

Introduction of NCR18650PF

December 26, 2012

Energy Company of Panasonic Group
Lithium-Ion Battery Business Unit

NCR18650PF (TENTATIVE)

TENTATIVE

Model		NCR18650PD	NCR18650PF
Nominal Voltage (V)		3.6	3.6
Rated Capacity (mAh) at 20°C		2680	2680
Typical Capacity (mAh) at 20°C		2830	2830
Nominal Capacity (mAh)/Typ. at 25°C		2880	2880
Standard Charge(CCCV)		0.5It 4.2V	0.5It 4.2V
Dimensions with Tube(Max.)	Diameter	18.5	18.5
	Height	65.3	65.3
Weight (g) (max.)		46.5	Almost 46.5
Maximum Continuous Discharge Current (A) *Actual(Reference)		10(**Spec.)	10(**Spec.)
AC-IR(mOhm) Actual		21	21
DC-IR(mOhm) **Actual		43	43

No change the specification

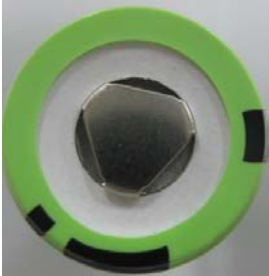



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Changing points of NCR18650PF(TENTATIVE)

TENTATIVE

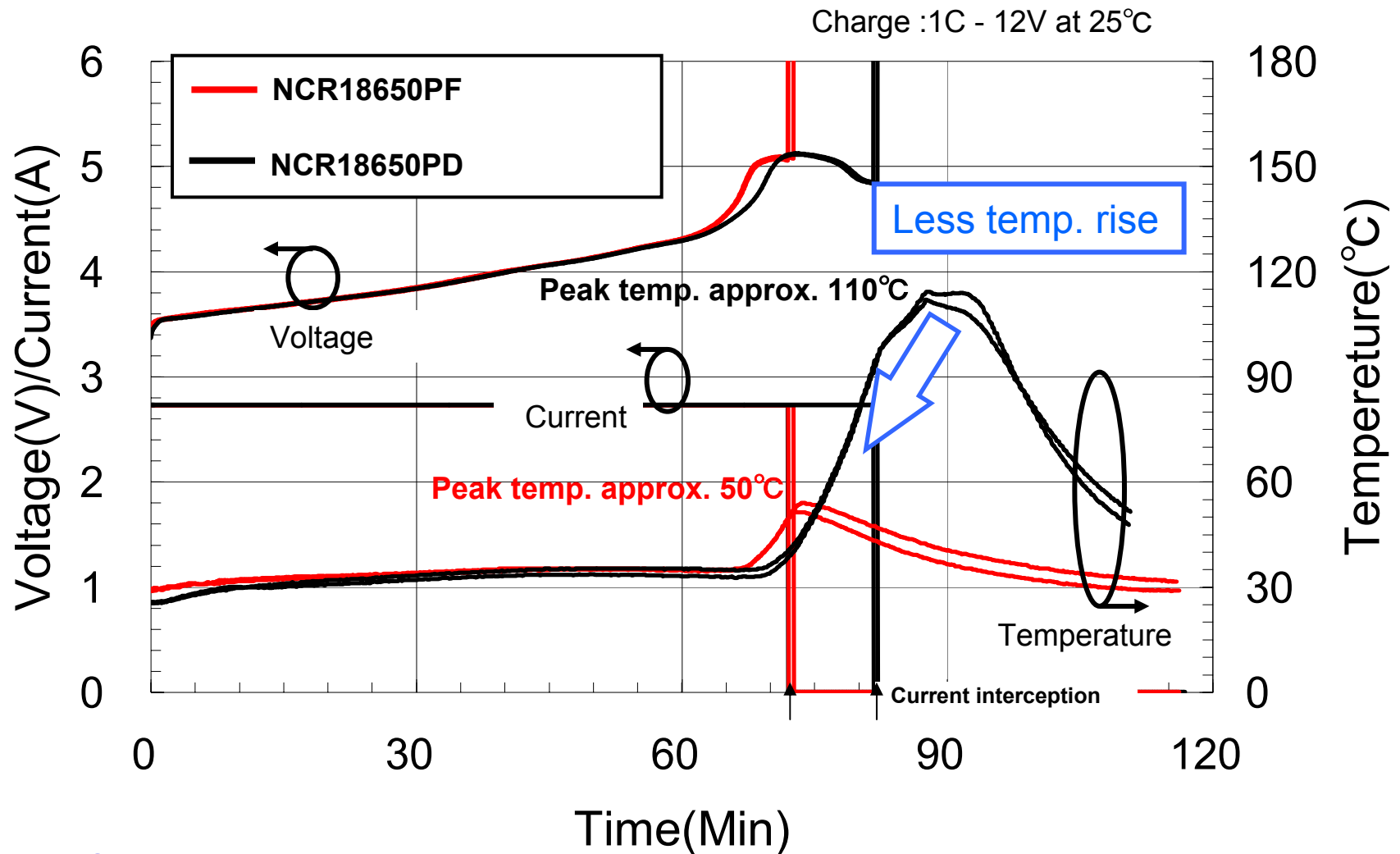
	Current	Improved
Top Cap Shape		
Safety vent on the bottom of can		
Over charge characteristics	—	CID will work earlier than current one

