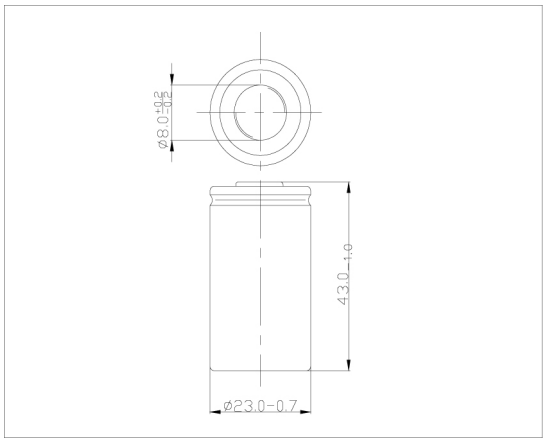
X4300SCR

Specifications of single cell

Nominal voltage		1.2 V	
Capacity		0.2 C Discharge	30 A Discharge
	Minimum	290 min	8.0 min
	Typical	300 min	8.1 min
Dimensions	Diameter	mm	
		$23.0^{-0.7}$	
	Height	$43.0^{-1.0}$	
Weight (approximately)		gram	
		77.0	
Internal Impedance at 1000 Hz		4 mΩ (max) After Charge	
Charge	Standard	430 mA (0.1 C) × 15 h	
	Rapid	4300 mA (1.0 C) × 1.05 h	
Ambient temperature	Charge Standard	°C	
		0°C to 45°C	
	Charge Rapid	0°C to 40°C	
	Discharge	-20°C to 50°C	
	Storage	-20°C to 40°C	

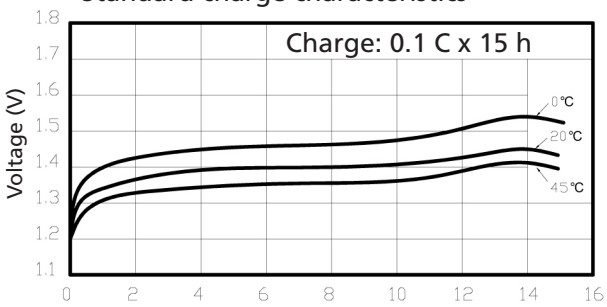
Dimensions with tube (unit mm)



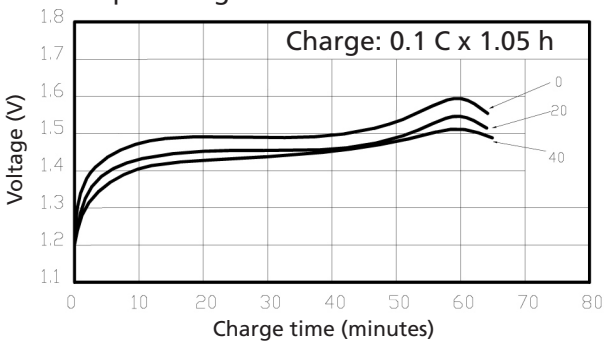
Note:
1. Nominal capacity, rated at 0.2 C 20°C.
2. Average capacity, for reference only.
3. Weight and internal impedance are for reference.
4. Standard according as IEC of test cycle life.

Typical characteristics

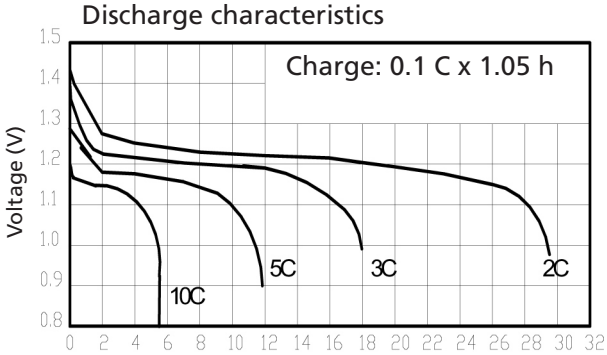
Standard charge characteristics



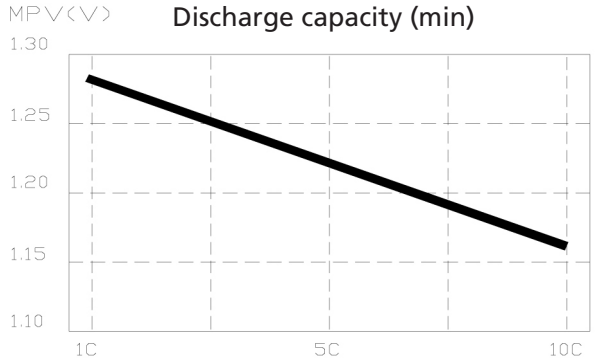
Rapid charge characteristics



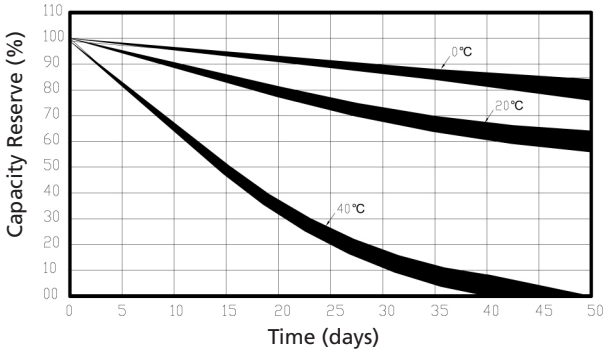
Discharge characteristics



Discharge capacity (min)



