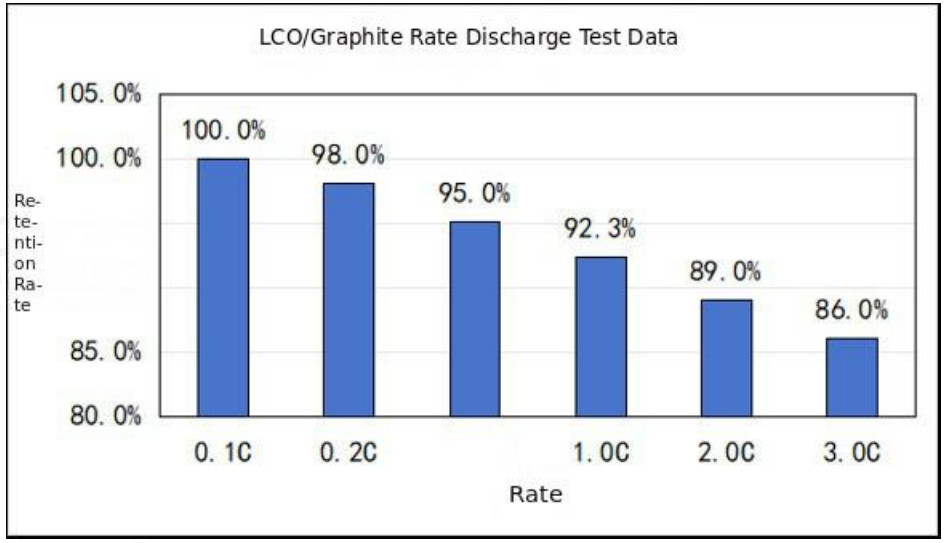


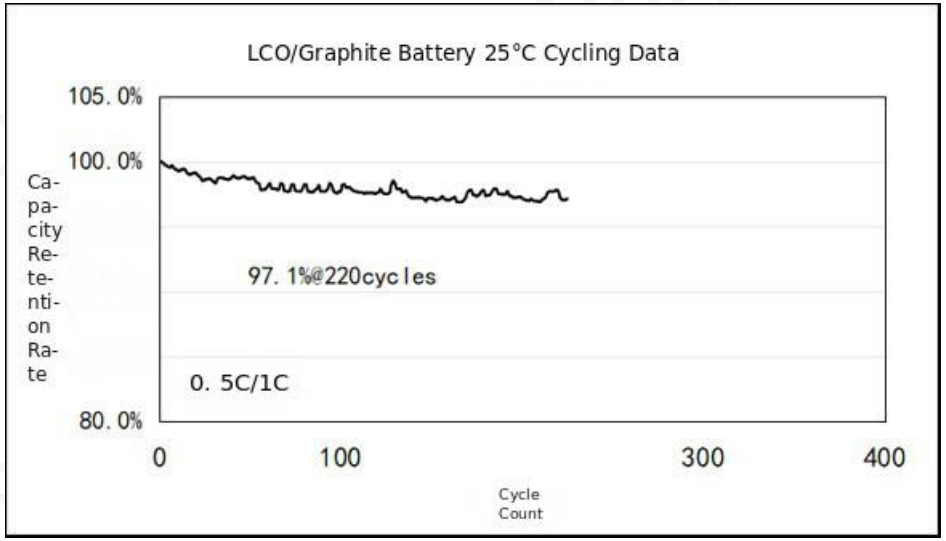




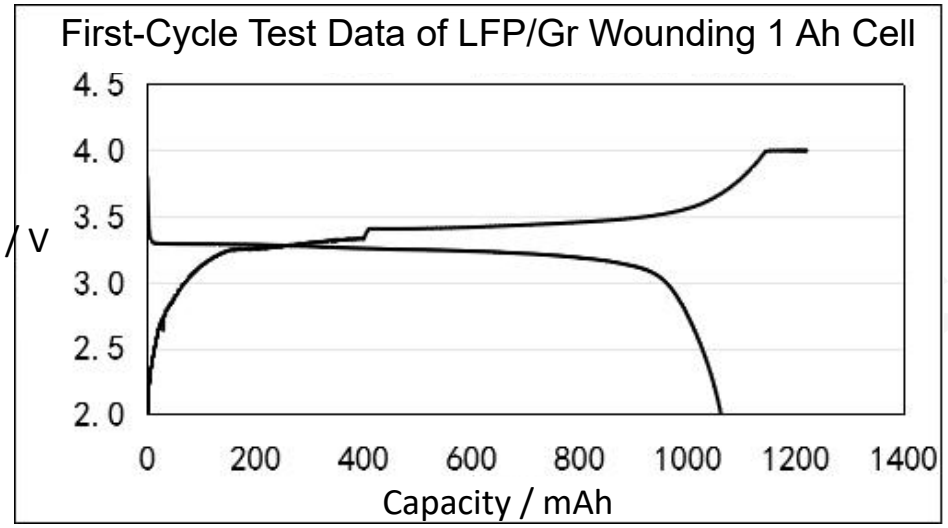
Test data(LCO-CU-PO-L1-100201)

