ECOBAT

VRLA-AGM Battery

ELC12-9(12V9Ah)

Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	9AH	
Dimensions	Length	151±2mm (5.95 inches)
	Width	65±1mm (2.56 inches)
	Container Height	93.5±1mm (3.68 inches)
	Total Height (with Terminal)	99±1mm (3.90 inches)
Approx Weight	Approx 2.40kg (5.30lbs)	
Terminal	F1/F2	
Container Material	ABS	
Rated Capacity	9.0AH/0.45A	(20hr,1.80V/cell,25°C77°F)
	8.3AH/0.83A	(10hr,1.80V/cell,25°C77°F)
	7.55AH/1.51A	(5hr,1.75V/cell,25°CF77°F)
	5.67AH/5.67A	(1hr,1.60V/cell,25°C77°F)
Max. Discharge Current	108A (5s)	
Internal Resistance	Approx 26mΩ	
Operating Temp.Range	Discharge : -15～50°C (5 ～122°F)	
	Charge : 0～40°C (32 ～104°F)	
	Storage : -15～40°C (5 ～104°F)	
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 2.16A.Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage 13.5V~13.8V 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 security system
- 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	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	29.5	23.3	17.1	9.76	95.6	5.67	3.51	2.40	1.60	1.08	0.89	0.47
1.67V	28.7	22.7	16.7	9.50	6.76	5.47	3.44	2.36	1.57	1.06	0.87	0.46
1.70V	27.9	22.1	16.2	9.24	6.58	5.28	3.38	2.32	1.54	1.04	0.86	0.45
1.75V	27.1	21.4	15.8	8.79	6.39	5.08	3.32	2.27	1.51	1.02	0.84	0.45
1.80V	26.4	20.8	15.3	8.71	6.21	4.89	3.19	2.18	1.46	0.98	0.83	0.45

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

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	56.8	44.9	33	18.78	13.38	10.91	6.75	4.63	3.08	2.07	1.71	0.90
1.67V	55.3	43.7	32.1	18.28	13.02	10.54	6.63	4.54	3.03	2.04	1.68	0.88
1.70V	53.8	42.5	31.2	17.78	12.66	10.16	6.50	4.46	2.97	2.00	1.65	0.87
1.75V	52.2	41.3	30.3	17.27	12.30	9.78	6.38	4.37	2.92	1.96	1.62	0.85
1.80V	50.7	40.1	29.5	16.77	11.94	9.41	6.14	4.21	2.80	1.88	1.56	0.82

Specifications subject to change without prior notice.

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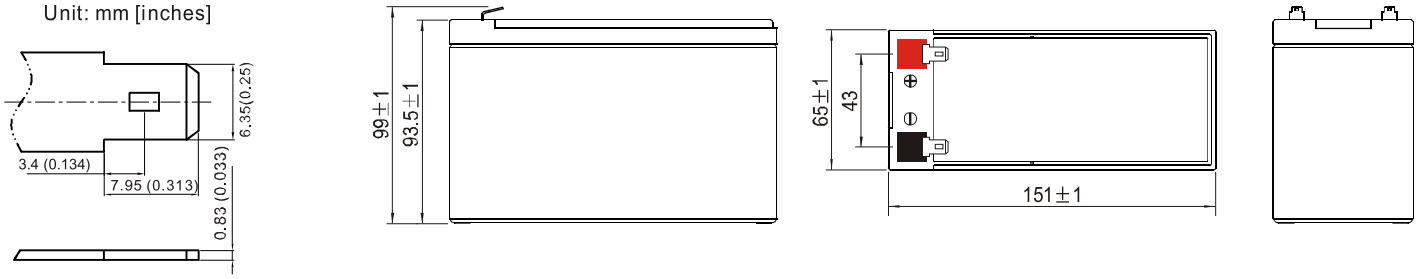
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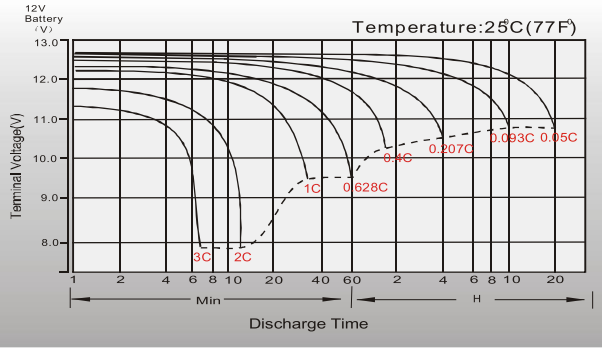
Dimensions

