# EV12-110

12V110Ah / 10hr rate



#### Introduction

Genergy EV AGM Series is designed for tough applications and repeated deep discharging. It is superior with the long cycle life, large current discharge capability, high reliability and safety. The range is the definitive choice for golf cart, electric medical equipment, automated guided vehicles (AGV), aerial lifts, floor cleaning equipment, robotics applications.

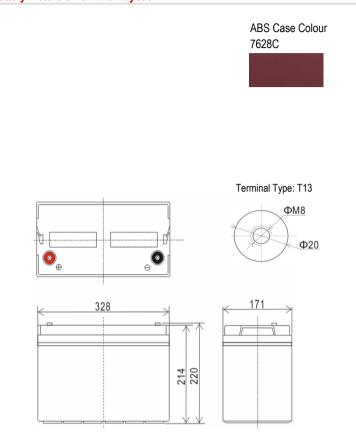
### **Battery Features**

- Extra long cycle life and resistance to mechanical stress and the elements all in one battery.
- Maintenance-free
- O Very high purity lead (purity rate 99.994%)
- Traction heavy duty grid design gives consistent active material adhesion and corrosion resistance.
- Fully tank formed plates for evenly formed and capacity matched plates.
- O Low impurity electrolyte
- O Recognized gas recombination efficiency greater than 99.9%
- Flame arresting pressure regulated safety sealing valves for safety.
- Low self-discharge
- Classified as non-spillable and not restricted for transportation by > Air (IATA/ICAO provision 67)
  - > Surface (DOT-CFR-HMR49)
  - > Water (per IMDG amendment 27)

#### **Electrical Specification**

Design Life Cycles @ 80% D.O.D. (25°C)         450 Cycles           Nominal Capacity @ 25°C /77°F         100 hour rate 1.32A to 1.75Vpc         132 Ah           10 hour rate 11 A to 1.75Vpc         110 Ah           5 hour rate 19.6 A to 1.75Vpc         98 Ah           3 hour rate 29.6A to 1.70Vpc         89 Ah           1 hour rate 66 A to 1.60Vpc         66 Ah           Minutes of Discharge         25A to 10.5V         235         56A to 10.2V         80           75A to 10.2V         35         56A to 10.2V         45           100A to 10.2V         35         56A to 10.2V         45           100A to 10.2V         35         56A to 10.2V         45           100A to 10.2V         35         600 A (5°)         475           Internal Resistance         (Fully charged battery @ 25°C /77°F         7 mΩ         7 mΩ           Max. Discharge Current @ 25°C /77°F         600 A (5°)         600 A (5°)           Charge Methods: Constant voltage charge @ 25°C /77°F         41.7 ~ 14.9V         47.5 A           Standby Use         13.6 - 13.8V         47.5 A           Operating Temperature Range         -20 ~ 60°C         20 ~ 60°C           Notes: battery voltage must be adjusted according to temperature.         17°C /70°F)           Please refer to	Electrical Specification							
100 hour rate 1.32A to 1.75Vpc	Design	Design Life Cycles @ 80% D.O.D. (25°C)						
10 hour rate 11 A to 1.75Vpc								
5 hour rate 19.6 A to 1.75Vpc	100	hour rate	1.32A to 1.75Vpc		132 Ah			
3 hour rate 29.6A to 1.70Vpc	10	hour rate	11 A to 1.75Vpc.		110 Ah			
1 hour rate 66 A to 1.60Vpc	5	hour rate	19.6 A to 1.75Vpc	<b>)</b>	98 Ah			
Minutes of Discharge         25A to 10.5V 235       56A to 10.2V 80         75A to 10.2V 56       85A to 10.2V 45         100A to 10.2V 35       Cranking Amps         0°C /32°F 570       -18°C /0°F 475         Internal Resistance       (Fully charged battery @ 25°C /77°F ) 7 mΩ         Max. Discharge Current @ 25°C /77°F 600 A (5S)         Charge Methods: Constant voltage charge @ 25°C /77°F 600 A (5S)         Charge Methods: Constant voltage charge @ 25°C /77°F 44.9V         Max. Current	3	hour rate	29.6A to 1.70Vpc		89 Ah			
25A to 10.5V 235 56A to 10.2V 80 75A to 10.2V 56 85A to 10.2V 45 100A to 10.2V 35  Cranking Amps 0°C /32°F 570 -18°C /0°F 475  Internal Resistance (Fully charged battery @ 25°C /77°F ) 7 mΩ  Max. Discharge Current @ 25°C /77°F 600 A (5S)  Charge Methods: Constant voltage charge @ 25°C /77°F Cycle Use 14.7 ~ 14.9V Max. Current 27.5 A Standby Use	1	hour rate	66 A to 1.60Vpc.		66 Ah			
75A to 10.2V 56 85A to 10.2V 45  100A to 10.2V 35  Cranking Amps 0°C /32°F 570 -18°C /0°F 475  Internal Resistance (Fully charged battery @ 25°C /77°F ) 7 mΩ  Max. Discharge Current @ 25°C /77°F 600 A (5S)  Charge Methods: Constant voltage charge @ 25°C /77°F  Cycle Use 14.7 ~ 14.9V  Max. Current 27.5 A  Standby Use 13.6 - 13.8V  Operating Temperature Range20 ~ 60°C  Notes: battery voltage must be adjusted according to temperature.  Please refer to our recommendation.  Self-Discharge	Minutes of Discharge							
Cranking Amps 0°C /32°F570 -18°C /0°F475 Internal Resistance (Fully charged battery @ 25°C /77°F )7 mΩ  Max. Discharge Current @ 25°C /77°F600 A (5S) Charge Methods: Constant voltage charge @ 25°C /77°F Cycle Use14.7 ~ 14.9V Max. Current27.5 A Standby Use13.6 - 13.8V Operating Temperature Range20 ~ 60°C Notes: battery voltage must be adjusted according to temperature. Please refer to our recommendation. Self-Discharge	25A to	10.5V	. 235	56A to 10.2V .	80			
Cranking Amps 0°C /32°F	75A to	10.2V	. 56	85A to 10.2V .	45			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	100A to 10.2V 35							
Internal Resistance (Fully charged battery @ 25°C /77°F)	Cranking Amps							
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	0°C /32	2°F	. 570	-18°C /0°F	475			
Max. Discharge Current @ 25°C /77°F	Internal Resistance							
Charge Methods: Constant voltage charge @ 25°C /77°F  Cycle Use	(Fully charged battery @ 25°C /77°F)							
Cycle Use	Max. Discharge Current @ 25°C /77°F 600 A (5S)							
Max. Current	Charge Methods: Constant voltage charge @ 25°C /77°F							
Standby Use	C	Cycle Use			14.7 ~ 14.9V			
Operating Temperature Range -20 ~ 60°C Notes: battery voltage must be adjusted according to temperature. Please refer to our recommendation.  Self-Discharge	N	lax. Currer	nt		27.5 A			
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Please refer to our recommendation. Self-Discharge	Operat	-20 ~ 60°C						
Self-Discharge	Notes: battery voltage must be adjusted according to temperature.							
· ·	Please refer to our recommendation.							
3% of capacity declined per month @ 25°C (77°F).	Self-Discharge							

