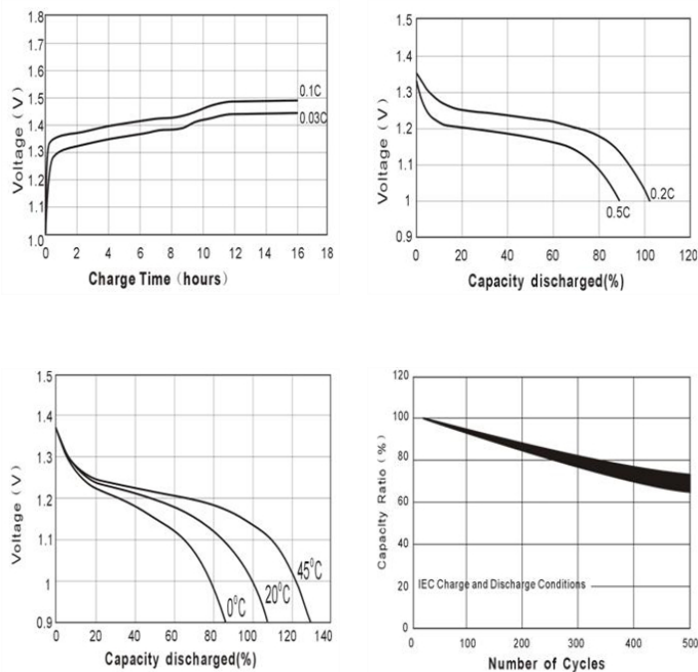


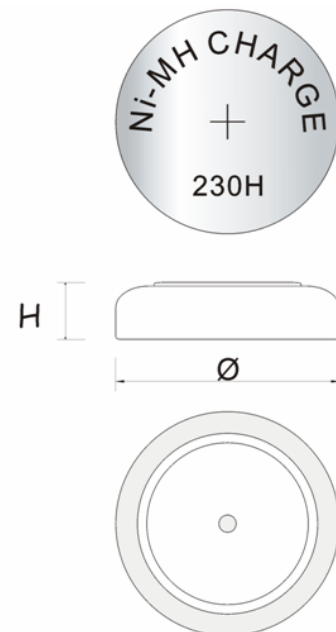
● **Specifications of single cell**

Type	Sealed Ni-MH button cell
Nominal Voltage	1.2V (Single cell, Series voltage is 1.2 * N)
Nominal Capacity	230mAh
Average Weight	11g
Diameter	Ø25.2mm
Height	6.4mm (Max.)
Charging Method: (20°C)	
Standard Charge,	Charge with 0.1C (23mA) for 14-16 hours
Quick Charge	Charge with 0.2C (46mA) for 7-8 hours
Max Overcharge Current	23mA(No longer than 48 hours)
Trickle Current	7-11.5 mA
Discharge	46mA 230mA (Max.)
Operating Temperature(reference only):	
Storage	-10°C~35°C
Discharge:	-10°C~65°C
Standard Charge	0°C~45°C
Fast Charge	10°C~35°C

● **Typical characteristics**



● **Single battery draw**



● **Performance**

Testing Item	Testing Conditions				Standard
Standard Testing Condition	The test is carried out with new batteries (within a month after delivery). ambient conditions: Temperature: 20±5℃ Humidity: 65±20% Tolerances ±5‰ for voltage and current				
Normal Charge	charging at a constant current of 0.1C for 16h. Prior to charging, the cell shall have been discharged at a constant current of 0.2C, down to a final voltage of 1.0V/cell *N.				
(1)OpenCircuit Voltage	Test within 14 days after standard charge				≥1.25V *N
(2)Capacity	The cell shall be charged. After charging, the cell shall be stored for 1h, then the cell shall have been discharged at a constant current of 0.2C, down to a final voltage of 1.0V/cell *N. 5 cycles are permitted for this test.				≥300min
(3)Overcharge	Prior to this test, the cell shall be discharged. The cell shall then be charged at a constant current of 0.1C for 48h. After this charging operation, the cell shall be stored 1h, The cell shall then be discharged at a constant current of 0.2C to a final voltage of 1.0V/cell *N.				≥255min
(4)Charge retention	The charged cell is stored for 28 days. And the discharge time is measured at normal discharge.				≥225min
(5)Life expectancy (IEC cycle)	Cycle	Charge	Rest	Discharge	≥500 <sup>th</sup> cycle
	1	0.1C x 960min	None	0.25C x140 min	
	2-48	0.25C x190 min	None	0.25C x140 min	
	49	0.25C x190 min	None	0.25C to 1.0V/cell *N	
	50	0.1C x 960min	1-4h	0.2C to 1.0V/cell *N	
	Cycles 1 to 50 shall be repeated until the discharge duration on any 50th cycle becomes less than 3h. At this stage, a repeat capacity measurement as specified for cycle 50 shall be carried out. The endurance test is considered complete when two such successive capacity cycles give a discharge duration of less than 3h. [IEC61951-2:(2003)7.4.1.1]				
(6)Storage	Standard Charged as (1) condition and stored for 12 months under 20℃±5℃, then tested as (4) condition.				≥240min

● **Note**

- 1) Do not dispose of cell into fire or be dismantled under any condition.
- 2) Do not mix different cell types and capacities in the same battery assembly.
- 3) Charge and discharge under specified ambient temperature recommended to HISUN specification.
- 4) Short circuit leading to cell venting must be avoided.
- 5) Never solder onto cell directly. Cell reversal should be avoided.
- 6) Use batteries in extreme condition may affect the service life, such as: extreme temperature, deep cycle, extreme overcharge and over discharge.
- 7) Batteries should be stored in a cool dry place.
- 8) Up to three full cycles of charge /discharge after long-termed storage may need to obtain highest capacity.
- 9) Quality assurance period: 12 months