



# Valve Regulated Lead-Acid Rechargeable Battery



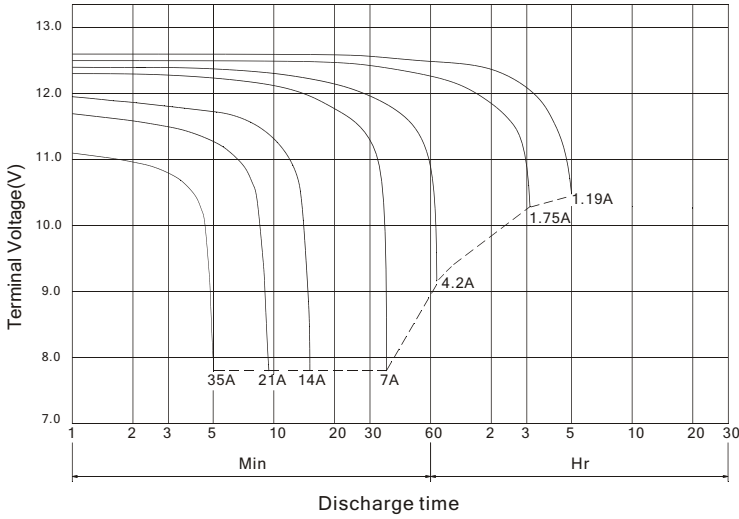
## SH7-12

The battery is constructed by plates, separators, safety valves and container. Since the electrolyte is held by a glass-mat separator and plates, the battery can be used in any direction and position without leakage.

### PERFORMANCE SPECIFICATIONS

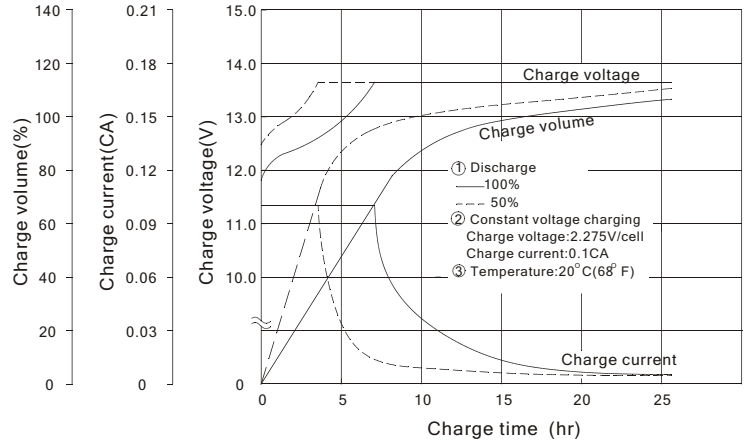
Nominal Voltage(V).....	12 volts(6cells in series)
Nominal Capacity(AH)	
20 hour rate F.V.(1.75V/cell) (350mA to 10.50volts) .....	6.30A.H.
10 hour rate F.V.(1.75V/cell) (665mA to 10.50volts) .....	6.00A.H.
1 hour rate F.V.(1.55V/cell) (4200mA to 9.30volts).....	4.20A.H.
15 Min rate F.V.(1.30V/cell) (168W to 7.80volts).....	3.50A.H.
3C rate F.V.(1.30V/cell) (21000mA to 7.80volts).....	2.80A.H.
Approximate Weight.....	2200g.(4.85lbs.)
Terminal	
Standard.....	Type T2
Optional.....	Type T1
Internal Resistance (Fully Charged Battery).....	<25m Ω
Maximum Discharge Current For 5 sec.(A).....	99A
Maximum Charge Current(A).....	2.1A
Ambient Temperature	
Charge.....	0°C(32°F)~40°C(104°F)
Discharge.....	-20°C(-4°F)~50°C(122°F)
Storage.....	-20°C(-4°F)~40°C(104°F)
Vibration test:	
Frequency: 16.7HZ	
Amplitude: 4mm	
Vibrate the battery horizontally or vertically for 60 minutes. The battery have no abnormality.	
Case.....	ABS
Dimension(mm/inch)	
Length           ±1.5mm.....	151/5.94
Width           ±1.5mm.....	65/2.56
Container Height ±1.5mm.....	94/3.70
Total Height   ±2mm.....	100/3.94
Application.....	UPS.Laboratory Equipment, Toy-Cars, Power Packs, Fishing Lights.

