

# ECOBAT

## VRLA-AGM Battery

### ELC12-40(12V40Ah)

#### Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	40AH	
Dimensions	Length	195±2mm(7.65 inches)
	Width	165±2mm(6.50 inches)
	Container Height	170±2mm(6.70 inches)
	Total Height (with Terminal)	170±2mm(6.70 inches)
Approx Weight	Approx 12.3kg (27.2lbs)	
Terminal	M6	
Container Material	ABS	
Rated Capacity	40.0AH/2.00A	(20hr, 1.80V/cell, 25°C/77°F)
	37.6AH/3.76A	(10hr, 1.80V/cell, 25°C/77°F)
	33.2AH/6.64A	(5hr, 1.75V/cell, 25°C/77°F)
	24.2AH/2.40A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	380A (5s)	
Internal Resistance	Approx 10mΩ	
Operating Temp.Range	Discharge	-20~50°C (5 ~ 122°F)
	Charge	0~40°C (32 ~ 104°F)
	Storage	-20~40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 9.5A .Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	NP series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



#### Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply(UPS)
- ◆ Electric Power System(EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and securitysystem
- ◆ Electronic apparatus & equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto controlsystem



ISO9001 ISO14001

#### Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	6h	8h	10h	20h
1.60V	68.6	40.4	30.6	24.2	14.3	10.5	7.1	6.2	4.8	4.0	2.11
1.67V	64.8	38.3	29.4	23.5	13.8	10.1	7.0	6.0	4.8	3.9	2.09
1.70V	60.8	37.2	28.3	22.6	13.4	9.9	6.8	5.9	4.7	3.9	2.06
1.75V	57.0	35.5	27.1	21.7	13.1	9.7	6.7	5.8	4.6	3.8	2.03
1.80V	53.5	34.2	26.1	20.9	12.6	9.3	6.5	5.7	4.6	3.8	2.01

#### Constant Power Discharge (Watts/cell) at 25°C (77°F)

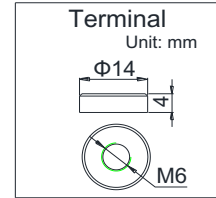
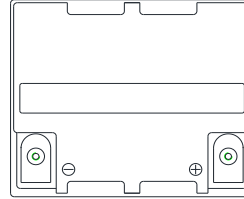
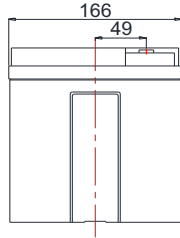
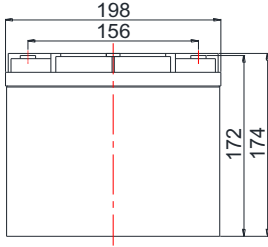
F.V/Time	15min	30min	45min	1h	2h	3h	5h	6h	8h	10h	20h
1.60V	131.1	80.2	58.1	46.5	27.0	20.0	13.6	11.9	9.4	7.8	4.2
1.67V	125.5	75.2	56.1	45.3	26.3	19.5	13.4	11.7	9.3	7.7	4.1
1.70V	116.9	73.6	54.3	43.7	25.7	19.0	13.2	11.6	9.2	7.6	4.1
1.75V	109.7	70.0	52.2	42.1	25.1	18.7	13.0	11.4	9.1	7.6	4.0
1.80V	103.0	67.2	50.4	40.7	24.2	18.1	12.8	11.2	9.0	7.5	4.0



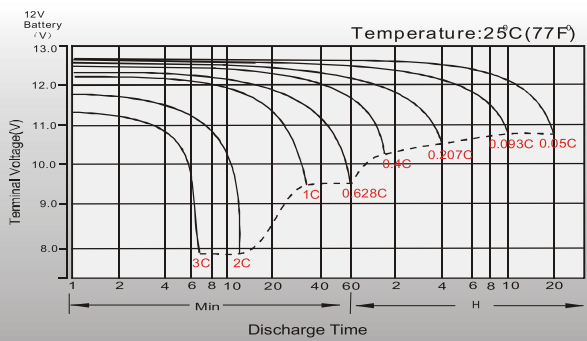
Specifications subject to change without prior notice.