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Over Charge Test for NCR18650PD and PF



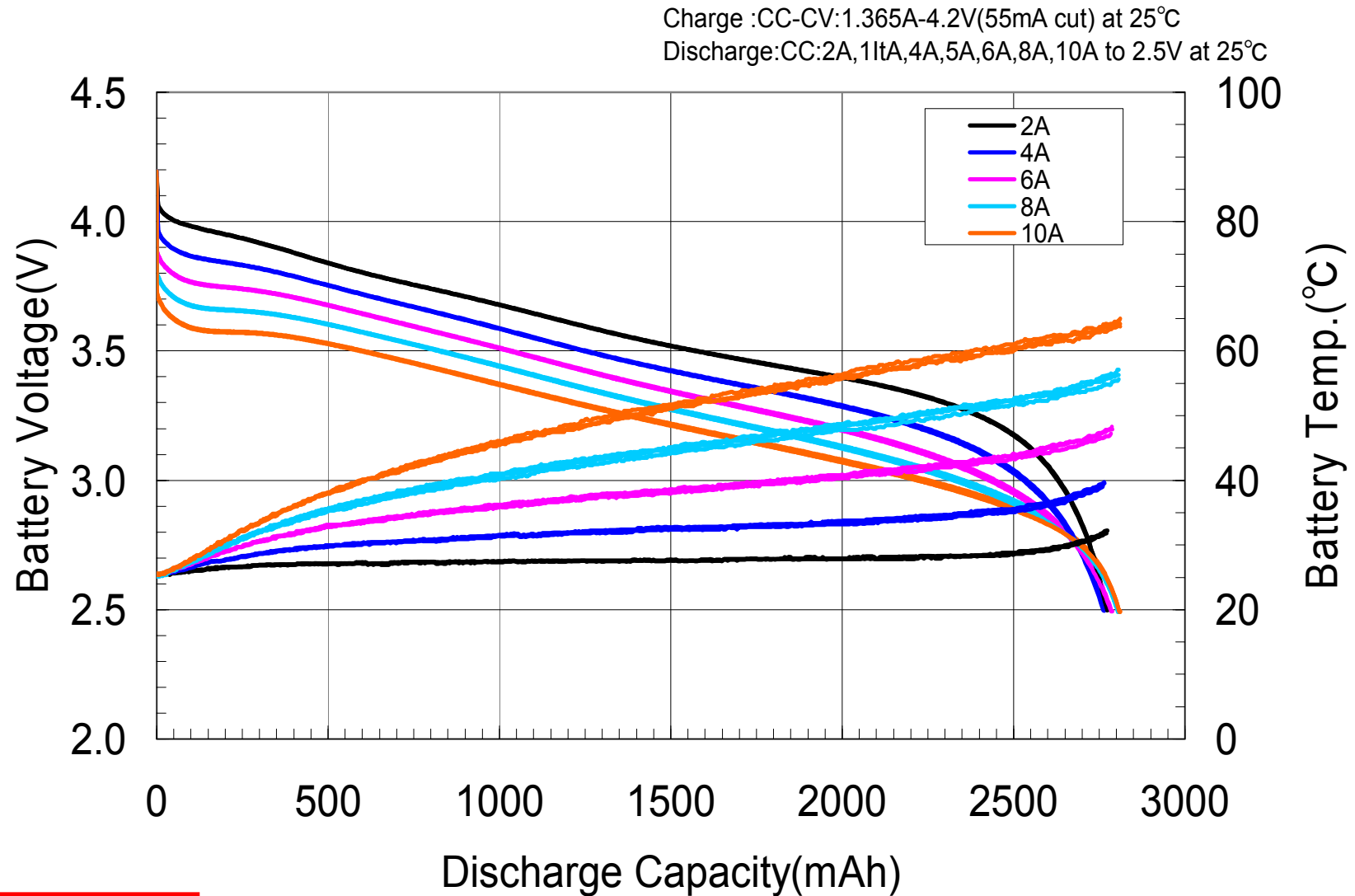
- NCR18650PF passed overcharge test with enough temperature margin. (No fire, No explosion)

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MAX temperature of overcharge decreased, compared with current design.