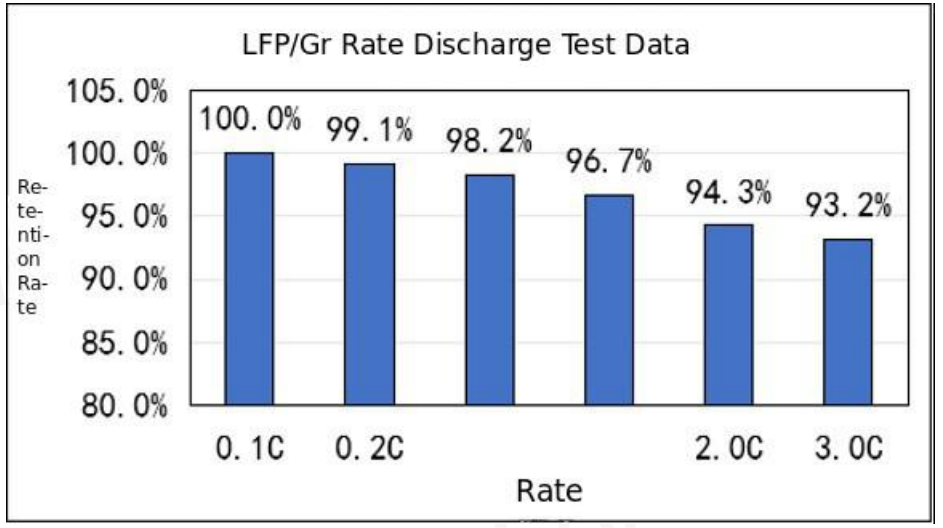


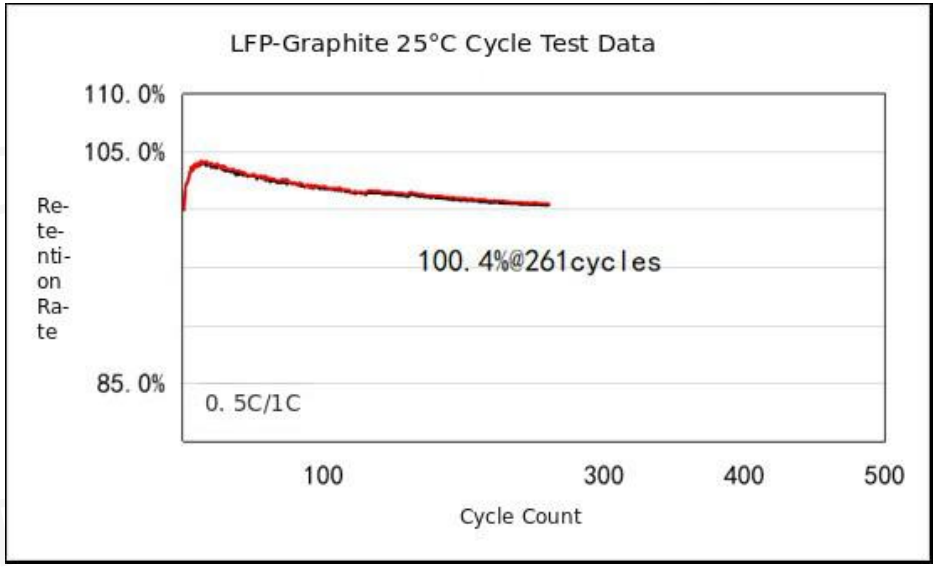




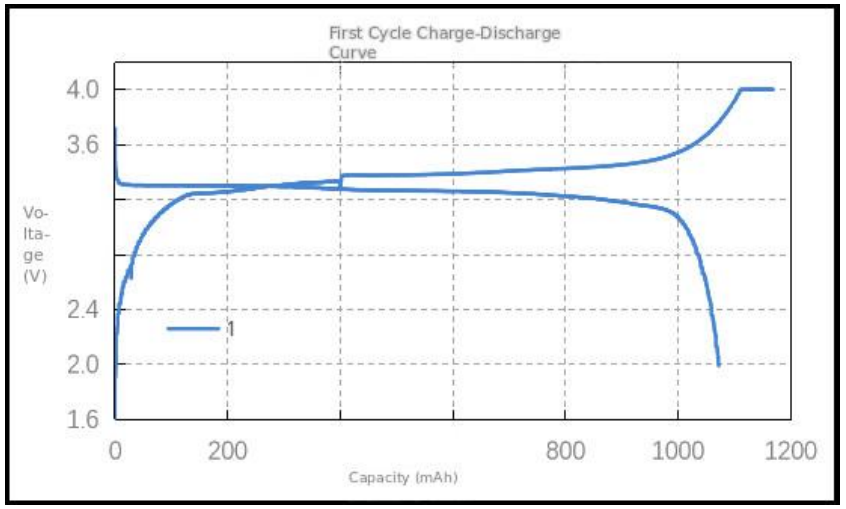
Test data(LFP-CU-PO-L1-200101)

