

General features for MPG (GEL) battery

- * Nanometer SiO₂ and H₂SO₄ gelled electrolyte technology for gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- * Computer designed lead, calcium tin alloy grid for high power density.
- * Not restricted for air transport-complies with IATA/ICAO Special Provision A67.UL-recognized component.
- * Long service life, float or cyclic applications, specially suitable for motive power applications, such as golf trailer, srubber, folklift, etc.
- * Maintenance-free operation. Lower self discharge.
- * Case and cover available in both standard and flame retardant ABS.
- * The design life to 2V GEL battery is 20years, the deep discharge cycles increased over 50% as compared with the AGM battery.



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MPG2-2000 (2V2000Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		2000 Ah
Dimensions (±2mm)	Total Height (Include top cover)	382 mm (15.0 inches)
	Height	344 mm (13.5 inches)
	Length	491 mm (19.3 inches)
	Width	351 mm (13.8 inches)
Weight Approx (±3%)		135.5 Kg (298.7 lbs)

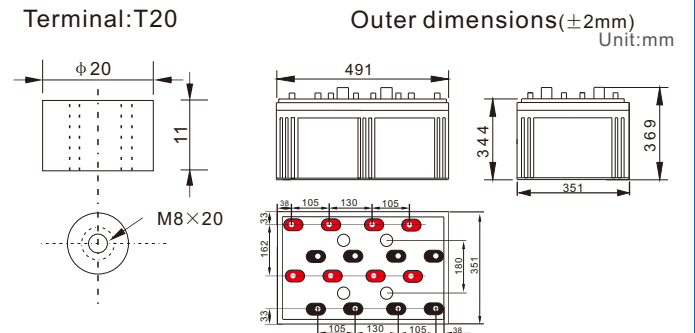
Battery picture and construction



Battery Construction

Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Gelled acid	PVC	Rubber	Copper

Outer dimension and terminal



(Total height 382mm includes the top cover)

Characteristics

Capacity 25°C (77°F)	10 hour rate(200A, 1.8V) 5 hour rate(320A, 1.75V) 1 hour rate(1200 A, 1.6V)	2000Ah 1600Ah 1200Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.20mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	102% 100% 85% 65%
Remaining capacity Self-Discharge At 25°C(77°F)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Terminal type	T20	
Max. Discharge current 25°C/(77°F)	11000A (5Seconds)	
Nominal operating temperature	25°C ±5°C(77°F ±9°F)	
Operating Temperature Range	Discharge Charge Storage	-20°C ~60°C (-4°F ~140°F) -10°C ~60°C (14°F ~140°F) -20°C ~60°C (-4°F ~140°F)
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use Standby use	Initial Charging Current less than 500 A Voltage 2.42-2.50V Temperature compensation:-5mV/°C Voltage 2.25-2.30V Temperature compensation:-3mV/°C

Constant current discharge (25°C , 77 °F)

Unit:A

Constant power discharge (25°C , 77 °F)

Unit:watts

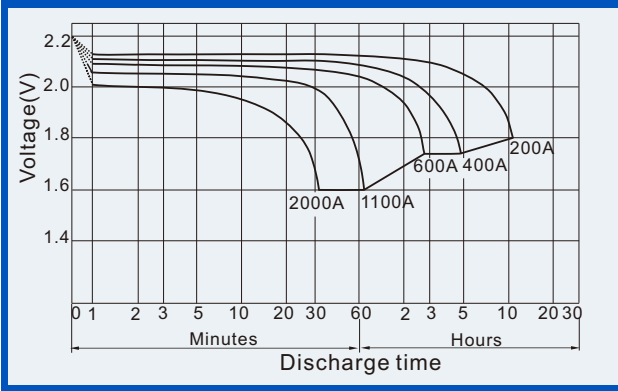
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	A	6406	4220	3402	2280	1200	700.0	514.0	400.0	330.0	234.0	210.0	113
	W	11018	7512	6079	4086	2160	1281	953.5	750.0	625.4	446.9	404.3	220
1.70V	A	6204	3808	3204	2180	1128	668.0	500.0	390.0	324.0	228.0	206.0	110.0
	W	11043	7087	5975	4079	2126	1283	965.0	755.8	629.5	444.6	403.3	215.1
1.75V	A	6002	3406	2802	2040	1092	652.0	488.0	384.0	320.0	226.0	202.0	110.0
	W	10924	6458	5329	3913	2108	1260	947.7	748.8	625.3	443.0	398.3	216.7
1.80V	A	5784	3210	2604	1880	1056	636.0	476.0	378.0	312.0	220.0	200.0	108.0
	W	10816	6170	5000	3630	2049	1241	935.3	743.9	614.6	434.5	396.2	214.4
1.85V	A	5590	3008	2404	1680	1020	620.0	460.0	368.0	304.0	214.0	190.0	102.0
	W	10565	5805	4664	3276	1999	1221	910.8	730.5	604.7	427.1	382.3	206.0

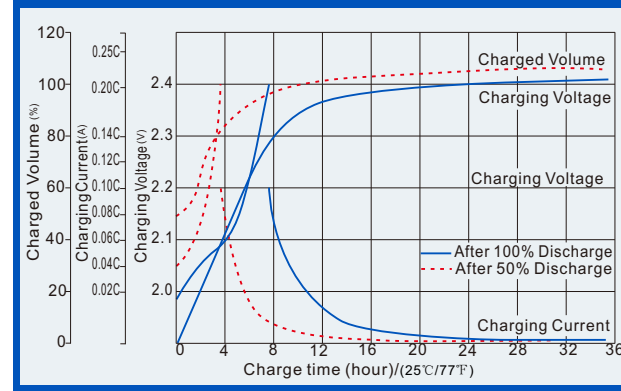
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

