# **Batteries**

## **DATA SHEET**

Type High Temperature Rechargeable Nickel Metal Hydride Cylindrical Cell   IEC Designation U   Nominal Dimension (with Sleeve) Φ = 23.0mm   Applications Long term standby use. Recommended discharge current: 220mA to 1100mA   Nominal Voltage 1.2V   Capacity Rated: 2200mAh Typical: 2310mAh When discharge at 440mA to 1.0V at 20°C   Charging Condition Standard mode: 220mA for 16 hrs at 20°C Standby intermittent mode: 220mA for 16 hrs at 20°C then maintenance with 220mA for 16 hrs at 20°C then maintenance with 220mA for 16 hrs at 20°C for 12 months When discharged at 440mA to 1.0V at 20°C   Service Life >80% of rated capacity after cell storage at 20°C for 12 months When discharged at 440mA to 1.0V at 20°C   Service Life >500 cycles (IEC standard)   Continuous Comply with IEC standard   Overcharge Permanent Charge Endurance Test   Weight 53.0g   Internal Resistance Average 23 mΩ upon fully charged (Max. 30mΩ) at 1000Hz   Max. Charging Voltage 1.6V at 220mA charging   Ambient Temperature *Charge: 0 to 70°C Storage: -20 to 35°C Storage (1 week): -20 to 60°C			
IEC DesignationUNominal Dimension $\Phi = 23.0 \text{mm}$ (with Sleeve) $H = 43.0 \text{mm}$ ApplicationsLong term standby use. Recommended discharge current: 220mA to 1100mANominal Voltage $1.2V$ CapacityRated: 2200mAh Typical: 2310mAh When discharged at 440mA to 1.0V at 20°CCharging ConditionStandard mode: 220mA for 16 hrs at 20°C Standby intermittent mode: 220mA for 16 hrs at 20°C then maintenance with 220mA for 16 hrs at 20°C then maintenance with 220mA for 16 hrs at 20°C for 12 monthsCharging Retention80% of rated capacity after cell storage at 20°C for 12 months When discharged at 440mA to $1.0V$ at $20^{\circ}C$ Service Life>500 cycles (IEC standard)ContinuousComply with IEC standard Permanent Charge Endurance TestWeight53.0gInternal ResistanceAverage 23 m\Omega upon fully charged (Max. $30m\Omega$ ) at $1000Hz$ Max. Charging Voltage $1.6V$ at $220mA$ chargingAmbient Temperature Range*Charge: Discharging: -20 to $35^{\circ}C$	Туре :	High Temperature Rechargeable Nickel	
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Storage: -20 to 35°C	Ambient Temperature	*Charge:	0 to 70°C
	Range	*Discharging:	-20 to 70°C
Storage (1 week): -20 to 60°C		Storage:	-20 to 35°C
		Storage (1 week):	-20 to 60°C

\* Charge/discharge temperature range: 55~70°C shorter than 1 month

30

Charge and discharge temp. (°C)

40

50

60

Charge & Discharge efficiency Vs. temp.

Charge: 0.05C for 48hrs

20

Discharge: 0.2C until 1.0V

120

100 80

60

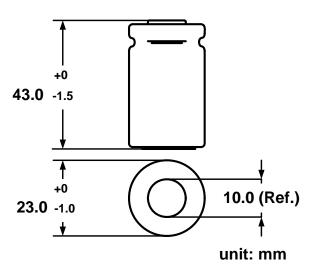
40

20

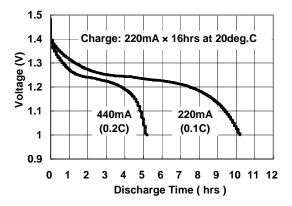
0 0

Available capacity (%)

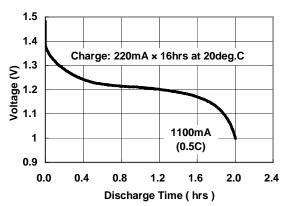
### Model No.: GP220SCHT



#### Low Rate Discharge



#### **High Rate Discharge**



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