Charge retention curves of Ni-MH cylindrical cell at various storage temperature



1. RATINGS

Description	Unit	Specification	Condition
Nominal Voltage	V	1.2	Unit cell
Typical Capacity	min	8.1	Discharge at 30 A to 0.8 V/cell
Nominal Capacity	mAh	4300	Standard Charge/Discharge
Minimum Capacity	min	8.0	Discharge at 30 A to 0.8 V/cell
Standard Charge	mA	430 (0.1 C)	Ta = 0~40°C (see note)
	hour	15	
Fast Charge	mA	860 (0.2 C)~4300 (1.0 C) with charge termination control	-∆V = 5 mV/cell Timer cutoff = 105 % input capacity Temp. cutoff = 40~45°C dT/dt = 0.8°C/min (0.5 to 1.0 C); 0.8~1°C/min (1 C)
	hour	6.0 approx. (0.2 C) 1.05 approx. (1.0 C)	
Trickle Charge	mA	215 (0.05 C)~430 (0.1 C)	Ta = 0~40°C (see note)
Maximum Discharging Current	A	30 (Continuous) 50 (Momentary)	Ta = 0~50°C 0.8 V/cell cut off
Storage Temperature	°C	-20~+25 (within 1 year) -20~+30 (within 3 month) -20~+40 (within 1 month) -20~+50 (within 1 week)	*
Typical Weight	g	77.0 approx.	*

2. PERFORMANCE

Test	Unit	Specification	Condition	Remarks
Capacity	min	≥ 8.0	Discharge at 30 A to 0.8 V/cell	Up to 3 cycles are allowed
Average Voltage	V	≥ 1.21	Discharge at 30 A to 0.8 V/cell	Up to 3 cycles are allowed
Open circuit Voltage (OCV)	V	≥ 1.25	Within 1 h after standard charge	Unit pack
Internal Impedance (Ri)	mΩ	≥ 4	Upon fully charge at 1 kHz	*
Low Temperature Discharge	min	≥ 240	Standard Charge, Storage: 24 h at 0 ± 2°C 0.2 C discharge at 0 ± 2°C	1.0 V/cell Cut-off
Overcharge	N/A	No conspicuous deformation and/ or leakage	0.1 C charge for 48 h	*
Charge reserve	min	≥ 180 min	Standard charge Storage: 28 days, Standard discharge (0.2 C)	1.0 V/cell Cut-off
IEC Cycle Life Test	Cycle	≥ 500	IEC61951-2(2003)7.4.1.1	*
Humidity	N/A	No leakage	Standard charged, stand for 14 days at 33 ± 3°C and 80 ± 5% of relative humidity	*
External Short Circuit	N/A	No fire and no explosion	After standard charge, short-circuit the cell at 20°C ± 5°C until the cell temperature returns to ambient temperature (cross section of the wire or connector should be more than 0.75 mm²).	*

Safety Device Operation	N/A	No explosion	Forced discharge at 0.2 C to a final voltage of 0 V, then the current be increased to 1 C and forced discharge continue for 60 min.	Leakage of electrolyte and Deformation are acceptable
Free falling (drop)	N/A	$\Delta V < 0.02$ V/cell $\Delta Ri < 5$ %/cell	Charge at 0.1 C for 16 h, and then leave for 24 h, check battery before/after drop. Height: 50 cm Thickness of wooden board: 30 mm Direction is not specified Test for 3 times	*

3. APPEND:

Table 5-Endurance in cycles

Cycle number	Charge	Stand in Charged condition	Discharge
1	0.1 C_tA for 16 h	None	0.25 C_tA for 2 h 20 min²)
2 to 48	0.25 C_tA for 3 h 10 min	None	0.25 C_tA for 2 h 20 min²)
49	0.25 C_tA for 3 h 10 min	None	0.25 C_tA to 1.0 V/cell
50	0.1 C_tA for 16 h	1 h to 4 h	0.2 C_5A to 1.0 V/cell
• It is permissible to allow sufficient open-circuit rest time after the completion of discharge at cycle 50, so as to start cycle 51 at an exact two-week internal. A similar procedure may be adopted at cycles 100, 150, 200, 250, 300, 350, 400 and 450. • If cell discharge voltage drops below 1.0 V/cell, discharge may be discontinued.			