



# Valve Regulated Lead-Acid Rechargeable Battery

## EB50-12

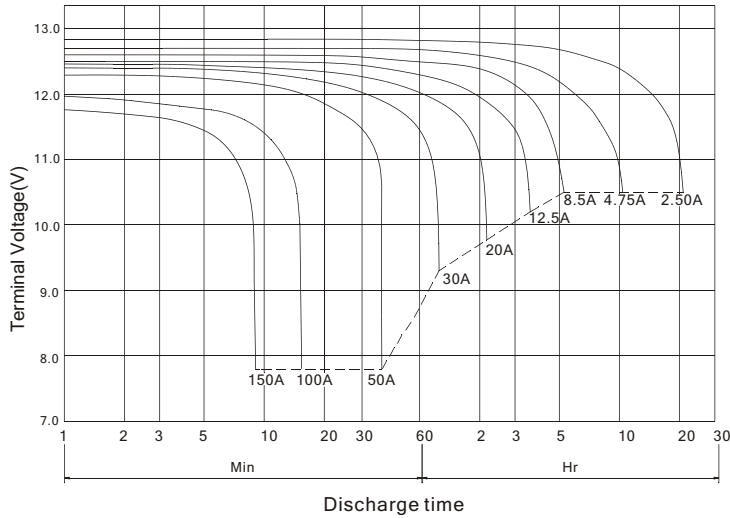


The battery is constructed by plates, separators, safety valves and container. Since the electrolyte is held by a glass-mat separator and plates, the battery can be used in any direction and position without leakage.

### PERFORMANCE SPECIFICATIONS

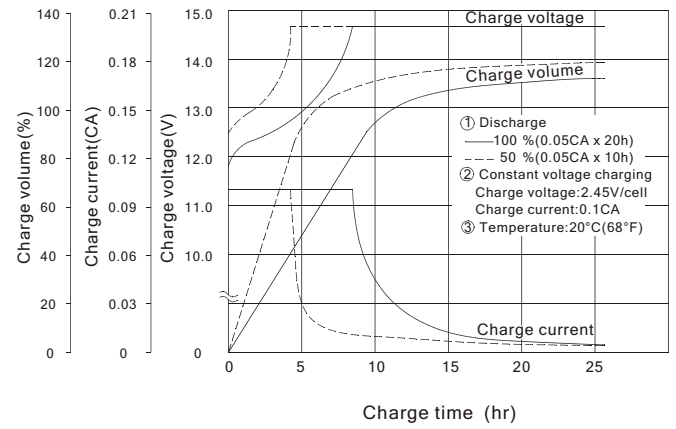
Nominal Voltage(V).....	12 volts(6cells in series)
Nominal Capacity(Ah)	
20 hour rate F.V.(1.75V/cell) (2.5A to 10.50volts) .....	50.0Ah
2 hour rate F.V.(1.60V/cell) (20A to 9.60volts) .....	40.0Ah
Approximate Weight.....	16500g(36.38lbs.)
Terminal	
Standard.....	Type I2
Hardware initial torque.....	60 in.-lbs (6.8N-m)
Internal Resistance (Fully Charged Battery).....	<6m Ω
Maximum Discharge Current For 5 sec.(A).....	750A
Maximum Charge Current(A).....	15.0A
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.....	197/7.76
Width           ±1.5mm.....	165/6.50
Container Height ±1.5mm.....	171/6.73
Total Height   ±1.5mm.....	171/6.73
Application.....	Electric Motorcycle, Wheelchairs, Lawn Mowers, Golf-Carts.
Cycle Life.....	Approx. 300 Cycles(D.O.D.100%), 500 Cycles(D.O.D.70%)

### EB50-12 Battery discharge characteristics (25°C/77°F)



### Battery Charging Characteristics

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

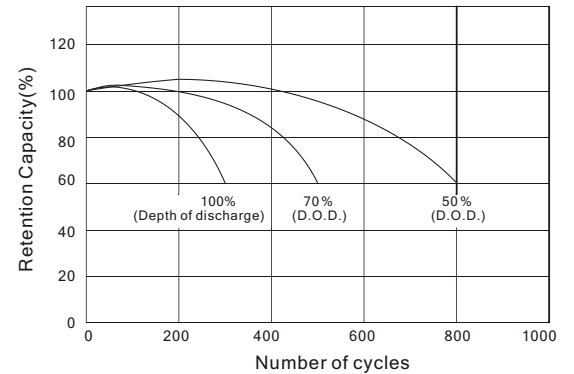


### Charging Procedure

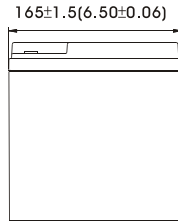
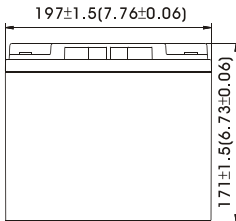
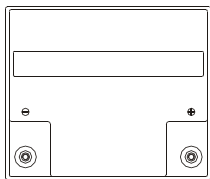
Application	Charging method	Charging Voltage at 20°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Max. charging current (CA)	Charging time 0.1CA, 20°C (h)		Temp (°C)
					100% discharge	50% discharge	
For standby power Source	Constant voltage & Constant current charging (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	

### Battery Life Characteristics of Cyclic Use

Testing Conditions : Discharge Current : 20Amp  
Final voltage : 1.60V/cell  
Charging Current : 0.1C Amp  
Charging Volume : 120% of Discharge Capacity  
Ambient Temperature : 20 °C (68 °F)

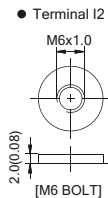


### OUTER DIMENSIONS



### TERMINAL TYPE

mm(inch)



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

Final Voltage	Discharge time									
	10Min	15Min	30Min	40Min	1Hr	2Hr	3Hr	5Hr	10Hr	20Hr
	Battery output power(W)									
10.80V	1346.7	1090.5	685.9	543.8	415.0	228.0	175.0	110.9	56.14	29.36
10.50V	1459.0	1141.7	712.2	563.5	427.0	234.0	178.3	112.3	57.00	30.00
10.20V	1511.7	1176.2	727.8	574.8	434.5	236.4	180.0	113.2	57.29	30.14
9.90V	1547.8	1203.7	738.4	582.8	440.5	238.8	181.7	114.0	57.43	30.21
9.60V	1578.5	1227.4	745.9	588.7	445.0	240.0	182.5	114.0	57.43	30.21
9.00V	1610.2	1251.9	753.4	594.6	449.7	241.2	183.6	114.0	57.43	30.21

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

Final Voltage	Discharge time									
	10Min	15Min	30Min	40Min	1Hr	2Hr	3Hr	5Hr	10Hr	20Hr
	Battery output current(Amps)									
10.80V	118.5	94.8	58.1	45.9	34.9	19.0	14.6	9.24	4.68	2.45
10.50V	128.4	99.3	60.4	47.6	35.9	19.5	14.9	9.36	4.75	2.50
10.20V	133.1	102.3	61.7	48.5	36.5	19.7	15.0	9.43	4.77	2.51
9.90V	136.3	104.7	62.6	49.2	37.0	19.9	15.1	9.50	4.79	2.52
9.60V	139.0	106.7	63.2	49.7	37.4	20.0	15.2	9.50	4.79	2.52
9.00V	141.7	108.9	63.8	50.2	37.8	20.1	15.3	9.50	4.79	2.52



**B.B. BATTERY CO., LTD.**

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