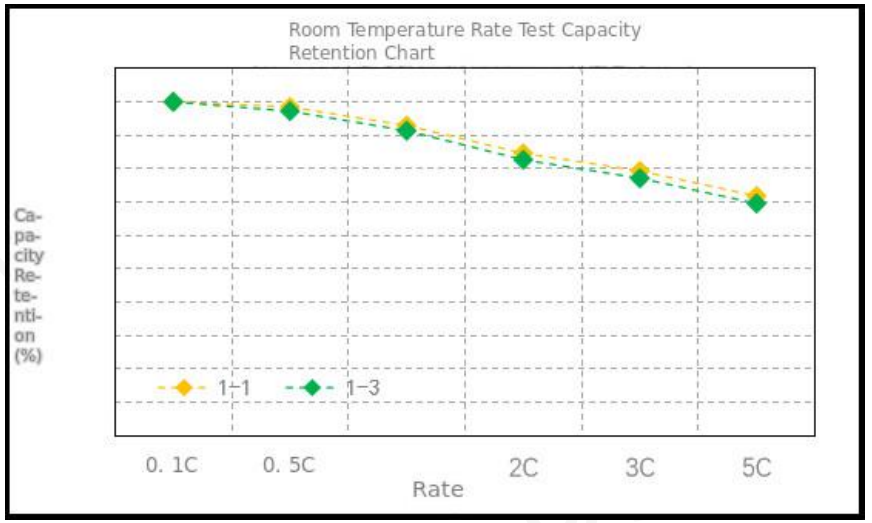


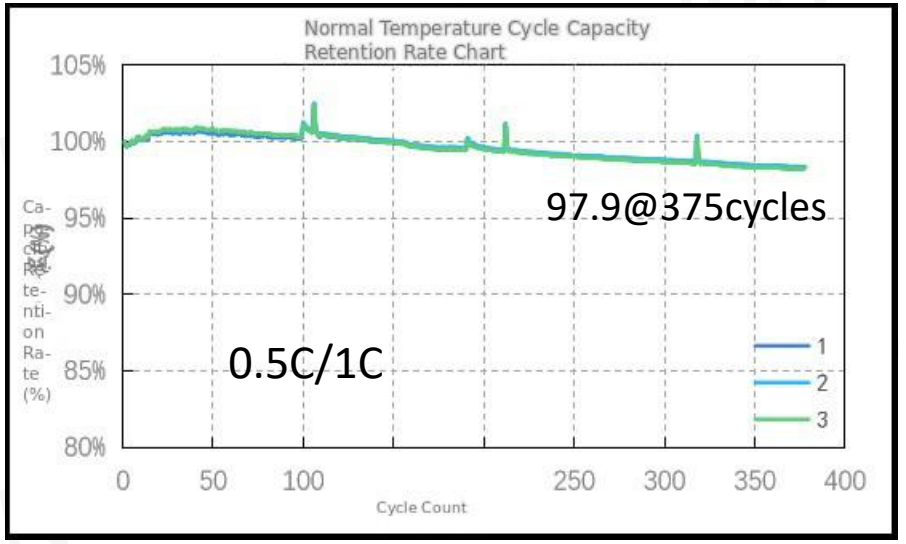




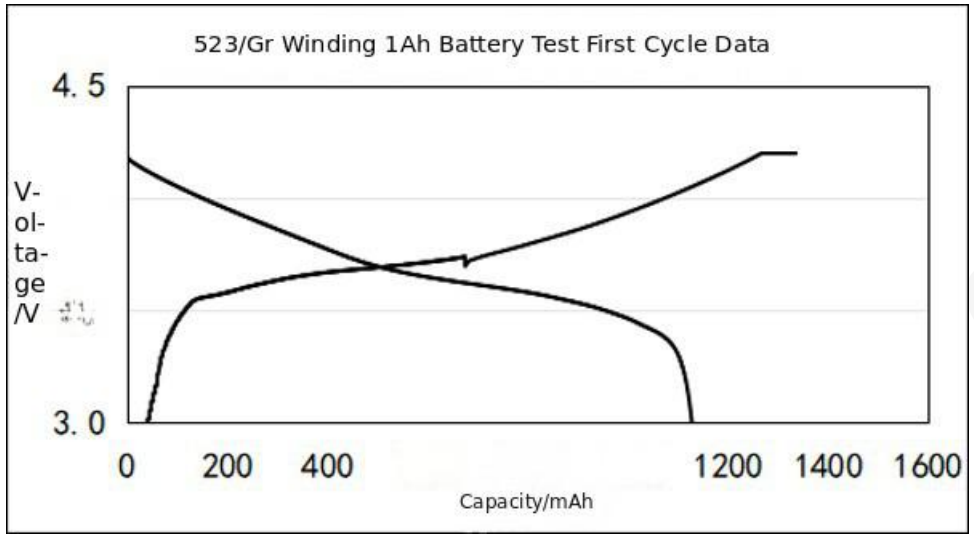
Test data(LFP-CU-PO-L1-200201)