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NCR18650PF Discharge characteristics

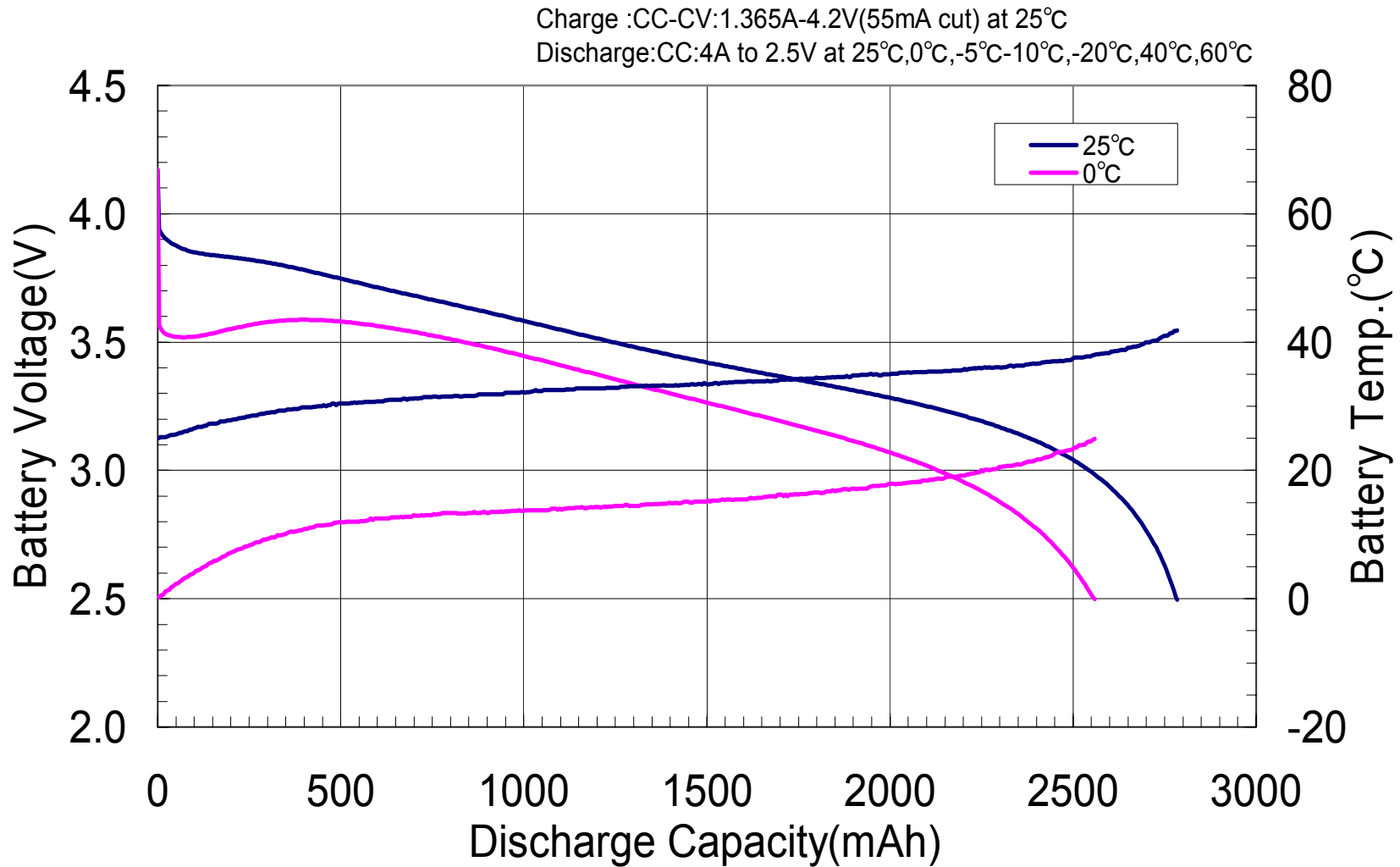


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NCR18650PF Discharge characteristics



