

## High Rate Discharge Battery Aerial drones/Agricultural plant protection drones/Emergency start power supplies/Model aircraft/power tools

GPGATE® High rate batteries outperform traditional batteries and are a resilient battery solution for aerial drones, agricultural plant protection drones, emergency start power supplies, model aircraft, power tools. The batteries exceed rigorous safety tests and incorporate design features that adhere to discharge performance, wide operating temperatures and long duration cyclic current draws.

MECHANICAL SPECIFICATIONS		
Industry Reference	ISO9001	
Length A (in/mm)	15.9	403
Width B (in/mm)	6.9	174
Height C (in/mm)	8.2	209
Total Height D (in/mm)	9.4	238
Weight (lbs/kgs)	37	81.6
Terminal *	F9/F15	
Technology	AGM VRLA	

ELECTRICAL SPECIFICATIONS		
Voltage (V)	12	
Internal Resistance (mΩ)	5.3	
Short Circuit (A) (20°C / 68°F)	960	
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	120
	20 HR	130

**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

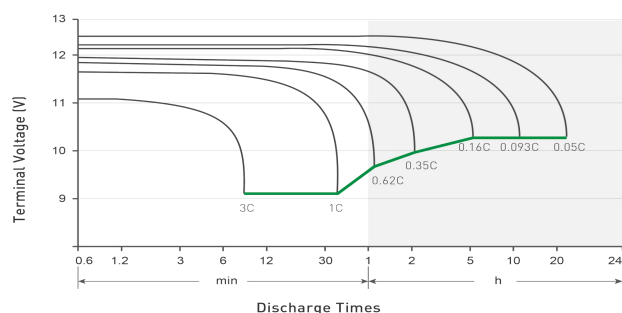
1. It has the characteristics of excellent high-current discharge performance, sufficient explosive power, high discharge platform, and good cycle life.
2. The discharge rate can meet the pulse 150C, 45C continuous discharge, 5C fast charging capability.
3. With high energy density, the lamination process is adopted, because of its small internal resistance, it is more conducive to rate charge and discharge, and high-efficiency output performance.
4. Supply higher discharge rate, up to 45C, better temperature stability during discharge, controlled within 65 degrees Celsius to prevent overheating and damage.
5. With the characteristics of ultra-thin, the battery is small in size and extremely light in weight, and can be made into special-shaped batteries of various shapes and capacities, with a thickness of 0.45mm.

## Compliant Standards:

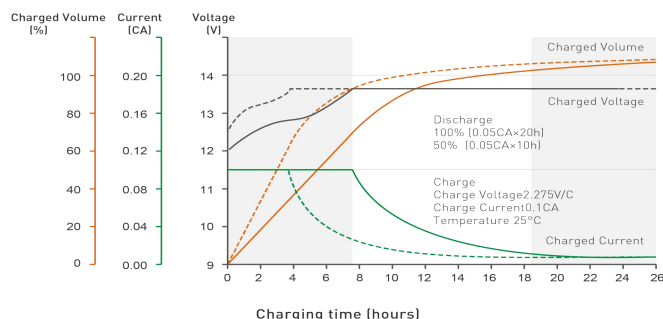
GB/T 22199-2008 、 GB/T18332.1-2009 ; Passed ISO9001、 ISO14001、 ISO18001、 CE certificate

## BATTERY CHARACTERISTICS

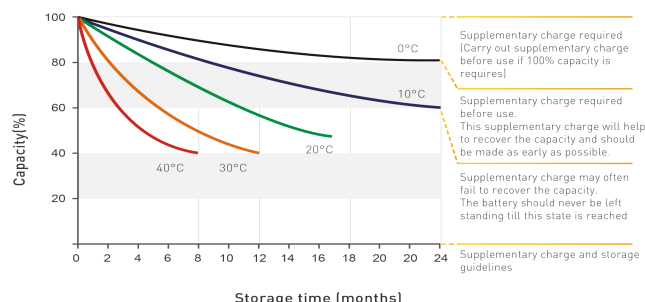
### Charge Characteristics



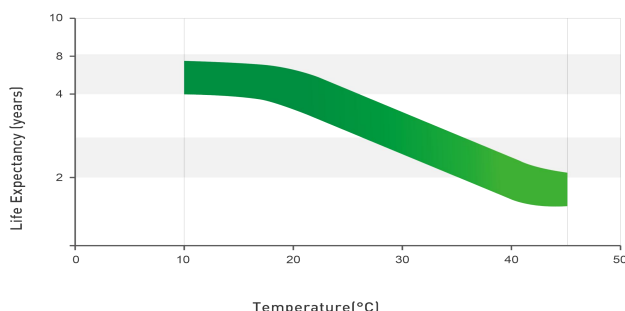
### Charging Characteristics(25°C)



### Self-Discharge Characteristics



### Effect Of Temperature On Long Life



## 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).