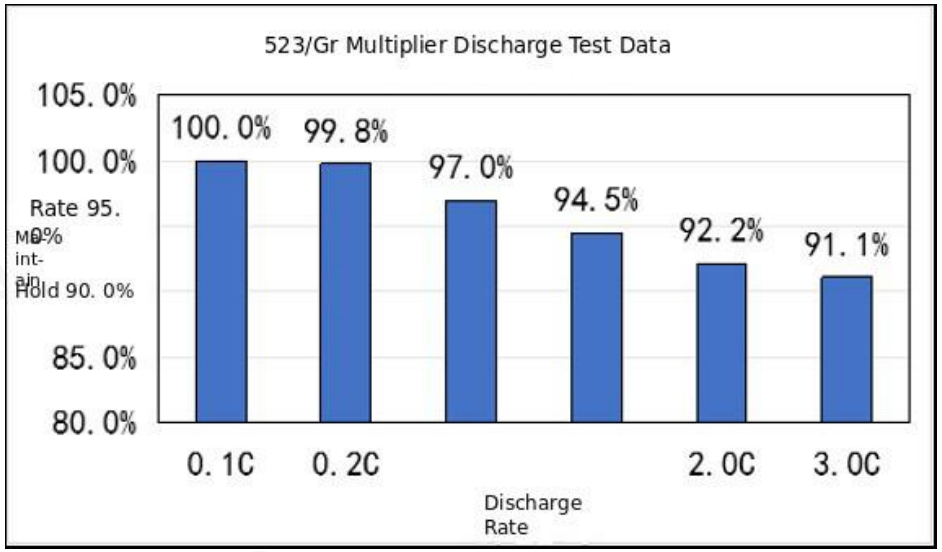


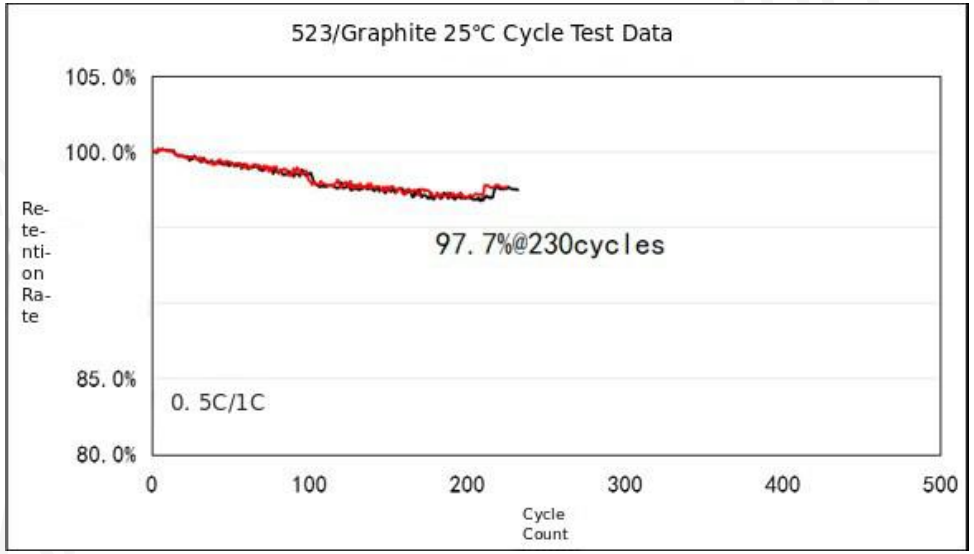




