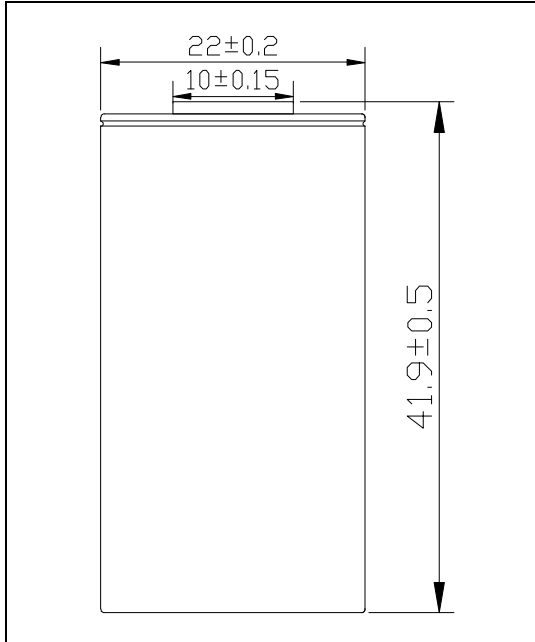


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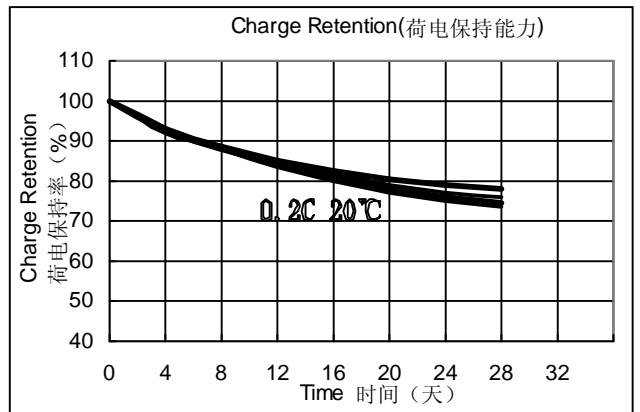
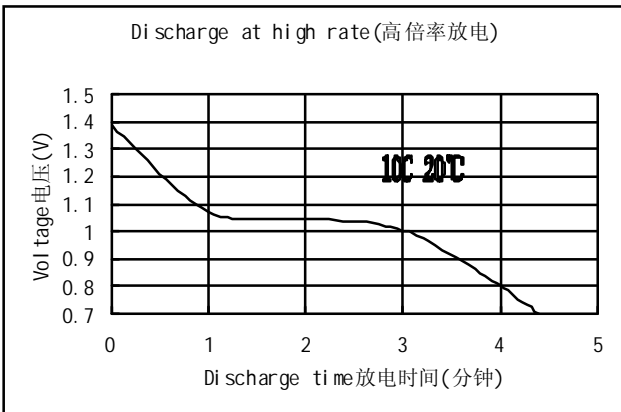
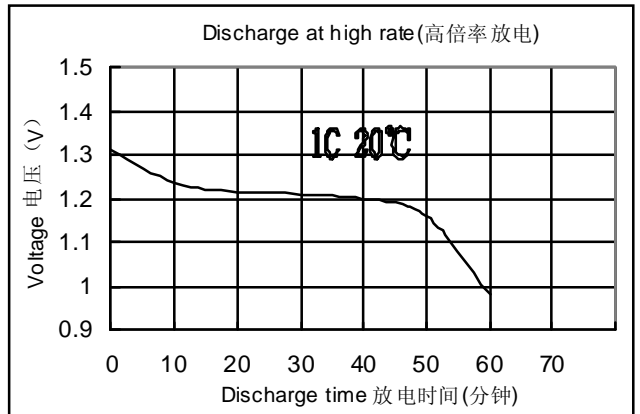
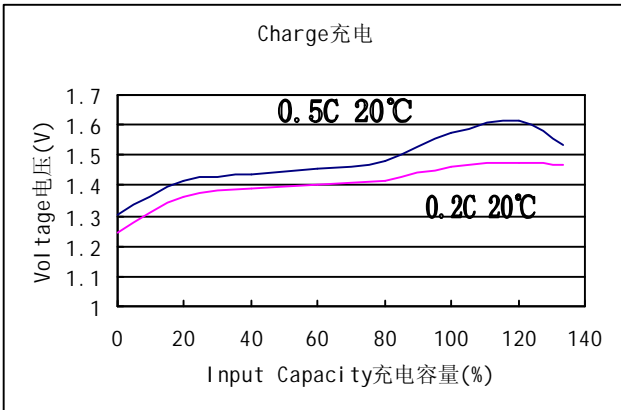
MODEL No: SC2000P

