

PRODUCT SPECIFICATION

Version: A/0

Date: 2018-01-05

Sample Number:

Rechargeable Ni-MH Battery Product Specification

Product Model/成品型号: PH-H- D5000H

Cell Model/电芯型号: NIMH D5000H 1.2V

Prepared By/Date 编制/日期	Checked By/Date 审核/日期	Approved By/Date 批准/日期

Customer Approval 客户确认	Signature/签字	Date/日期
	Company Name/公司名称	
	Company Stamp/公司印章	

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Amendment Records/修正记录

Revision 版本	Description/记述	Prepared by 编制	Approved by 批准	Date/日期
A	First Publish	黄伟鹏		2018.01.05

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1. Preface/适用范围

This specification is suitable for the performance of the GREAT POWER Ni-MH rechargeable battery. (此规格书用于鹏辉电池有限公司生产的镍氢可充电电池。)

2. Model/型号

PH-H-D5000H

3. Appearance/表现特征

There shall be no such defects as deformation, flaw, stain, discoloration or electrolyte leakage./电池表面清洁，无漏液，无零电压。

4. Nominal specification/规格

Description(项目)		Specification (规格)	
Model (产品号)		PH-H-D5000H	
Size (型号)		D	
Dimensions (尺寸)	Diameter/直径(mm)	33.0+0/-1.0	
	Height/高度(mm)	61.5+0/-2.0	
	Weight/重量(g)	Approx.116g	
Nominal Voltage/公称电压(V)		1.2	
Nominal capacity/公称容量(mAh)		5000	
Internal Impedance/内阻(充满电后测量)(mΩ)		≤65	
Discharge Cut-off Voltage/放电截止电压		1.0V	
Ambient temperature 环境温度	Charge 充电	Standard/标准	0°C to 40°C
		Fast/快充	10°C to 40°C
	Discharge		-10°C to 50°C
	Storage 贮存	<1 year/年	-10°C to 30°C
		<3 months/月	-10°C to 40°C
The relative humidity should keep with in 相对湿度必须保持在		65±20%	

5. Characteristics/性能

Unless otherwise specified, test: should be done within one month of delivery under the following conditions; (除非特别说明，测试需在发货后一个月内在下述条件下进行)

Ambient temperature/环境温度 20±5°C

Relative humidity/相对湿度 65±20%

Atmospheric pressure、大气压力 960±100mbar

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Test item/测试项目		Condition/制度	Specification/指标
3. Charge 充电	Standard/标准	Charge at 0.1C for 16 hours 0.1C 充 16 小时	0°C to 40°C
	Fast/快速	Charge at 0.5C , $-\Delta V=0-5mV$ 、 0.5C 充电, $-\Delta V=0-5mV$	10°C to 40°C
	Trickle/涓流	(0.03C)-(0.05C)	0°C to 40°C
2. Discharge/标准放电		At 0.2C to 1.0V 0.2C 放电至 1.0V	
7. Discharge cut-off voltage 放电截止电压			1.0V
4. Capacity/容量 (mAh)	Minimum 最低	Standard charge/discharge 标准充放电	4800
	Typical 典型	Standard charge/discharge 标准充放电	5000
5. Internal resistance/内阻		After fully charge, rest 1 hour, measured at 1000Hz 充满电静置 1 小时测试	$\leq 65m\Omega$
6. Self-Discharge/自放电		The charged battery is stored for 28 days at 20°C \pm 5°C. And the discharge time is measured at standard discharge/ 充满电后电池 于 20 \pm 5°C 贮存 28 天后, 用标准放电 制度测试	≥ 180 minutes (≥ 180 分钟)
7. High Rate Discharge 高倍率放电	Standard charge 1hour rest Before Discharge by 0.5C to 1.0V/ 标准充 电后搁置一小时, 0.5C 放电至 1.0V		≥ 108 minutes (≥ 108 分钟)
	Standard charge 1hour rest Before Discharge by 1C to 1.0V/ 标准充电 后搁置一小时, 1C 放电至 1.0V		≥ 48 minutes (≥ 48 分钟)
8. Overcharge/过充		0.1C charger 28 days, /0.1C 充电 28 天	No leakage 无漏液

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9.循环寿命	按照 IEC61951-2 2003 中 7.4.1.1 项实验方法 Based on clause 7.4.1.1, IEC61951-2 2003			
	Charge 充电	Rest 测试	Discharge 放电	
1	0.1C for 16h 0.1C 充 16 小时	0	0.25C for 2h20min 0.25C 放 2 小时 20 分	循环 500 次后容量 ≥60% Capacity retention≥60% after 500cycles
2~48	0.25C for 3h10min 0.25C 充 3 小时 10 分	0	0.25C for 2h20min 0.25C 放 2 小时 20 分	
49	0.25C for 3h10min 0.25C 充 3 小时 10 分	0	0.2C to 1.0V 0.2C 放至 1.0V	
50	0.1C for 16h 0.1C 充 16 小时	1~4h	0.2C to 1.0V 0.2C 放至 1.0V	
Cycles 1 to 50 shall be repeated until the discharge duration on any 50 th cycle becomes Less than 3h 循环至任意第 50 次放电时间不足 3 小时为止				
10. Leakage Test 泄漏测试	Standard charge stand for 14days 标准充电后存放 14 天检查		No leakage 无漏液	
11. High temperature test 高温测试	Store at 40°C、50°C、60°C for 2 hours then charge/discharge 在 40°C、50°C、60°C 的环境下贮存 2 小时后充放电		No leakage 无漏液	
12.Low temperature test 低温测试	Store at 0°C for 2 hours then charge/discharge 在 0°C 的环境温度下贮存 2 小时后 充电, 放电		No leakage 无漏液	
13.Short circuit test 短路测试	Short circuit after fully charge 充满后进行短路测试		No explode 无爆炸	
14. Drop test 跌落测试	Free fall on the concrete from 1 meters after fully charged 充满电后于 1 米高处自由跌落 3 次		No leakage No short-circuit 电 池不泄漏/不短路	

