



Lithium-ion
Rechargeable
Batteries

Technical Data Sheet

PD3032

www.powercellkorea.com

June, 2005
Korea PowerCell Inc.

Contents

1. Specification
2. Electrical Characteristics
 - 2.1. Charge Characteristics – 0.5C at 25
 - 2.2. Discharge Characteristics at 25
 - 2.3. 0.2C Discharge at Low Temperature
 - 2.4. 0.5C Discharge at Low Temperature
 - 2.5. Cycle life – 0.5C charge/ 0.5C discharge
3. Reliability
 - 3.1. High temperature storage Test (90 ° C, 4hr)
 - 3.2. Humidity test (60 ° C, 90% RH, 1week)
 - 3.3. Thermal shock test(-40 ° C/60 ° C, 10 cycles)
4. Safety test
 - 4.1. Hot-Box Test (150 ° C, 10min)
 - 4.2. Nail Penetration Test
 - 4.3. Short circuit Test
 - 4.4. Overcharge test (3C continuous overcharge)

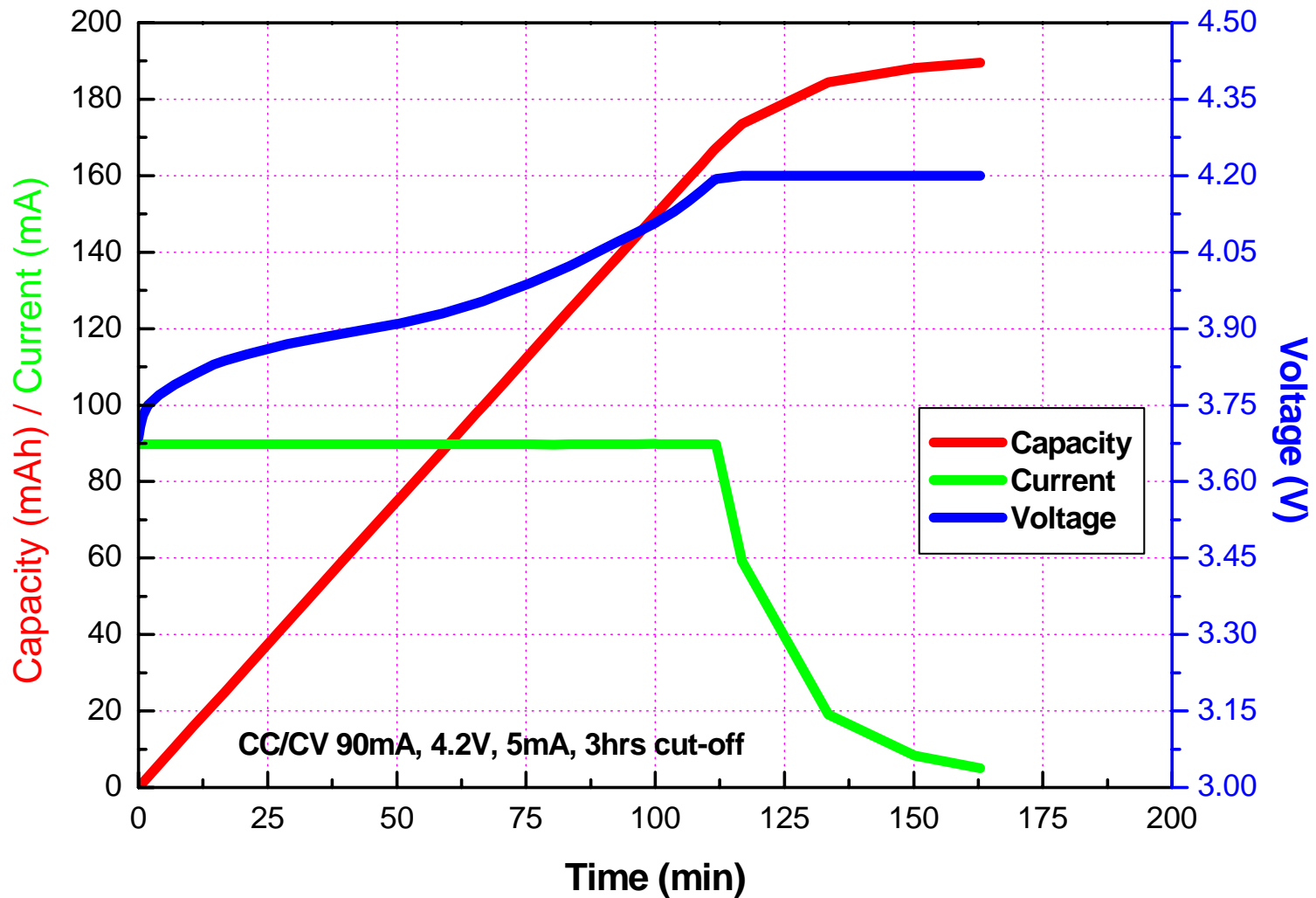
confidential

1. Specification

Model		PD 3032
Nominal Capacity		180 mAh (0.2C, 3.0V Cut-off)
Nominal Voltage		3.7 V
Dimension	Thickness	3.2 ± 0.2 mm (center)
	Diameter	30.0 ± 0.2 mm
Charge Method		CC-CV
Charge Voltage		4.2 V
Charge Current		Standard 90 mA (End - Current : 5~18mA)
Discharge Current		Standard 90 mA, Max. 360mA
Discharge end voltage		3.0 V
Discharge Temperature		- 20°C ~ + 60°C
Internal Impedance		Max. 500 mohm
Weight		approx 7.2g