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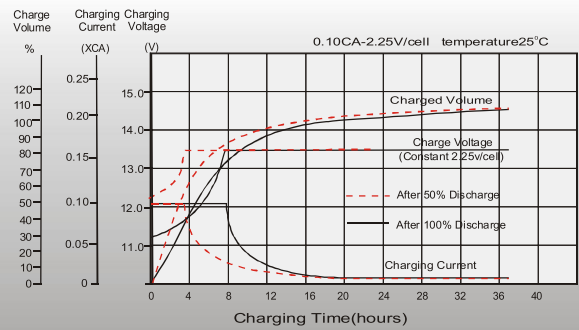
#### Dimensions



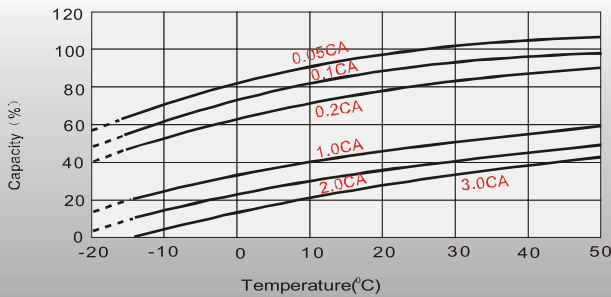
#### Discharge Characteristics



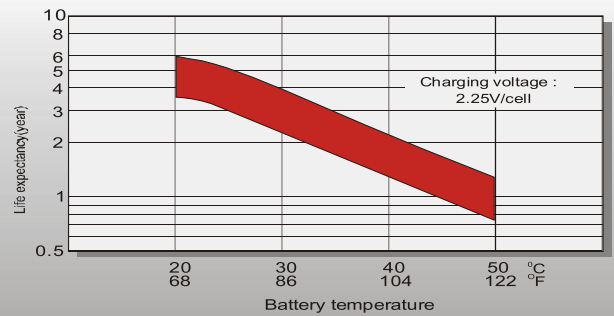
#### Float Charging Characteristics



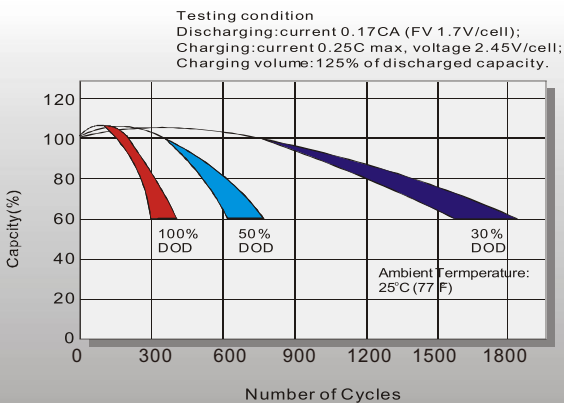
#### Temperature Effects in Relation to Battery Capacity



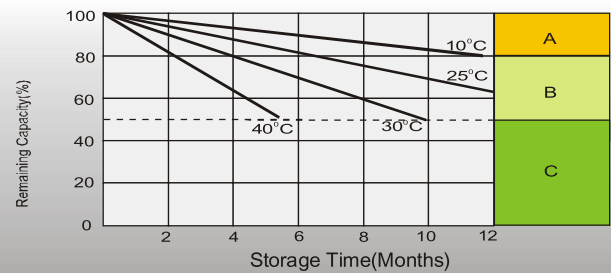
#### Effect of Temperature on Long Term Float Life



#### Cycle Life in Relation to Depth of Discharge



#### Self Discharge Characteristics



- A** No supplementary charge required.  
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplemental charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplemental charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.

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