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 12V GEL battery is 15years ,the deep discharge cycles increased over 50% as compared with the AGM battery.

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MPG12-100 (12V100Ah)

Specifications

Nominal Voltage			12V
Rated capacity (20 hour rate)			100 Ah
Dimensions (±2mm)	Total Height	T16	218mm (8.58inches)
		T10	235mm (9.25inches)
	Height		213 mm (8.39 inches)
	Length		331 mm (13.0 inches)
	Width		173 mm (6.81inches)
Weight Approx (±3%)			32.5Kg (71.6lbs)

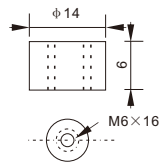
Battery picture and construction

Battery Construction

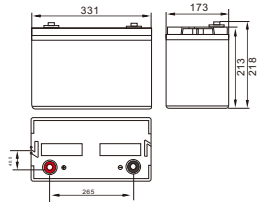
Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Gelled acid	PVC	Rubber	Copper

Outer dimension and terminal

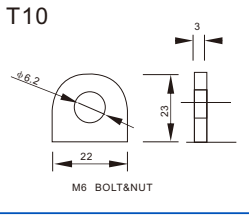
T16

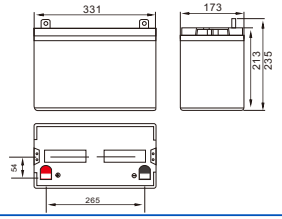


Outer dimensions(±2mm) Unit:mm



T10





Characteristics

Capacity 25℃(77℉)	20 hour rate(5.0 A,10.5V) 10 hour rate(9.3A,10.5V) 5 hour rate(16A,10.5V) 1 hour rate(60A,9.6V)	100Ah 93Ah 80Ah 60Ah
Internal Resistance	Full charged battery at 25℃(77℉)	Appox 5.1mΩ
Capacity affected by Temperature (20hour rate)	40℃ (104℉) 25℃ (77℉) 0℃ (32℉) -15℃ (5℉)	102% 100% 85% 65%
Remaining capaicty Self-Discharge At 25℃(77℉)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Terminal type		T16 (Option T10)
Max. Discharge current 25℃/(77℉)		800A (5Seconds)
Nominal operating temperature		25℃ ±5℃(77℉ ±9℉)
Operating Temperature Range	Discharge	-20℃ ~55℃ (-4℉ ~131℉)
	Charge	-10℃ ~55℃ (14℉ ~131℉)
	Storage	-20℃ ~55℃ (-4℉ ~131℉)
Charge methods (constant Voltage) At 25℃(77℉)	Cycle use	Initial Charging Current less than 25 A Voltage 14.5-15.0V Temperature compensation:-20mV/℃
	Standby use	Voltage 13.5-13.8V Temperature compensation:-30mV/℃

Constant current discharge (25℃ , 77 ℉)

Unit:A

Constant power discharge (25℃ , 77 ℉)

Unit:watts

Constant Current(Amp) and Constant Power(Watt) Discharge Table

Time		10min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	200.0	110.0	60.0	35.0	25.8	20.0	16.5	11.4	9.5	5.2
	W	2120	1172	642	378	281	220	182.0	126.5	105.5	58.2
10.20V	A	190.0	111.0	56.4	33.4	25.0	19.5	16.2	11.3	9.4	5.1
	W	2090	1227	626	374	283	221	184	128	107	57
10.50V	A	180.0	102.0	55.0	32.6	24.4	19.2	16.0	11.1	9.3	5.0
	W	2016	1148	622	372	279	221	184	128	107	58
10.80V	A	170.0	94.0	53.0	31.8	23.8	18.9	15.6	10.9	9.2	4.9
	W	1930	1072	607	367	276	220	182	127	107	57
11.10V	A	160.0	84.0	50.0	31.0	23.0	18.3	15.2	10.6	8.8	4.8
	W	1840	970	580	363	270	216	179	125	103	56

(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 Rechageable Battery

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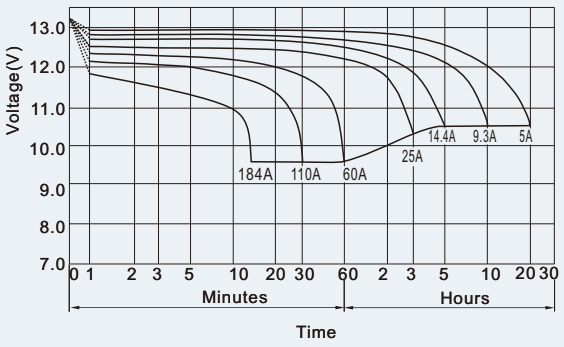
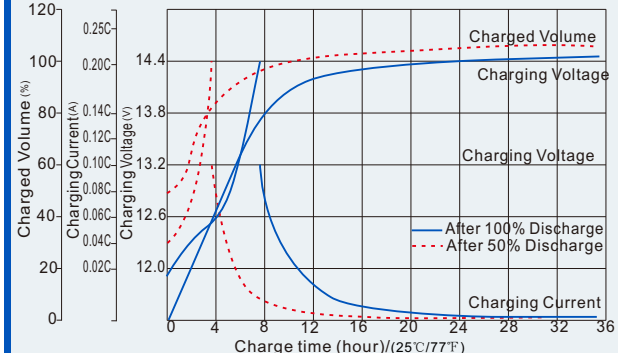
MPG12-100 (12V100Ah)