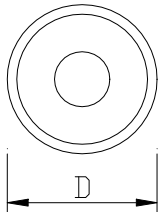
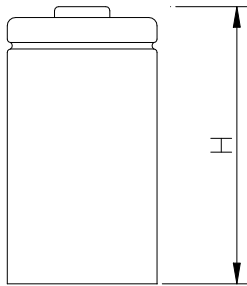
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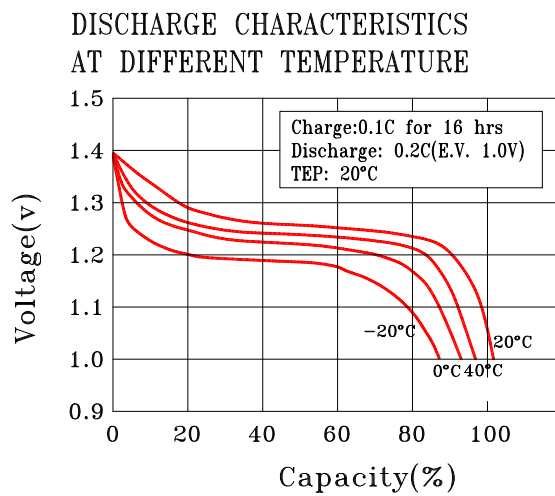
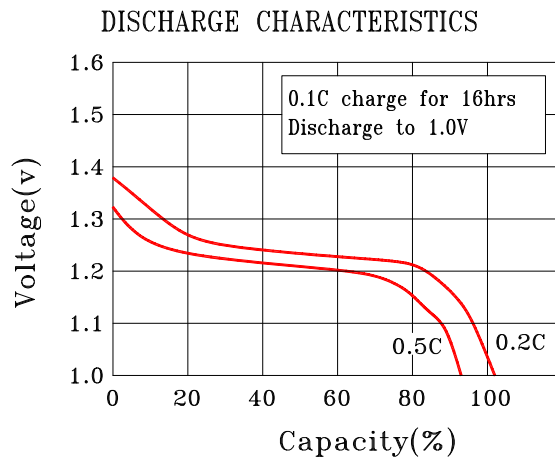
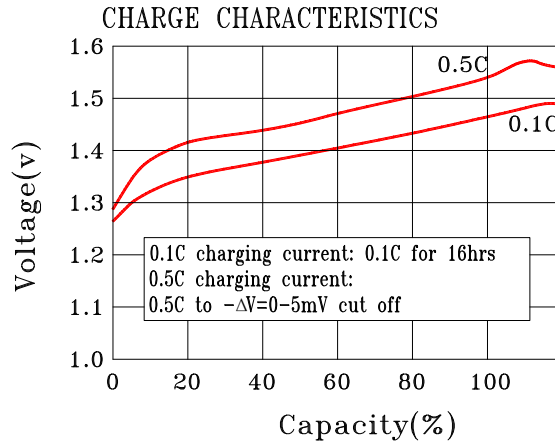
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6. Drawing/图形



Project 项目	Description 类型	Dimension 尺寸(mm)
D	Diameter 直径	33.0 ⁺⁰ _{-1.0}
H	Height 高度	61.5 ⁺⁰ ₋₂



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7. Cautions in use/使用须知

To ensure proper use of the battery please read the manual carefully before using it.

为保证正确使用电池，请在使用前详细阅读以下使用指南

Handling/操作

Do not expose to, dispose of the battery in fire.

/请勿将电池投入火中；

Do not put the battery in a charger or equipment with wrong terminals connected.

/请勿将电池反极放入充电器或设备中

Avoid shorting the battery./避免将电池短路

Avoid excessive physical shock or vibration./避免剧烈的振动与冲击

Do not disassemble or deform the battery./请勿解剖或破坏电池

Do not immerse in water./请勿将电池投入水中

Do not use the battery mixed with other different make, type, or model batteries.

/请勿将不同生产商、不同规格、不同型号的电池混合使用

Keep out of the reach of children./请将电池远离儿童

Storage/贮存

Cycle(charge and discharge)the battery every 6 month to maintain cell/battery performance ,When being stored for an extended period of time/若持续贮存，为了维护电池性能，在半年内要对电池进行充放电一次，以防其失去功效

Store the battery in a cool, dry and well-ventilated area./请将电池存放在低温、干燥、通风处

Disposal/处置

Regulations vary for different countries. /电池处理法规因国家不同而不同

Dispose of in accordance with local regulations./电池因按当地的法规进行处理

8. Note/备注

Any other items which are not covered in this specification shall be agreed by both parties.

/此规格书上未涉及的项目，双方可共同协商达成一致

9. Period of Warranty/保质期

The period of warranty is one year from the date of shipment. Great Power guarantees to give a replacement in case of cells with defects proven due to manufacturing process instead of the customer abuse and misuse. 电池的保质期从出货之日算起为一年。如果电池的缺陷是在制造过程中形成的而不是由于用户滥用及错误使用造成，本公司负责退换电池。