Description: 2000mAh SC SIZE Ni-Cd



Specification

Nominal Capacity 额定容量		2000 mAh
Nominal Voltage 额定电压		1.2 V
Charge current 充电电流	Standard 标准	200mA
	Quick 快充	600mA
	Fast 急充	1000mA
Charge time 充电时间	Standard 标准	14~16 Hrs
	Quick 快充	4.0 Hrs
	Fast 急充	2.4Hrs
Ambient Temperature 使用温度	Charge 充电	Standard 标准: $0^{\circ}\text{C} \sim 35^{\circ}\text{C}$ Quick 快充: $10^{\circ}\text{C} \sim 35^{\circ}\text{C}$
	Discharge 放电	$-30^{\circ}\text{C} \sim 60^{\circ}\text{C}$
	Storage 储存	$-30^{\circ}\text{C} \sim 35^{\circ}\text{C}$
Internal Impedance(mΩ) (Upon fully charge) 充满电后内阻		Max ≤ 12
Weight 重量		47.1g



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Document Title: Product Specification of Ni-Cd SC2000P

1、 APPLICATION

This specification governs the performance of the following LND Nickel-Cadmium Cylindrical cell .

LND Model: SC2000P

Cell Size: SC ($\phi 22.0^{\pm 0.2} \times 41.9^{\pm 0.4}$)

2、 DATA OF STACK UP BATTERIES

All data involves voltage and weight to stack-up battery are equal to the value of unit cell times the number of unit cell which consisted in the stack-up batteries

Example: Stack-up battery consisting three unit cells

Nominal voltage of unit cell=1.2V

Nominal voltage of stack-up batteries= $1.2V \times 3=3.6V$

3、 RATINGS

Description	Unit	Specification	Conditions
Nominal Voltage	V/Cell	1.2	
Nominal Capacity	mAh	2000	Standard Charge/Discharge
Standard Charge	mA	200(0.1C)	$T_1= 0\sim 35^{\circ}\text{C}$ (see Note1)
	Hour	14~16	
Fast Charge	mA	1000(0.5C)	- $\Delta V=0\sim 5\text{mV/Cell}$ or Timer CutOff=120 % nominal capacity or Temp.Cutoff= 55°C , $T_1= 10\sim 35^{\circ}\text{C}$
	hour	2.4approx (see Note 2)	
Trickle Charge	mA	(0.05C)	$T_1= 0\sim 35^{\circ}\text{C}$
Standard discharge	mA	400(0.2C)	$T_2= -30\sim 60^{\circ}\text{C}$ Humidity: Max.85%
Discharge Voltage	Cut-off V/Cell	1.0	

Storage Temperature	°C	-30~35	Discharged state、Humidity、Max.85%
Typical Weight	Gram	47.1	unit cell

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Document Title: Product Specification of Ni-Cd SC2000P

3、 PERFORMANCE

Unless otherwise stated, tests should be done within one month of delivery under the following conditions:

Ambient Temperature, T: $20 \pm 5^{\circ}\text{C}$

Relative Humidity: $65 \pm 20\%$

Notes: Standard Charge/Discharge Conditions:

Charge: $200\text{mA}(0.1\text{C}) \times 14$ hours

Discharge: $400\text{mA}(0.2\text{C})$ to 1.0V/Cell

Test	Unit	Specification	Conditions	Remarks
Capacity	mAh	≥ 2000	Standard Charge Discharge	up to 3 cycles are allowed
Open Circuit Voltage(OCV)	V/ Cell	≥ 1.25	Within 1 hour after standard Charge	
Internal Impedance	m Ω / Cell	≤ 12	Upon fully charge(1KHz)	
High Rate Discharge(1C)	minute	≥ 54	Standard Charge, 1 hour rest Before discharge by 2000mA (1C)to 1.0V/cell	up to 3 cycles are allowed
Charge Retention	mAh	$\geq 70\%$	Standard Charge, Storage: 28 days, Standard Discharge	
IEC Cycle Life	Cycle	≥ 500	IEC61951-1 (2003) 7.4.1.1	(see Note 3)
Leakage		No leakage nor deformation	Fully charged at 1000mA(0.5C) For 2.4 hour Stand for 14 days	
Maximum	A	20(10C)		

continuous discharge current				
Maximum momentary discharge current	A	20		

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Document Title: Product Specification of Ni-Cd SC2000P

4、 CONFIGURATION,DIMENSIONS AND MARKINGS

Please refer to the attached drawing.

5、 EXTERNAL APPEARANCE

The cell/battery shall be free from cracks, scars, breakage, rust, discoloration, leakage nor deformation.

6、 WARRANTY

One year limited warranty against workmanship and material defects.

7、 CAUTION

- (1)Reverse charging is not acceptable.
- (2)Charge before use. The cells/batteries are delivered in an uncharged state.
- (3)Do not charge/discharge with more than our specified current.
- (4)Do not short circuit the cell/battery Permanent damage to the cell/battery may result.
- (5)Do not incinerate or mutilate the cell/battery.
- (6)Do not solder directly to the cell/battery.
- (7)the life expectancy may be reduced if the cell/battery is subjected adverse conditions like: extreme temperature, deep cycling, excessive overcharge/ over-discharge.
- (8)store the cell/battery uncharged in a cool dry place. Always discharge batteries before bulk storage or shipment.

