

### Deep Cycle GFM Battery UPS systems/Solar systems/Renewable systems/Security systems/Emergency Lighting systems/UPS systems/Backup Power Systems Marine Systems and other applications.

GPGATE® GFM cell batteries outperform traditional AGM and Gel batteries and are a resilient battery solution for UPS systems, Solar systems, Renewable systems, Security systems, Emergency Lighting systems, EPS systems, Backup Power Systems, Marine Systems, and other applications. The batteries exceed rigorous safety tests and incorporate design features that adhere to longer floating life and high floating consistency. Its modular and horizontal structure design ensures convenient installation and maintenance, saving space effectively.

MECHANICAL SPECIFICATIONS		
Industry Reference	ISO9001	
Length A (in/mm)	12.1	308
Width B (in/mm)	6.7	170
Height C (in/mm)	8.3	210
Total Height D (in/mm)	8.4	214
Weight (lbs/kgs)	26.8	59.1
Terminal *	F8/F14	
Technology	AGM VRLA	

ELECTRICAL SPECIFICATIONS		
Voltage (V)	12	
Internal Resistance (mΩ)	6	
Short Circuit (A) (20°C / 68°F)	720	
Self-Discharge (20°C / 68°F)	2-3% per month	
Charge Temperature	Min: -10°C (14°F)   Max: 50°C (122°F)	
Storage Temperature	Min: -10°C (14°F)   Max: 50°C (122°F)	
Amp Hours (AH)	10 HR	90
	20 HR	99

**NOTE 1:** Dimensions have a ±2 mm (0.08 in) tolerance. Weights may vary.

**NOTE 2:** Refer to terminal guide on website for torque values.

**NOTE 3:** Extra considerations must be given when designing systems for use at maximum temperatures.

**NOTE 4:** Internal Resistance is approximate.

### FEATURES

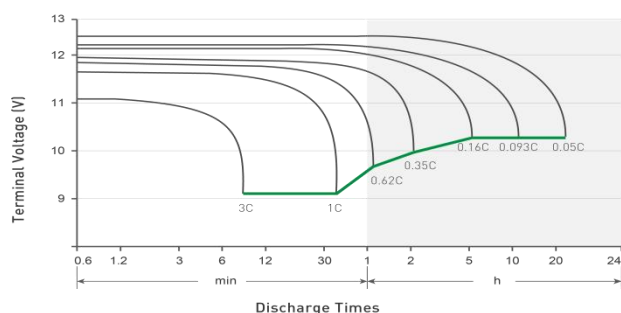
1.The deep cycle battery can be recharged 100% of its capacity when it is recharged in time after deep discharge, which can meet the needs of high frequency and deep discharge, so its use range is wider than that of lead-acid batteries.

2.The deep cycle battery has small self-discharge, good deep discharge performance, strong charge acceptance, small potential difference between upper and lower, and large electric capacity. Significant improvements have been made in low temperature start-up capability, charge retention capability, electrolyte retention capability, cycle durability, vibration resistance, and temperature change resistance.

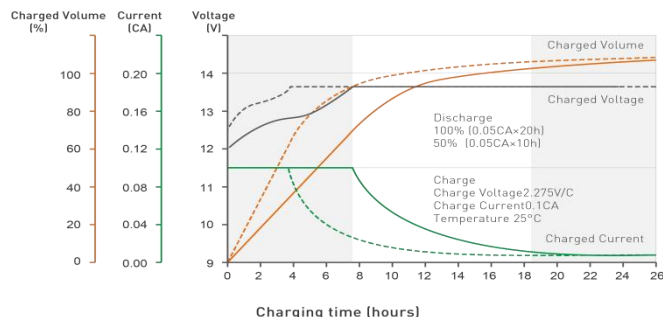
**Compliant Standards:**GB/T 22199-2008 、 GB/T18332.1-2009 ; Passed ISO9001、 ISO14001、 ISO18001、 CE certificate

## BATTERY CHARACTERISTICS

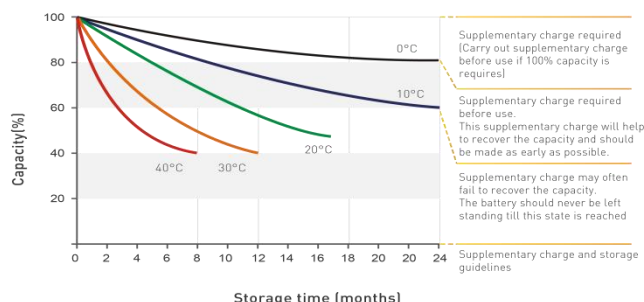
### Charge Characteristics



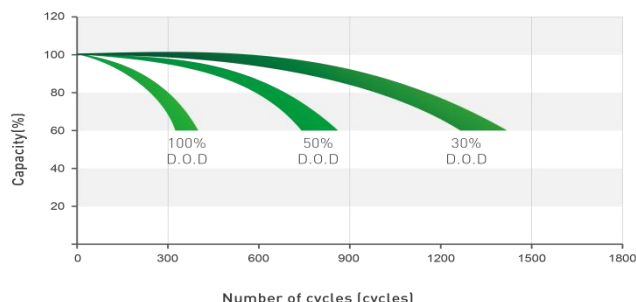
### Charging Characteristics(25°C)



### Self-Discharge Characteristics



### Cycle Life On D.O.D(25°C)



## NOTES

1. Due to self-discharge characteristics of lead-acid battery technologies, batteries should be top charged within 6 months of storage to ensure optimum performance, prevent sulphation and permanent capacity loss.
2. Charge profile recommendations correspond to battery voltages at 25°C (77°F). For temperatures below, adjust +5mVPC/°C (+3mVPC/°F). Temperatures above, adjust -5mVPC/°C (-3mVPC/°F). Temperature compensated charging helps ensure optimum battery runtime and life performance.
3. Charge profile recommendations depend on application and charger. IUI (or IUI with Pulse) is appropriate for applications that require frequent and deep discharges. IUU is appropriate for applications that are on standby and cycled less frequently.
4. IUI with Pulse algorithm uses a pulse termination criterion. The finish current is pulsed on and off in order to keep the battery voltage at a minimum while still reaching target overcharge. If average VPC exceeds U2 and the charger output has been on for more than 30 seconds, the output is shut off until VPC falls to U3.
5. IUI Charge Profile (if applicable), may have a continuous float phase added (2.27VPC).