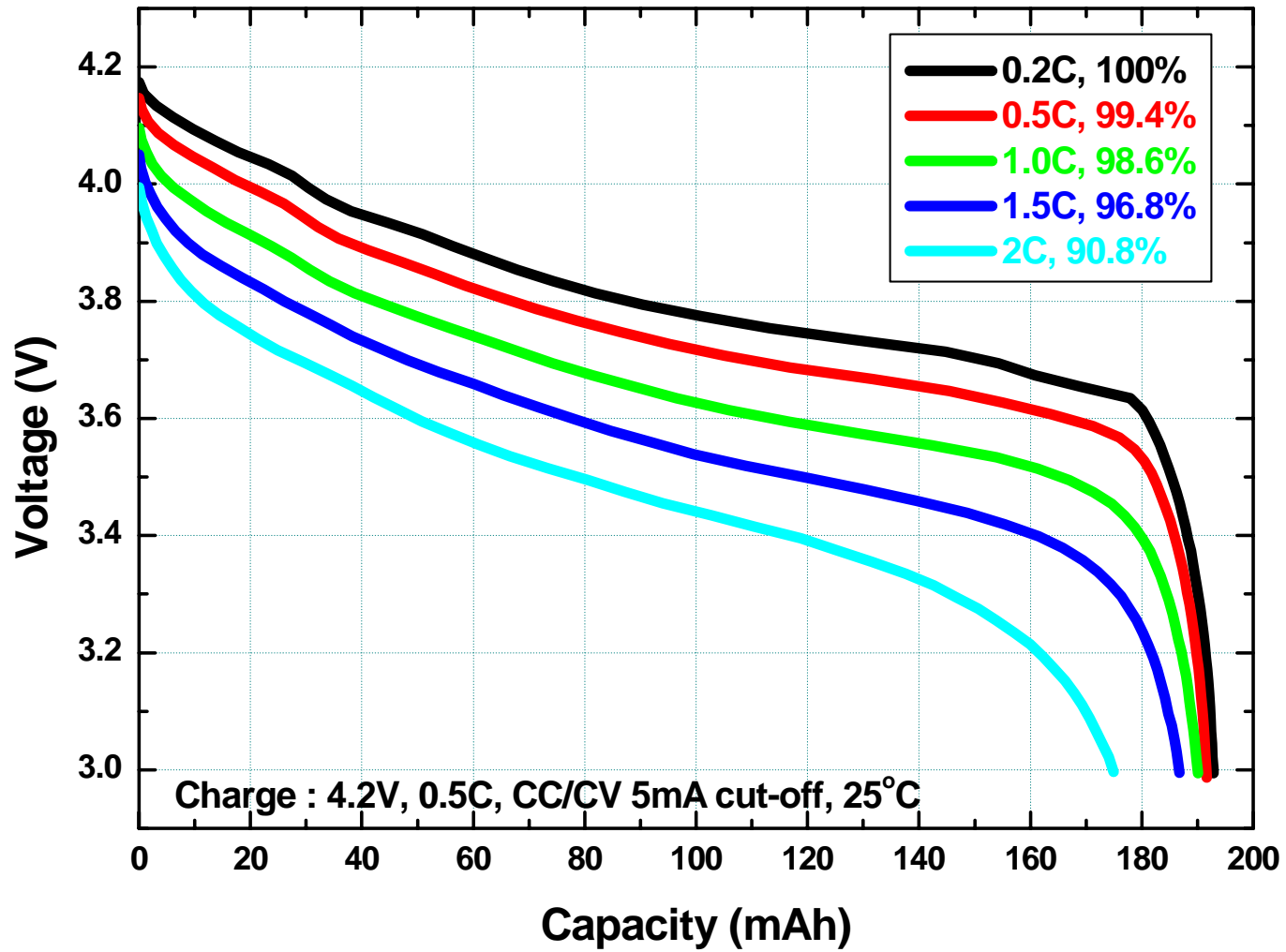
confidential

2.1. Charge Characteristics – 0.5C at 25



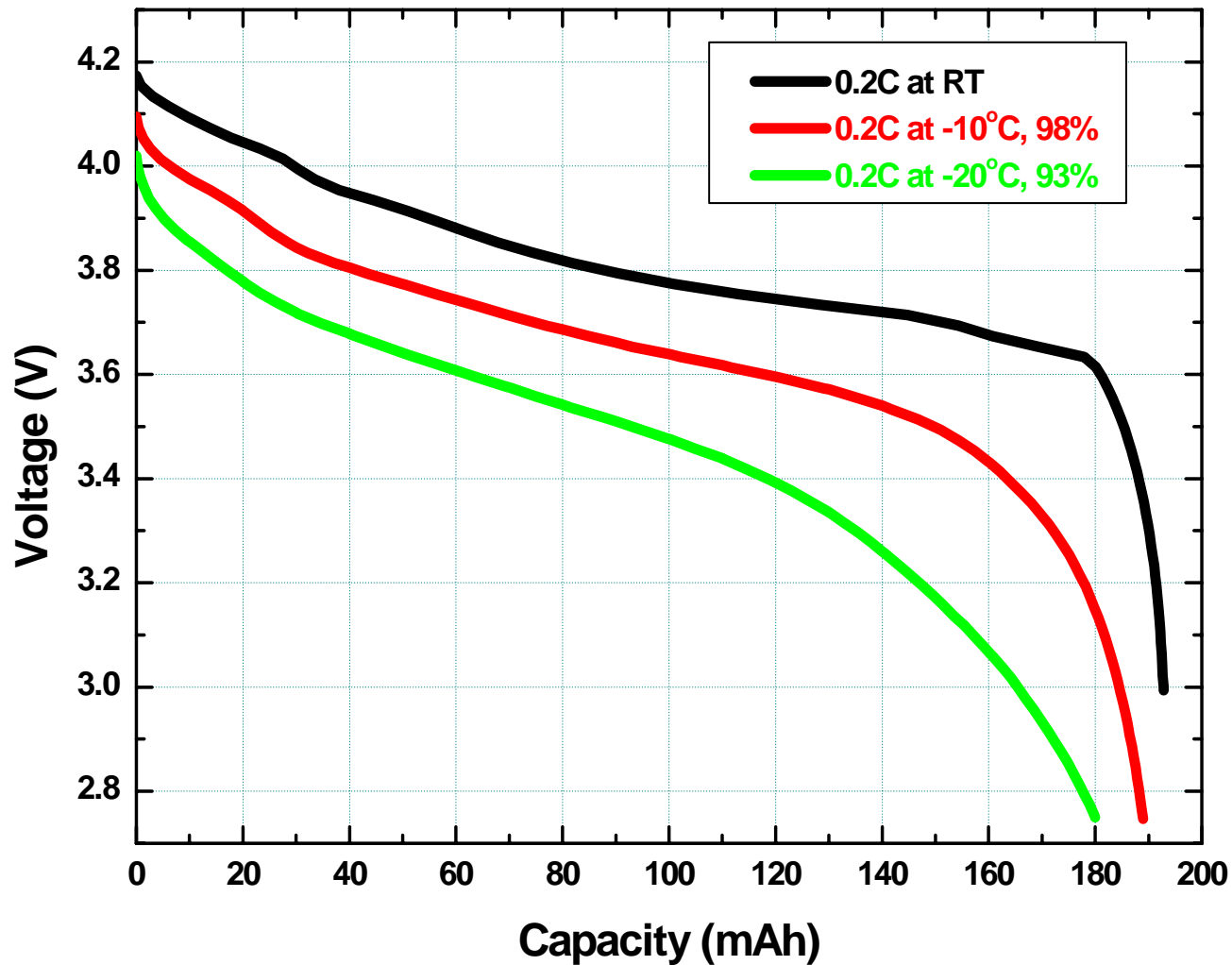
confidential

2.2. Discharge Characteristics at 25



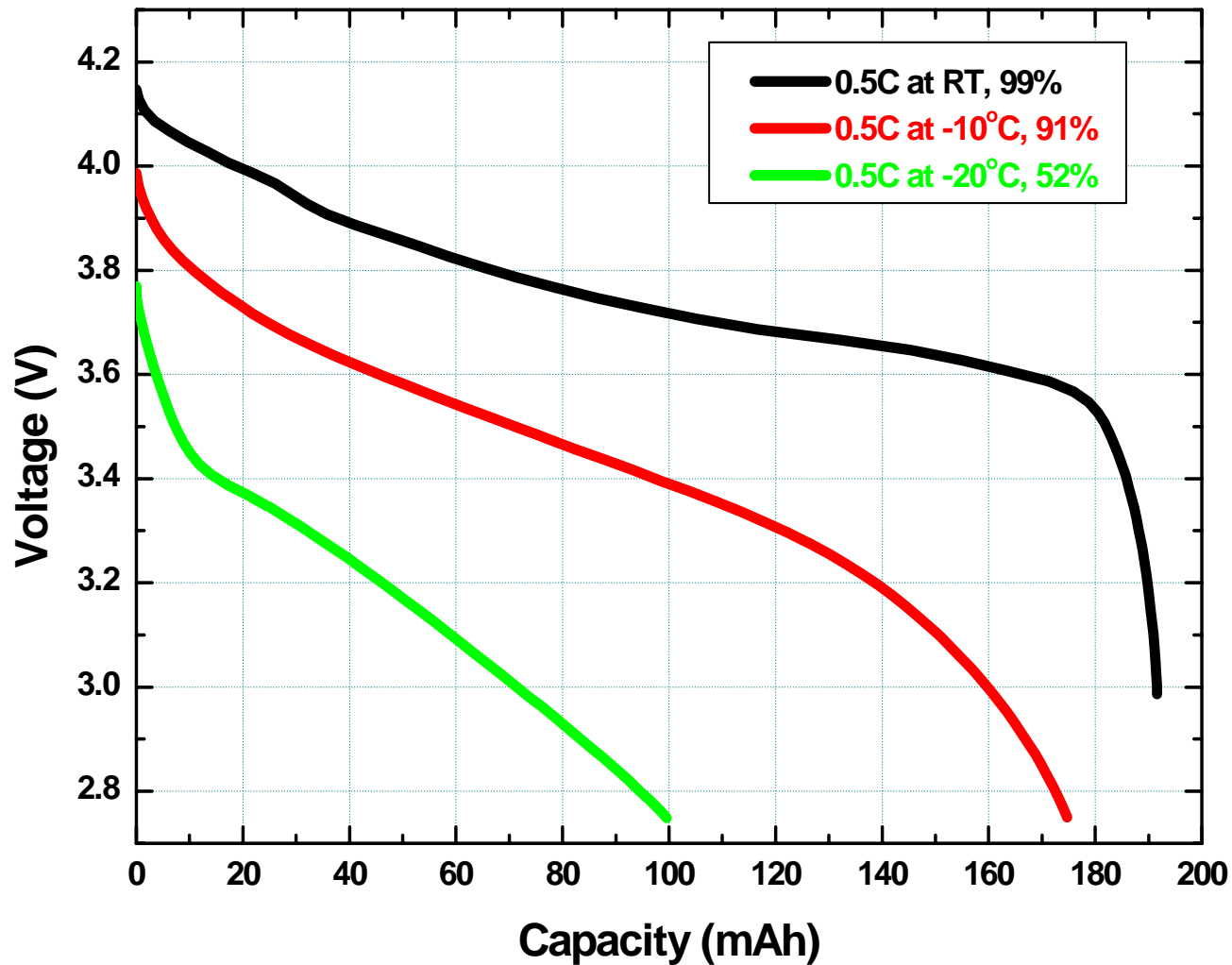
confidential

2.3. 0.2C Discharge at low temperature



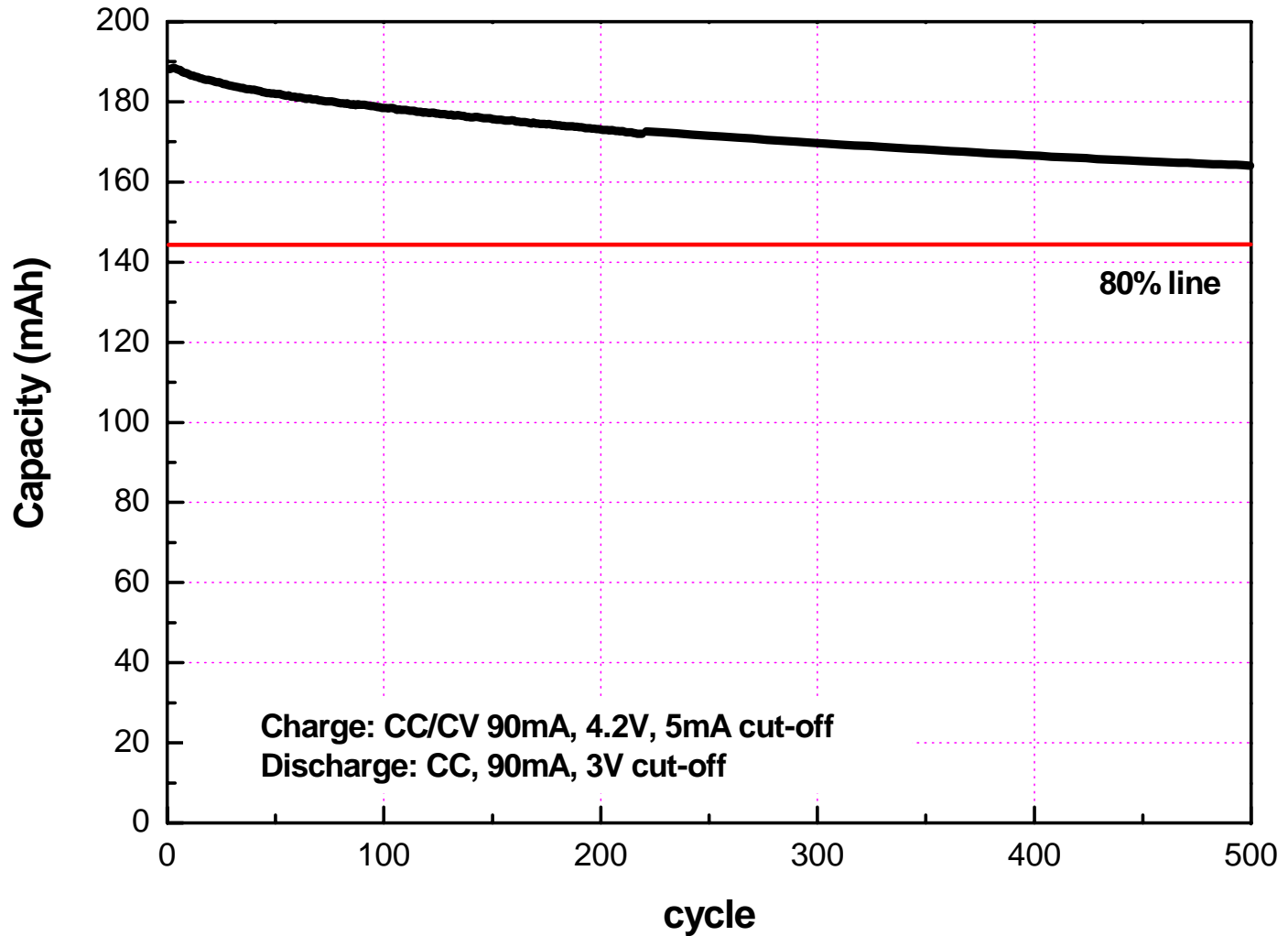
confidential

