1. SCOPE

This specification is suitable for the performance of following Battery Expert Asia Pte Ltd Ni－Cd high Temperature battery:

Model : F 8000

Size : F

Nominal voltage =1.2V

2. RATINGS

Description	Unit	Specification	Conditions
Nominal Voltage	V	1.2	
Typical Capacity	mAh	8400	Standard Charge/Discharge
Nominal Capacity	mAh	8000	Standard Charge/Discharge
Standard Charge	mA	800	T=-20∽70℃ (See Note)
	hour	12	
Standard Discharge	mA	8000	T=-20∽70℃ (See Note)
	V	1.0	
Fast Charge	mA	1600	-ΔV=0∽5mV/cell Time CutOff=120% Input capacity Temp CutOff=55℃ T=-20∽45℃
	hour	About 6 H	
Trickle Charge	mA	400~490	T=-20∽70℃
Storage Temperature	℃	-20~70	Discharged state
Typical Weight	gram	195±10	

3. Performance and Test Methods

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

Ambient Temperature (℃): 20±5.

Relative Humidity (%): 65±20.

Test Item	Test Conditions	Requirements
1.Standard Charge	Charge for 12 hours at the constant current of 800mA after pre-discharge at the constant of 1000mA to a cut-off voltage at 1.0V.	
2. Standard Discharge	Discharge at the constant of 1600mA to a cut-off voltage at 1.0V after standard charge	
3.Open-circuit Voltage	Voltage between terminals of the charged battery specified in item (1) is measured after rest for 1 hour.	≥1.27V
4.Capacity	Standard charge/discharge(up to 3 cycles are allowed)	≥300 minutes
5.Trickle charge life	charge at the constant current of 360~490mAh at -20~70℃.	≥4year
6.Internal Resistance	The battery is measured at 1000Hz with charge state.	≤15mΩ(full charged)
7.Over-charge	after the capacity test specified in item (4),then storage 16-24hours at 20±2 ℃ and Charge is conducted continuously for 28 days at 800mA, and the discharge time is measured at 1600mA up to 1.0V	≥255 minutes
8.Over-discharge	Discharge is conducted with a 3Ω/cell load for 24 hours.	No deformation and leakage
9.Self-discharge	The charged battery specified in item(1) is stored for 28 days at 20 ℃, and the discharge time is measured at 1000mA up to 1V	≥195 minutes
10.Storage	The capacity test conducted as specified in item (4) after the battery discharged with 1000mA and stored for 12 months under standard condition.	≥300 minutes

Test Item	Test Conditions	Requirements
11.Safety Valve Operation	Forced discharge is conducted for 60 minutes at a constant current of 5000mA after pre-discharge at a constant current of 1000mA up to 0V.	Not explode or disrupt. *
12.External Short-circuit	The charged battery specified in item (1) is short-circuited for 1 hour.	Not explode. *
13.Drop Test	The battery is subjected to a drop, which has a height of 150cm (59 inches) to an oak board of 10mm or more thick in a voluntary axis respectively 3 times.	Change of voltage should be under 0.02V/cell and no deformed

NOTE: * Electrolyte leakage and deformation of battery are acceptable.

4. General Characteristics
   Please refer to the attached drawing
5. Configuration, Dimensions and Markings
   Please refer to the attached drawing
6. Suggestions & Cautions
   6.1 The cut-off voltage is recommended at 1V.
   6.2 Charge Boren batteries prior to use.
   6.3 Don't solder directly to Boren batteries.
   6.4 Don't short circuit or reverse charge.
   6.5 Do not dispose of in fire and keep away from damage.
   6.6 Store Boren batteries discharged in a cool (storage Temperature at -20∽70℃,) and dry place.
   6.7 The batteries' life may be reduced if they are subjected to adverse conditions such as: extreme temperature, deep cycling, excessive overcharge/discharge.
   6.8 Boren battery should be transported at discharged state.