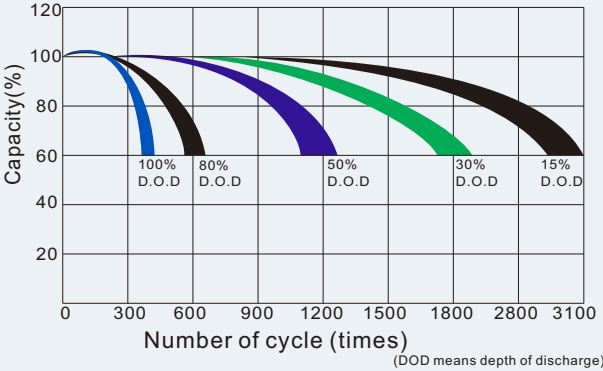
Discharge characteristics (25℃,77°F)



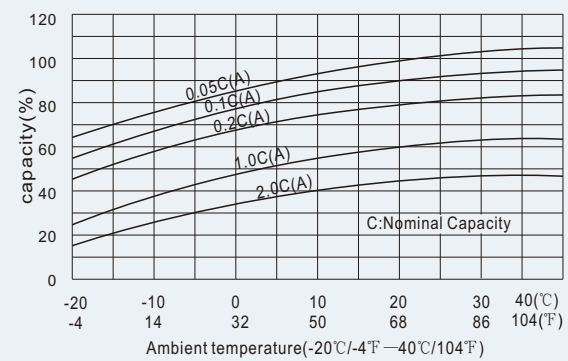
Charge characteristics (25℃,77°F)



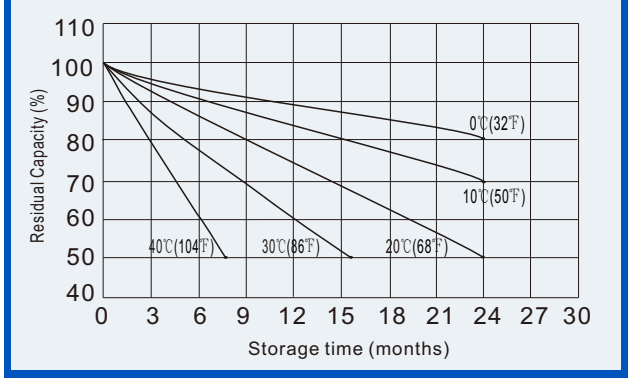
Life characteristics of Cyclic Use (25℃,77°F)



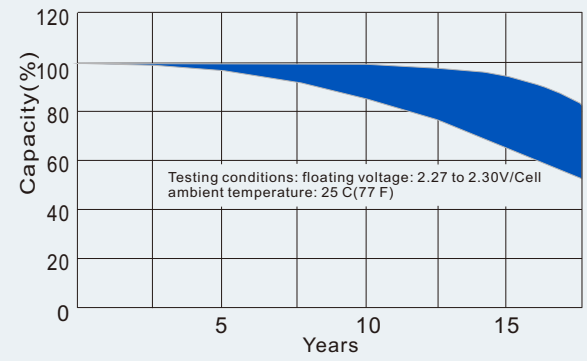
Effect of Temperature on capacity



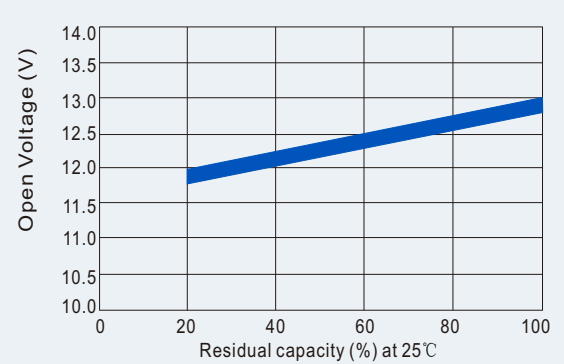
Self-discharge characteristics



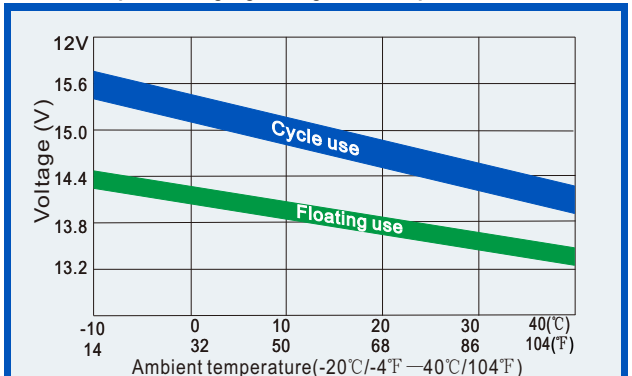
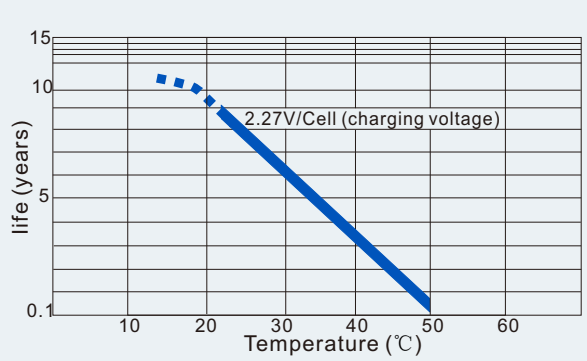
Life Characteristics of float service (25℃,77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life