

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, sruubber, 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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MPG2-200 (2V200Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		200 Ah
Dimensions (±2mm)	Total Height (Include top cover)	364 mm (14.3 inches)
	Height	330 mm (13.0 inches)
	Length	172 mm (6.77 inches)
	Width	111 mm (4.37 inches)
Weight Approx (±3%)		13.6 Kg (30.0 lbs)

Battery picture and construction

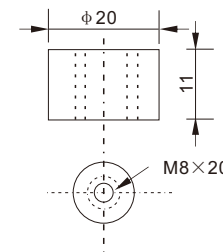


Battery Construction

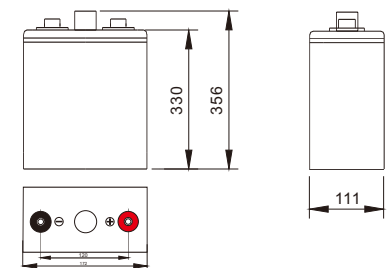
Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Gelled acid	PVC	Rubber	Copper

Outer dimension and terminal

Terminal: T20



Outer dimensions (±2mm)
Unit:mm



(Total height 364mm includes the top cover)

Characteristics

Capacity 25°C(77°F)	10 hour rate(20A, 1.8V) 5 hour rate(31.2A, 1.75V) 1 hour rate(120 A, 1.6V)	200Ah 156Ah 120Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.9mΩ
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)	1500A (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 50 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

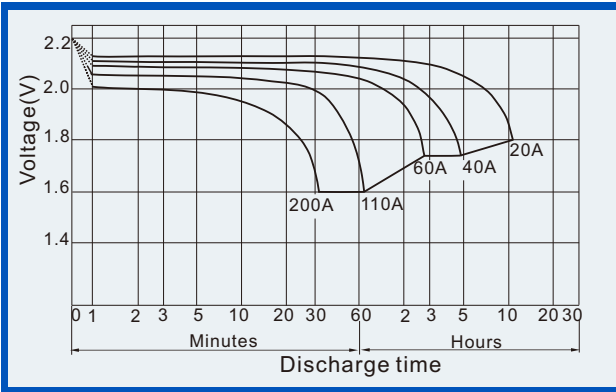
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	A	641	422	340	228	120	70.0	51.4	40.0	33.0	23.4	11
	W	1102	751	608	409	216	128	95.3	75.0	62.5	44.7	22
1.70V	A	620	381	320	218	113	66.8	50.0	39.0	32.4	22.8	11.0
	W	1104	709	598	408	213	128	96.5	75.6	63.0	44.5	21.5
1.75V	A	600	341	280	204	109	65.2	48.8	38.4	32.0	22.6	11.0
	W	1092	646	533	391	211	126	94.8	74.9	62.5	44.3	21.7
1.80V	A	578	321	260	188	106	63.6	47.6	37.8	31.2	22.0	10.8
	W	1082	617	500	363	205	124	93.5	74.4	61.5	43.5	21.4
1.85V	A	559	301	240	168	102	62.0	46.0	36.8	30.4	21.4	10.2
	W	1057	581	466	328	200	122	91.1	73.0	60.5	42.7	20.6

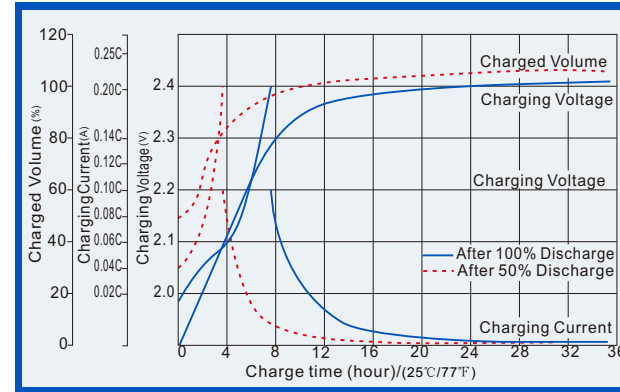
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

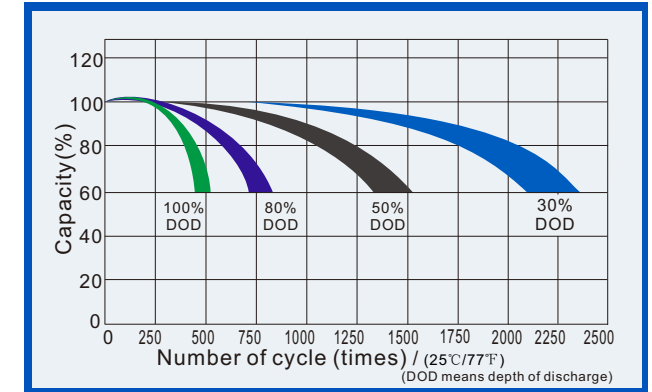
Discharge characteristics (25°C, 77°F)