2.4. 0.5C Discharge at low temperature



confidential

2.5. Cycle life – 0.5C charge/ 0.5C discharge



confidential

3.1. High temperature storage Test (90 °C, 4hr)

** Average of 10 samples.*

	Before storage	After storage	Δ	Stdev.
Weight, g	7.3793	7.3792	0.00%	0.00
Thickness, mm (at 90°C)	3.343	3.555	6.32%	0.91
Thickness, mm (at RT)	3.343	3.400	1.71%	0.37
Residual capacity, mAh	195	176	90%	1.66
Recovery capacity, mAh	195	186	95%	0.71

confidential

Korea PowerCell Inc.

3.2. Humidity test (60 °C, 90% RH, 1week)

** Average of 10 samples.*

	Before storage	After storage	Δ	Stdev.
Weight, g	7.3785	7.3782	0.00%	0.00
Thickness, mm (at RT)	3.330	3.430	3.00%	0.70
Residual capacity, mAh	195	171	88%	0.72
Recovery capacity, mAh	195	186	96%	0.62

confidential

Korea PowerCell Inc.

3.3. Thermal shock test(-40 °C/60 °C, 10 cycles)

** Average of 5 samples.*

	Before storage	After storage	Δ	Stdev.
Weight, g	7.1838	7.1828	0.01%	0.00
Thickness, mm (at RT)	3.394	3.455	1.80%	0.50
Residual capacity, mAh	191	183	96%	0.49
Recovery capacity, mAh	191	188	99%	0.39