## SH7-12 Battery Discharge Characteristics(25°C/77°F)



## Battery Charging Characteristics

(Typical example of the charge characteristics for the standby use)

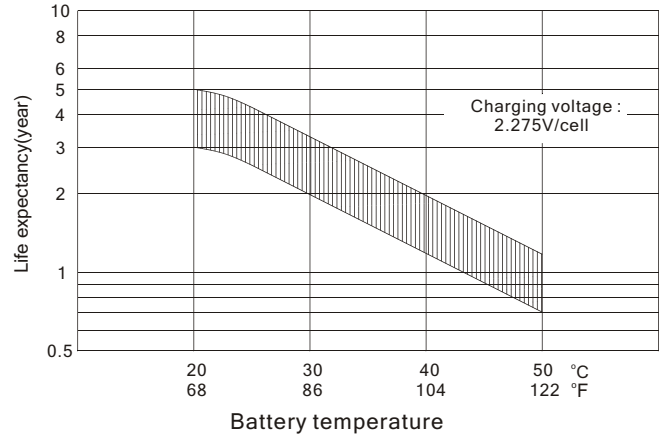


### Charging Procedure

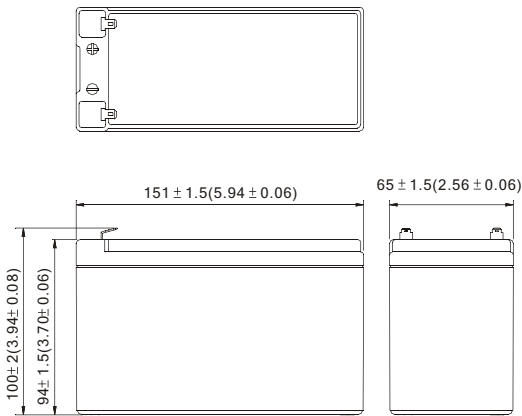
Application	Charging method	Charging Voltage at 20°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Max. charging current (CA)	Charging time 0.1CA, 20°C (h)		Temp (°C)
					100% discharge	50% discharge	
For standby power Source	Constant voltage & Constant current charging	2.25~2.30	-3	0.3	24	20	0~40 (32~104°F)
For cycle service	(with current restriction)	2.40~2.50	-4	0.3	16	10	

\*Temperature compensation of charging voltage is not needed, when using the batteries within 5°C to 35°C range.

### Effect of Temperature on Long Term Float Life



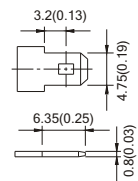
### OUTER DIMENSIONS



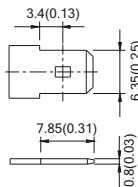
### TERMINAL TYPE

mm(inch)

#### Terminal T1



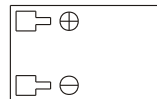
#### Terminal T2



### Constant power discharge characteristics at 25°C/77°F

Final Voltage	Discharge time							
	5Min	10Min	15Min	30Min	1Hr	3Hr	5Hr	10Hr
10.80V	274.5	196.5	150.0	87.4	49.8	18.8	12.8	5.7
10.50V	309.2	206.0	152.5	88.8	50.3	19.0	13.0	5.8
10.20V	316.5	210.5	157.1	89.8	50.7	19.2	13.1	6.0
9.90V	324.0	212.0	158.0	90.3	51.2	19.3	13.1	6.0
9.60V	337.0	213.0	159.5	90.7	51.5	19.4	13.2	6.0
7.80V	341.0	215.0	168.0	90.8	51.7	19.5	13.2	6.0

### TERMINAL POSITION



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