



# Valve Regulated Lead-Acid Rechargeable Battery



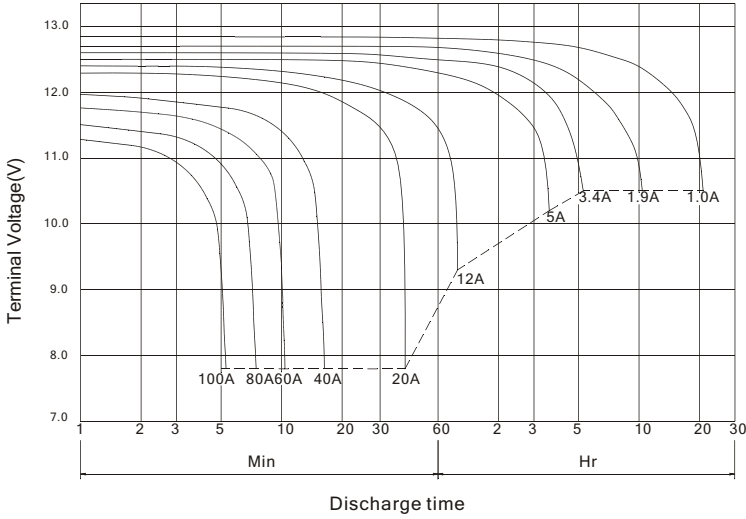
## EVP20-12

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

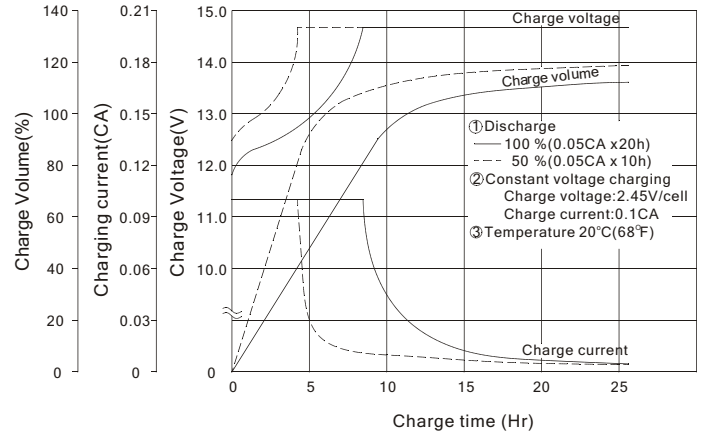
Nominal Voltage(V).....	12 volts(6cells in series)
Nominal Capacity(AH)	
20 Hour rate F.V.(1.75V/cell) (1.0A to 10.50volts) .....	20.0A.H.
5 Hour rate F.V.(1.75V/cell) (3.4A to 10.50volts) .....	17.0A.H.
30 Min rate F.V.(1.30V/cell) (25.0A to 7.80volts).....	12.5A.H.
Approximate Weight .....	6600g(14.55lbs.)
Terminal	
Standard.....	Type B1
Optional.....	Type T2,I1
Internal Resistance (Fully Charged Battery).....	<9mΩ
Maximum Discharge Current For 5 sec.(A).....	300A
Maximum Charge Current(A).....	6.0A
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.....	181/7.13
Width           ±1.5mm.....	76/2.99
Container Height ±1.5mm.....	166/6.54
Total Height   ±2mm.....	166/6.54
Application.....	Fishing Lights, Emergency Lights, Lawn Mowers, Electrical Bicycle.

## EVP20-12 Battery discharge characteristics (25°C/77°F)



## Battery Charging Characteristics

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



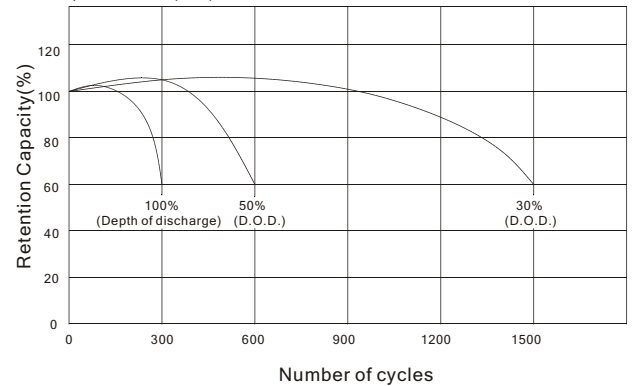
## Charging Procedure

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 (with current restriction)	2.25~2.30	-3	0.3	24	20	0~40 (32~104°F)
For cycle service		2.40~2.50	-4	0.3	16	10	

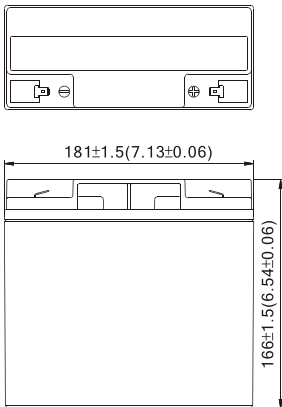
\*Temperature compensation of charging voltage is not needed, when using the batteries within 5°C to 35°C range.

## Battery Life Characteristics of Cyclic Use

Testing Conditions : Discharge Current : 1C Amp (F.V. 1.60V/cell)  
 Charging Current : 0.1C Amp  
 Charging Voltage : 120% OF Discharge Capacity  
 Ambient Temperature : 20°C (68°F)



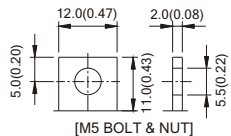
## OUTER DIMENSIONS



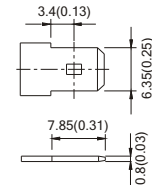
## TERMINAL TYPE

mm (inch)

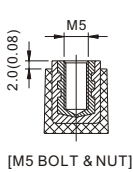
● Terminal B1



● Terminal T2



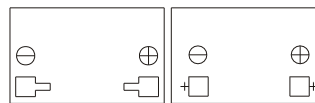
● Terminal I1



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

Final Voltage	Discharge time								
	5Min	10Min	15Min	30Min	45Min	1Hr	3Hr	5Hr	10Hr
	Battery output power (W)								
10.80V	859	609	461	271	194	156.6	62.9	40.0	22.4
10.50V	994	659	483	283	203	161.7	64.6	40.8	22.9
10.20V	1057	686	498	290	207	165.1	65.7	41.2	23.0
9.90V	1104	701	509	296	210	166.9	66.3	41.4	23.0
9.60V	1141	714	518	300	212	168.0	66.6	41.5	23.0

## TERMINAL POSITION



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