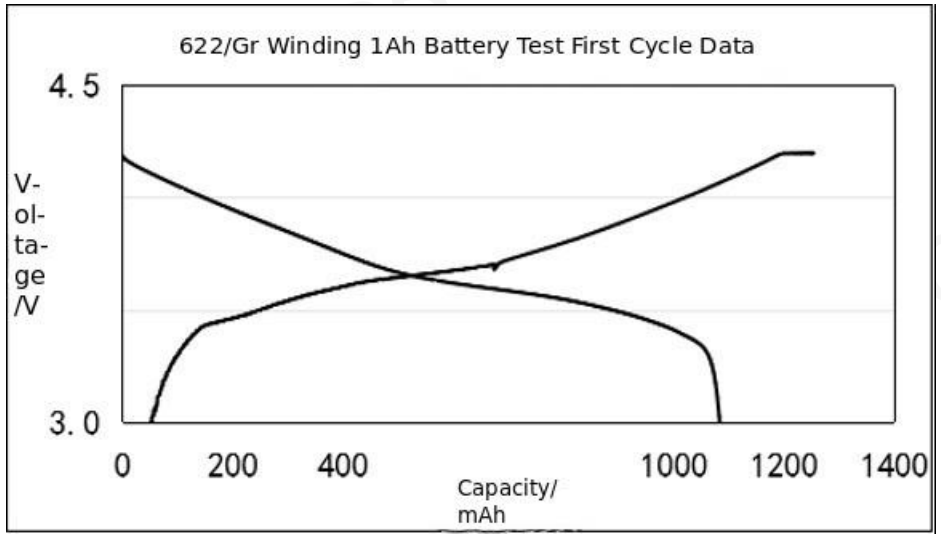
Test data(NCM-CU-PO-L1-500101)