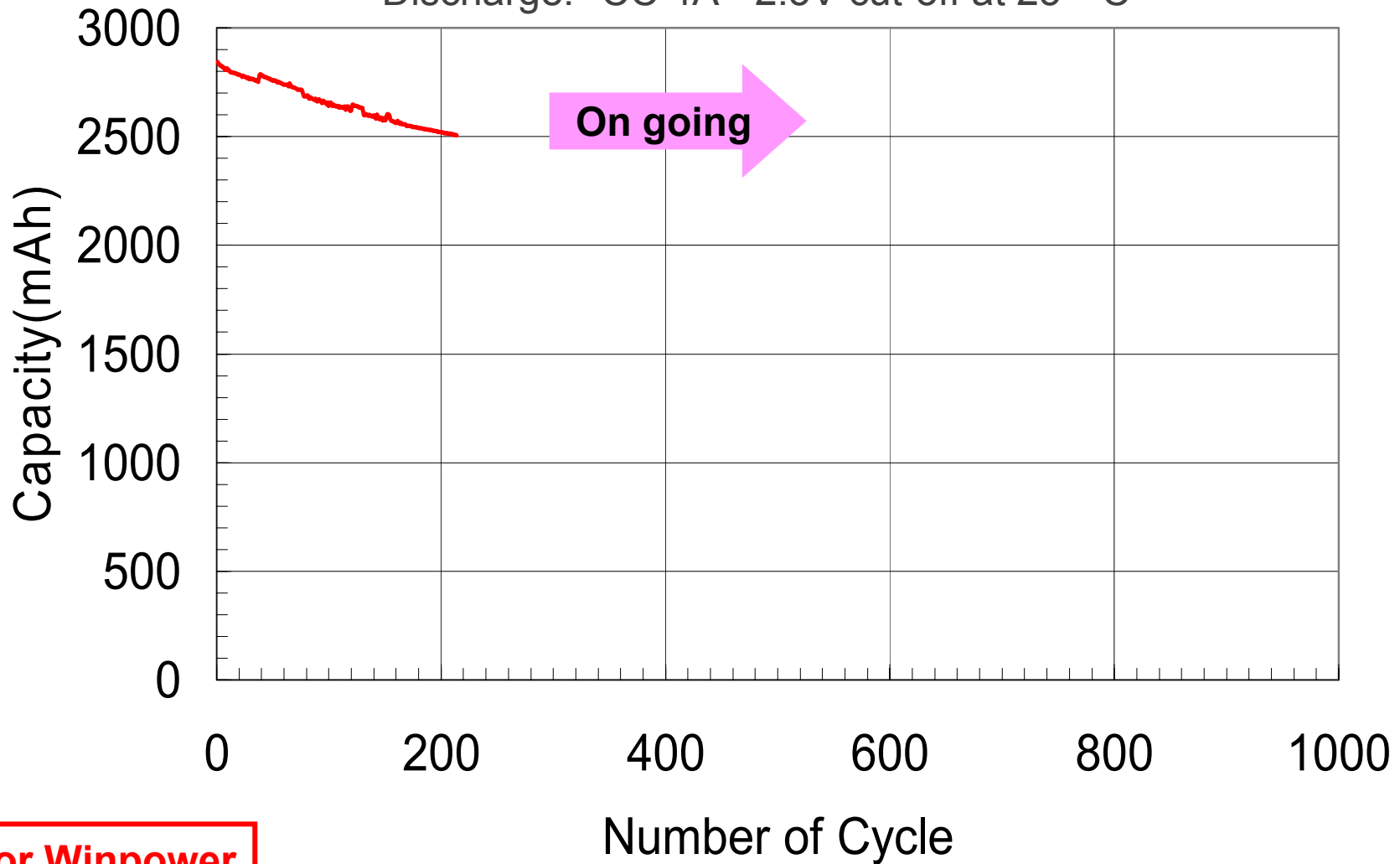
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NCR18650PF Cycle life characteristics

Charge: CC-CV 1.365A- 4.2V, 55mA cut-off at 25° C
Discharge: CC 4A - 2.5V cut-off at 25° C



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- **Sample available : End of January 2013
(Small qty)**
- **Cell mass production (TBD) : 3Q 2013**

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