GEL Battery (GEL technology) Maintenance-free Sealed Lead Gel Rechargeable Battery

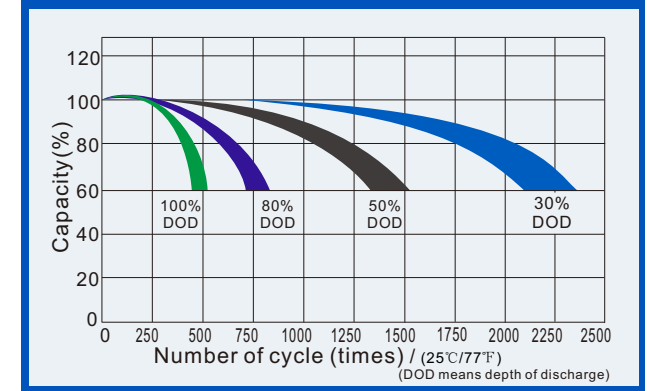
Discharge characteristics (25°C, 77°F)



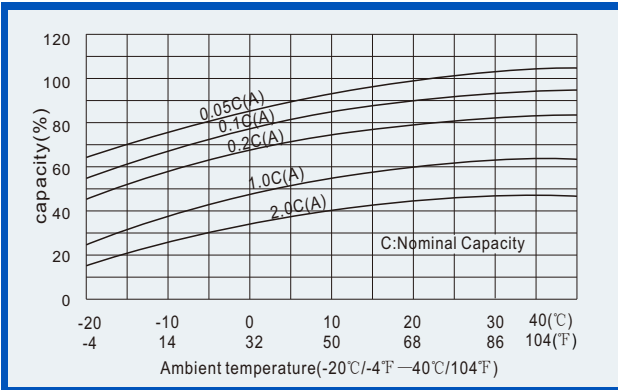
Charge characteristics (25°C, 77°F)



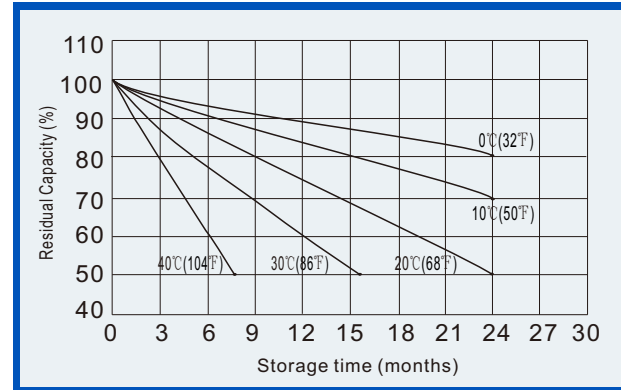
Life characteristics of Cyclic Use (25°C, 77°F)



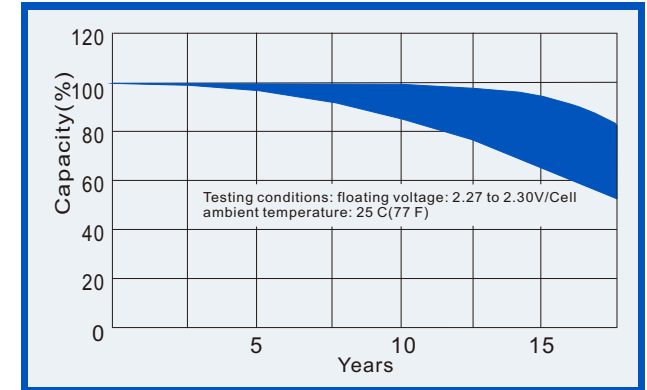
Effect of Temperature on capacity



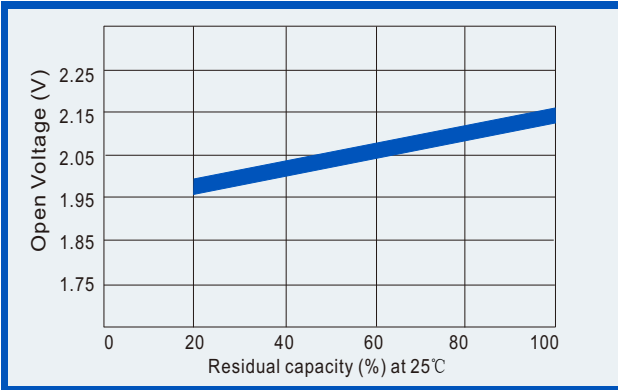
Self-discharge characteristics



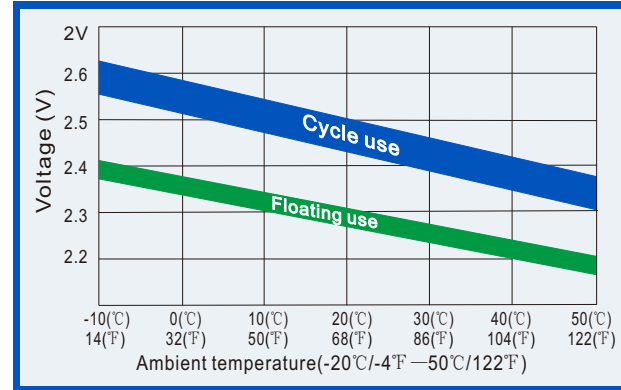
Life Characteristics of float service (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