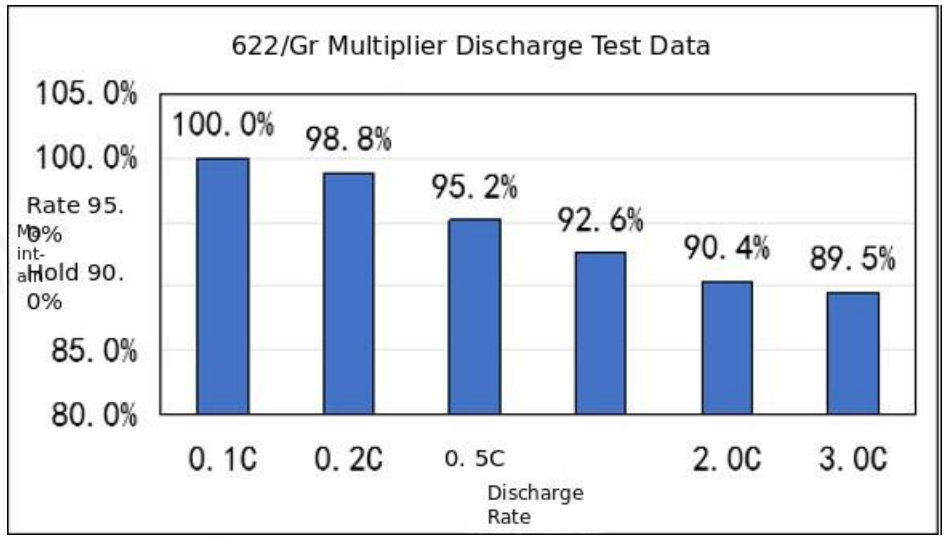


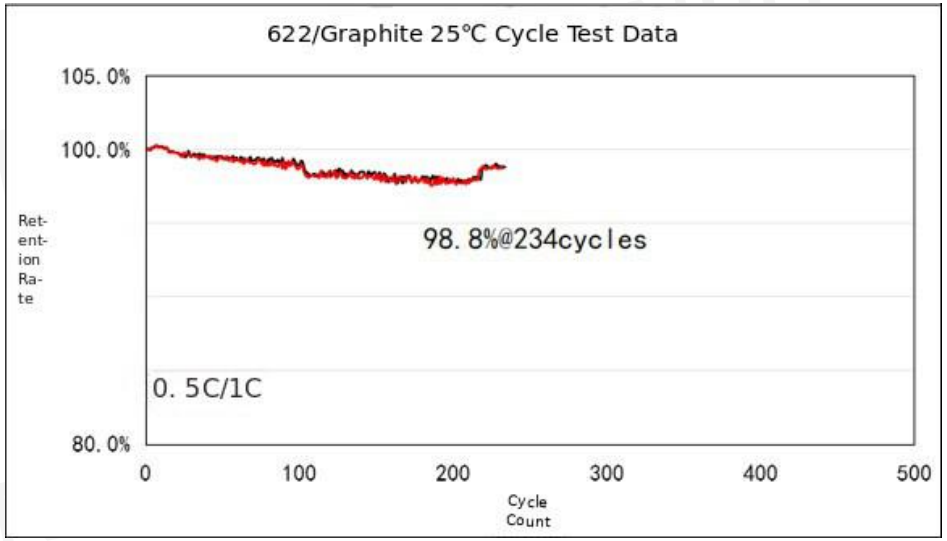




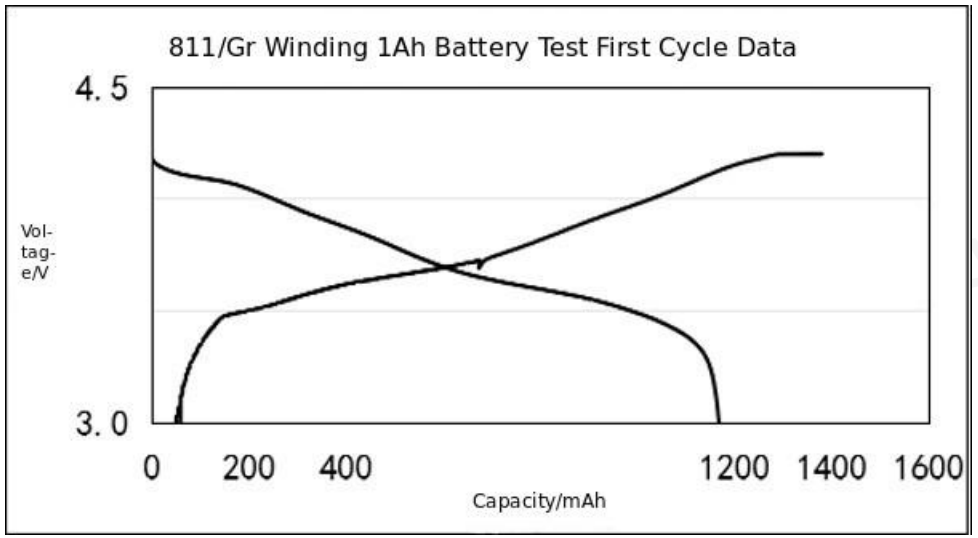
Test data(NCM-CU-PO-L1-600101)