■ F2 Terminal

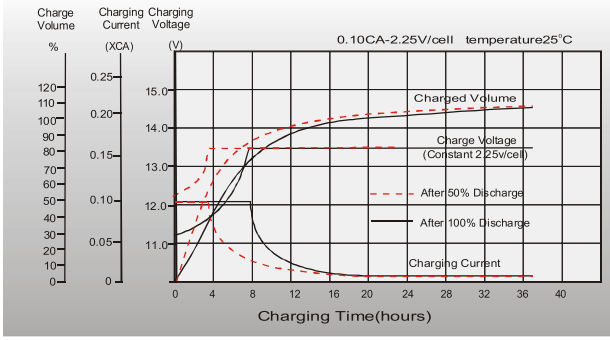
Unit: mm [inches]



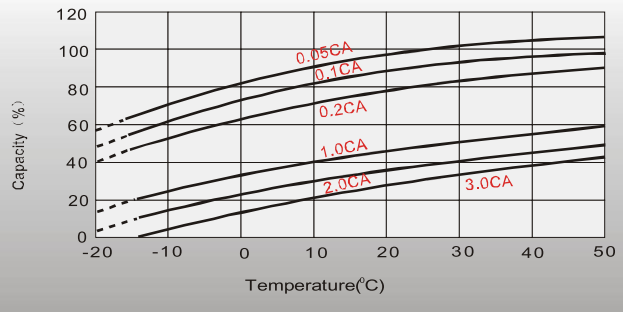
Discharge Characteristics



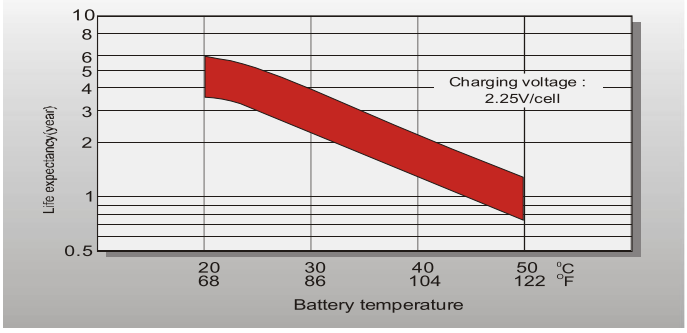
Float Charging Characteristics



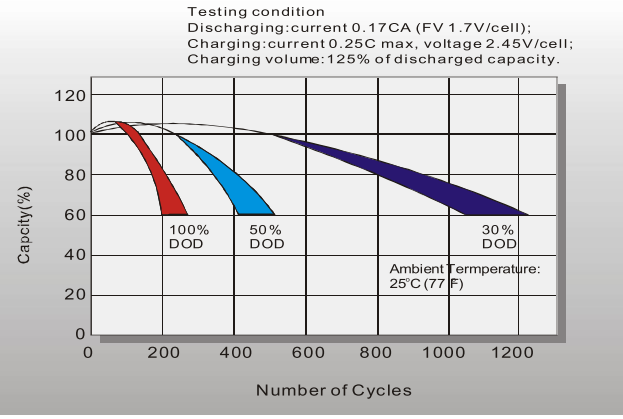
Temperature Effects in Relation to Battery Capacity



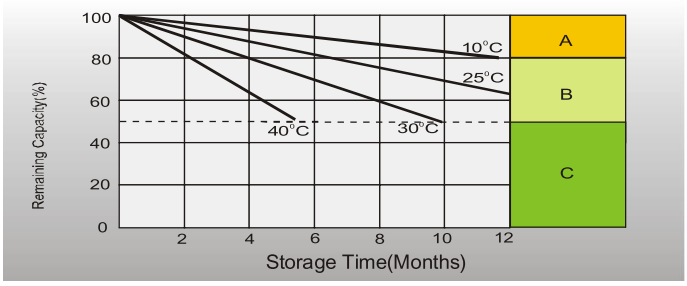
Effect of Temperature on Long Term Float Life



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 — Supplementary charge required before use.Optional charging way as below:
1.Charged for above 3 days at limted current 0.25CA and constant volatge 2.25V/cell.
2.Charged for above 20 hours at limted current 0.25CA and constant volatge 2.45V/cell.
3.Charged for 8~10 hours at limited current 0.05CA.

C — Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

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