Notes:

- (1) T_1 : Ambient Temperature.
- (2) Approximate charge time from discharged state, for reference only.
- (3) IEC61951-1 (2003) 7.4.1.1 Cycle Life:

Cycle No.	Charge	Rest	Discharge
1	$0.1C \times 16h$	None	$0.25C \times 2h20min$
2-48	$0.25C \times 3h10min$	None	$0.25 \times 2h20min$
49	$0.25C \times 3h10min$	None	$0.25C$ to $1.0V/ cell$
50	$0.1C \times 16h$	1-4h	$0.2C$ to $1.0V/ cell$
Cycles 1 to so shall be repeated until the discharge duration on any 50th Cycle becomes less than 3 h.			

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文件名: Cd-Ni SC2000P 大功率电池产品说明书

1、范围

本说明书包括了下述的 LND 牌 Ni-Cd 圆柱电池单体及组合的全部性能指标。

电池标称: SC2000P

型 号: SC ($\phi 22.0^{+0.2} \times 41.9^{+0.4}$)

2、组合电池的指标

组合电池的电压、重量等数据, 近似等于组成其单体电池数与对应值之乘积。

例如: 组合电池包括三个单体电池

单体电池的额定电压=1.2V

则组合电池的额定电压=1.2V \times 3=3.6V

3、额定性能

项目	单价	指标	条件
额定电压	V/只	1.2	单体及组合电池
额定容量	mAh	2000	标准充放
标准充电	mA	200(0.1C)	T ₁ = 0~35°C(见 Note 1)
	hour	14~16	
急充	mA	1000(0.5C)	充电终止条件: $-\Delta V=0\sim 5\text{mV/只}$ 或 充电至 120% 额定容量或电池升温至 55°C T ₁ = 10~35°C
	hour	2.4approx (见 Note 2)	
涓充	mA	(0.05C)	T ₁ = 0~35°C
标准放电	mA	400(0.2C)	T ₁ = -30~60°C 湿度: 最大 85%
放电截止电压	V/只	1.0	
贮存温度	°C	-30~35	放电状态下, 最高环境湿度 85%
单体电池重量	克	47.1	

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文件名: Cd-Ni SC2000P 大功率电池产品说明书

4、电池性能

除非另有说明, 测试须在发货后一个月内在下述条件下进行:

环境温度 T_1 : $20 \pm 5^\circ\text{C}$ 相对湿度: $65 \pm 20\%$

注意: 标准充放条件: 充电: $200\text{mA}(0.1\text{C})$ 充 14 小时

放电: $400\text{mA}(0.2\text{C})$ 至 $1.0\text{V}/\text{只}$

测试项目	单位	指标	其它条件	备注
容量	mAh	≥ 2000	标准充放	允许最多三次充放
开路电压	V	≥ 1.25	在标准充电后 1 小时内测量	
内阻	$\text{m}\Omega$	≤ 12	充满电后(1KHZ 的交流频率)	
1C 放电时间	minute	≥ 54	标准充电后搁置 1 小时, 2000mA 放电至 1.0V	允许最多三次充放
荷电保持能力	mAh	$\geq 70\%$	标准充电后存放 28 天, 标准制度放电	
IEC 循环寿命	Cycle	≥ 500	IEC61951-1 (2003) 7.4.1.1	(参见 Note 3)
泄漏		无漏液或变形	0.5C 充电 2.4 小时, 存放 14 天后检查	
持续最大放电电流	A	20 (10C)		
瞬间最大放电电流	A	20		

LND

文件名: Cd-Ni SC2000P 大功率电池产品说明书

5、电池结构、尺寸、包装物

参见附图

6、外观

无裂缝、疤痕、破裂、锈蚀、脏污、漏液、变形

7、使用注意事项

- (1) 勿将电池反极充电。
- (2) 初次使用前先充电。
- (3) 避免以高于指定的电流充放电。
- (4) 防止电池短路，以免造成可能的损坏。
- (5) 勿拆解或焚烧电池。
- (6) 勿在电池上直接焊接。
- (7) 如极端高温、深度循环、过量的过充、过放电，电池的使用寿命可能会下降。
- (8) 电池应贮放干爽阴凉处；组合电池或装定前应将电池放电。

Notes:

- (1) T_1 : 环境温度
- (2) 以放电态为基准的大致充电时间仅供参考。
- (3) IEC61951-1 (2003) 第 7.4.1.1 条: 循环寿命

循环周次	充电	搁置	放电
1	$0.1C \times 16h$	无	$0.25C \times 2h20min$
2-48	$0.25C \times 3h10min$	无	$0.25 \times 2h20min$
49	$0.25C \times 3h10min$	无	$0.25C$ to 1.0V/只
50	$0.1C \times 16h$	1-4h	$0.2C$ to 1.0V/只

循环至任一第 50 次放电时间不足 3 小时为止。