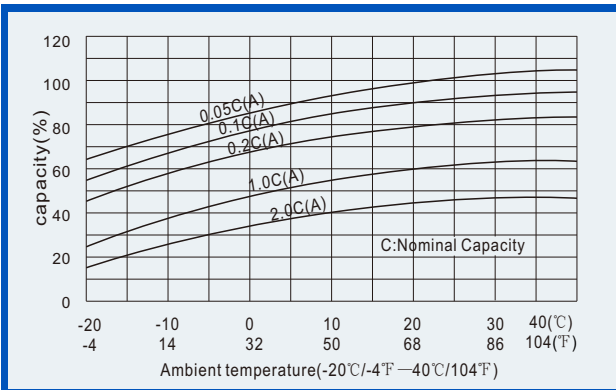
Charge characteristics (25°C, 77°F)



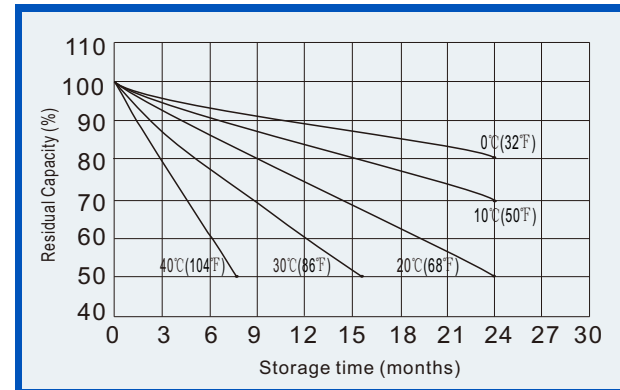
Life characteristics of Cyclic Use (25°C, 77°F)



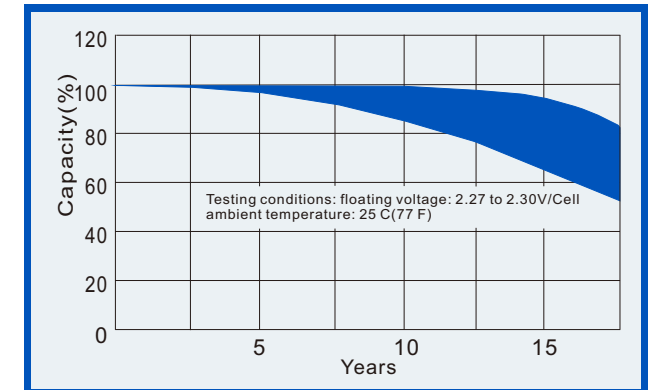
Effect of Temperature on capacity



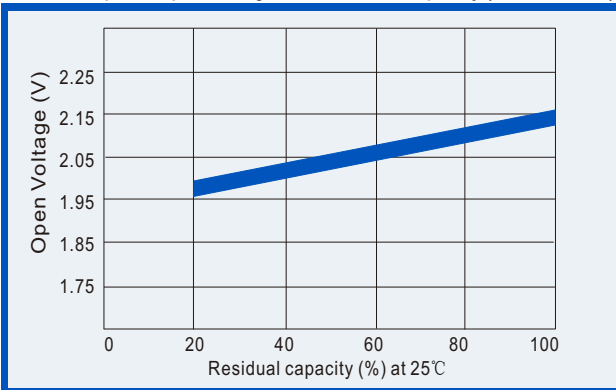
Self-discharge characteristics



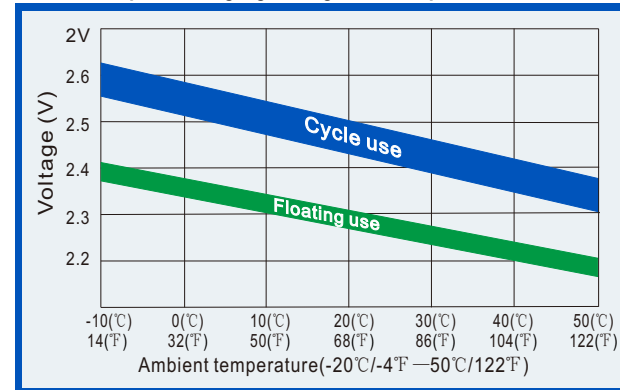
Life Characteristics of float service (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