confidential

Korea PowerCell Inc.

4. Safety test

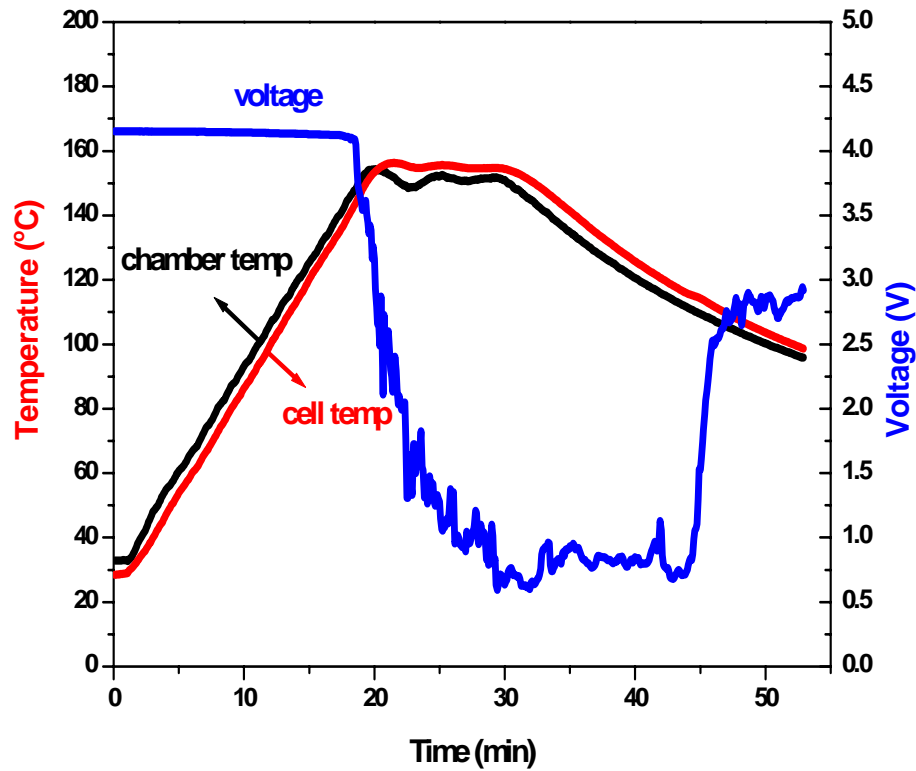
Test	comment
Hot box test (150oC, 10min)	NF, NE, NV
Nail test (2.5mm nail)	NF, NE, NV
Short circuit test	NF, NE, NV
Overcharge test (3C, 250% charge)	NF, NE, NV

** NF= no fire, NE= no explosion, NV=no vent*

confidential

Korea PowerCell Inc.