**Battery Picture & Terminal Layout** 



## **Dimension & Weight**

	Weight			
Length	Width	Height	Total Height	(± 2%)
328 mm	171 mm	214 mm	220 mm	35.5 kg
12.9 inch	6.7 inch	8.4 inch	8.7 inch	78.3 lbs

### **Typical Applications**

- O Golf Cart
- O Tour Bus
- O Electric Medical Equipments
- O Aerial and Fork Lifts
- Golf Trolley
- O Sweeper
- O Floor Cleaning Machines
- O Marine and RV

## Cetificates













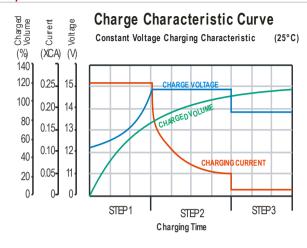


# EV12-110

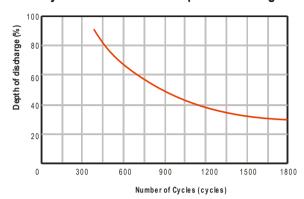
12V110Ah / 10hr rate



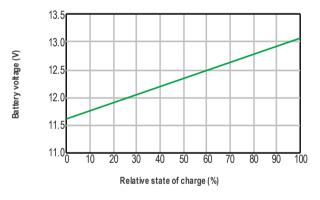
## Graphs



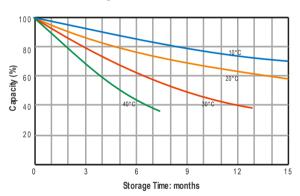
# Cycle Service Life V.S. Depth Of Discharge



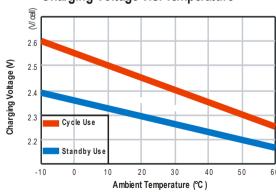
# OCV V.S. State of Charge (20°C)



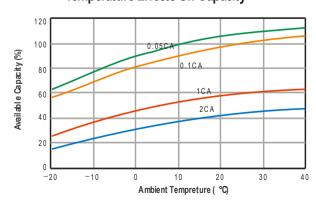
# **Self-Discharge Characteristic**



# Charging Voltage V.S. Temperature



## **Temperature Effects On Capacity**



 $\label{thm:control} \textit{Subject to revision without notice. Please contact our sales \textit{representatives for latest version.} \\$ 

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