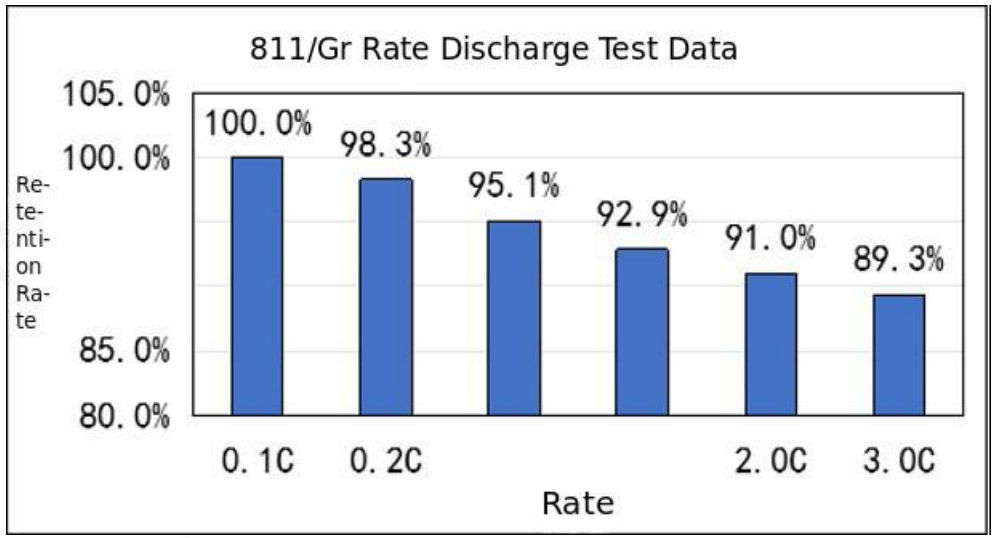


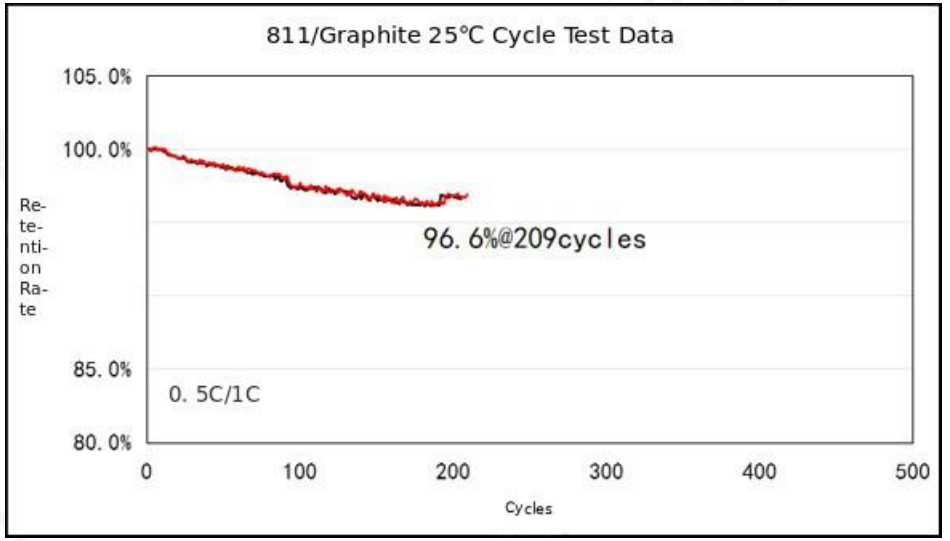




Test data(NCM-CU-PU-L1-800201)







Thank you