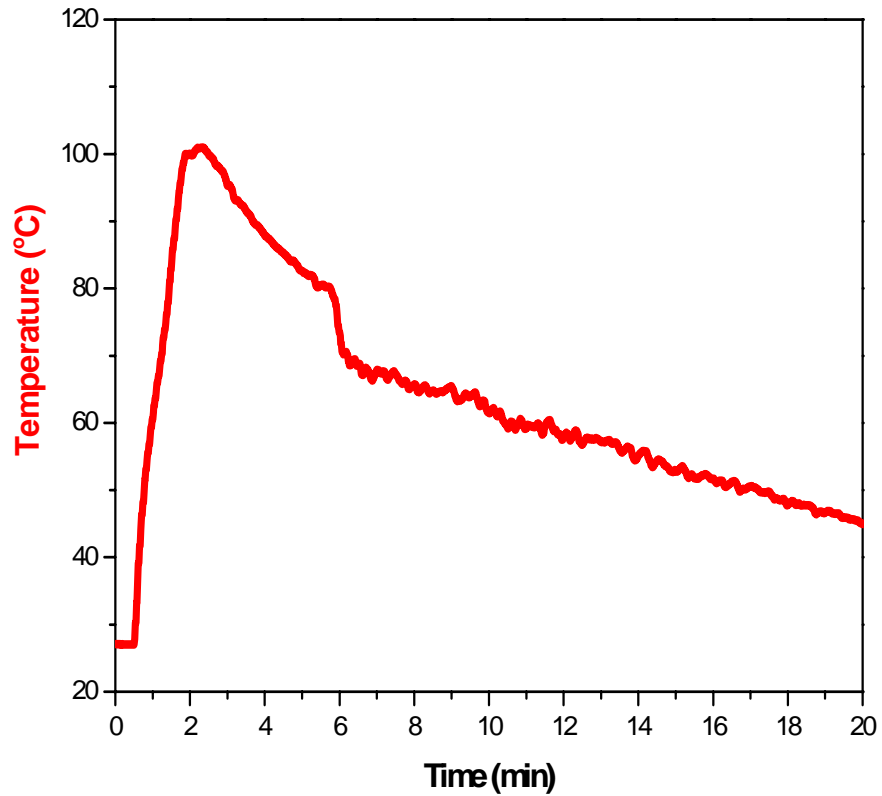
4.1. Hot-Box Test (150 °C, 10min)



<after test>

confidential

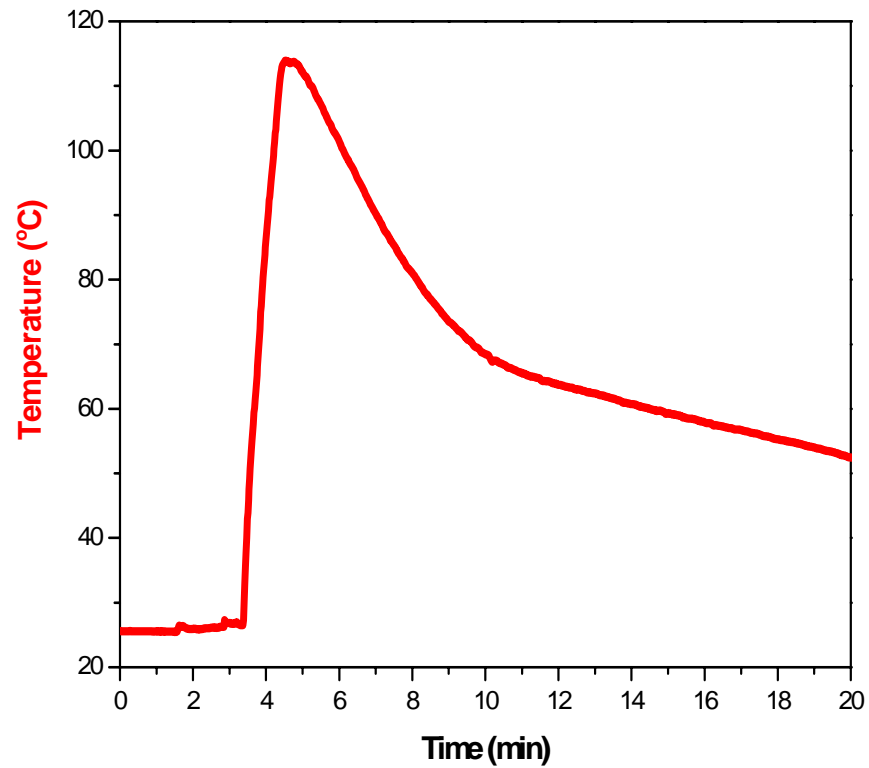
4-2. Nail Penetration Test



<after test>

confidential

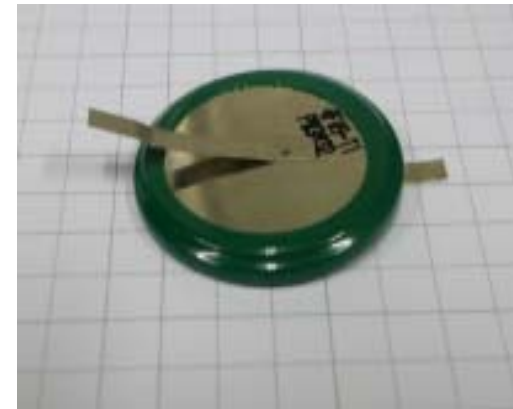
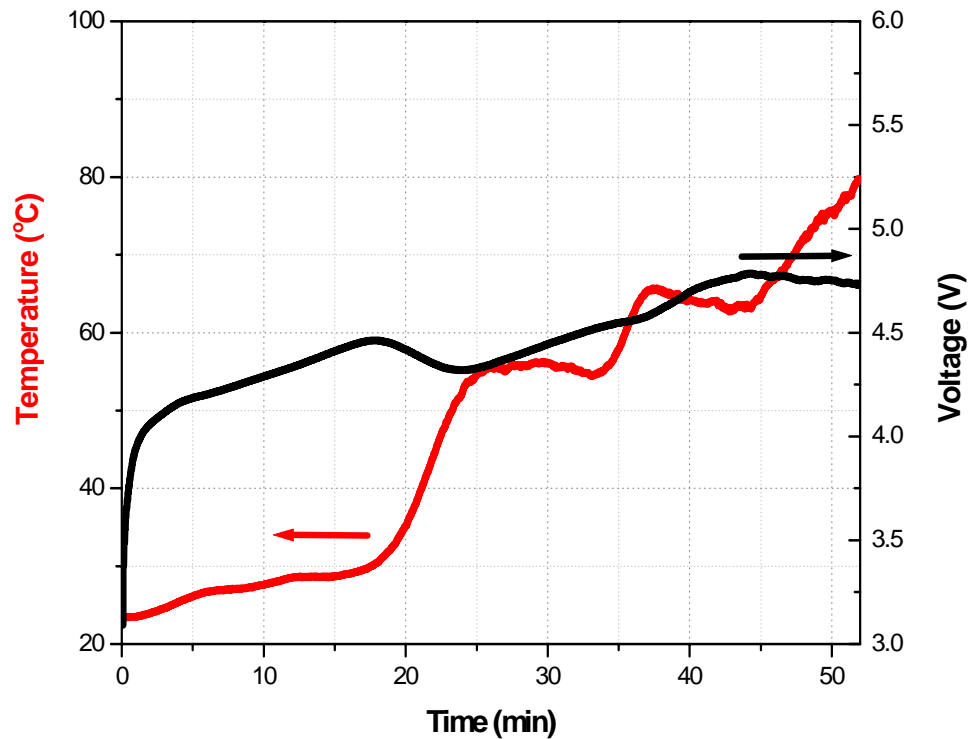
4.3. Short circuit Test



<after test>

confidential

4.4. Overcharge test (3C continuous overcharge)



<after test>

confidential