

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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MPG2-300 (2V300Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		300 Ah
Dimensions (±2mm)	Total Height (Include top cover)	364 mm (14.3 inches)
	Height	330 mm (13.0 inches)
	Length	171 mm (6.7 inches)
	Width	151 mm (5.9 inches)
Weight Approx (±3%)		20.5 Kg (45.2 lbs)

Battery picture and construction



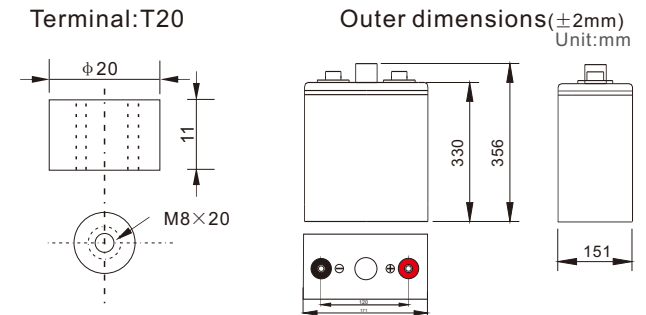
Terminal position:



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 364mm includes the top cover)

Characteristics

Capacity 25°C(77°F)	10 hour rate(30A, 1.8V) 5 hour rate(48A, 1.75V) 1 hour rate(180 A, 1.6V)	300Ah 240Ah 180Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.80mΩ
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)	2000A (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 75 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)

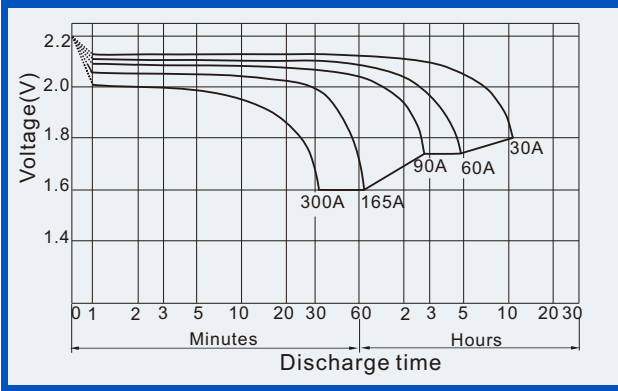
Unit:watts

Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	A	961	633	510	342	180	105.0	77.1	60.0	49.5	35.1	17
	W	1653	1127	912	613	324	192	143.0	112.5	93.8	67.0	33
1.70V	A	931	571	481	327	169	100.2	75.0	58.5	48.6	34.2	16.5
	W	1656	1063	896	612	319	192	144.8	113.4	94.4	66.7	32.3
1.75V	A	900	511	420	306	164	97.8	73.2	57.6	48.0	33.9	16.5
	W	1639	969	799	587	316	189	142.2	112.3	93.8	66.4	32.5
1.80V	A	868	482	391	282	158	95.4	71.4	56.7	46.8	33.0	16.2
	W	1622	925	750	545	307	186	140.3	111.6	92.2	65.2	32.2
1.85V	A	839	451	361	252	153	93.0	69.0	55.2	45.6	32.1	15.3
	W	1585	871	700	491	300	183	136.6	109.6	90.7	64.1	30.9

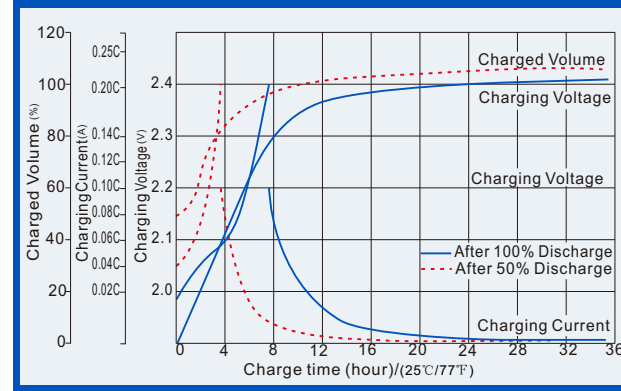
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

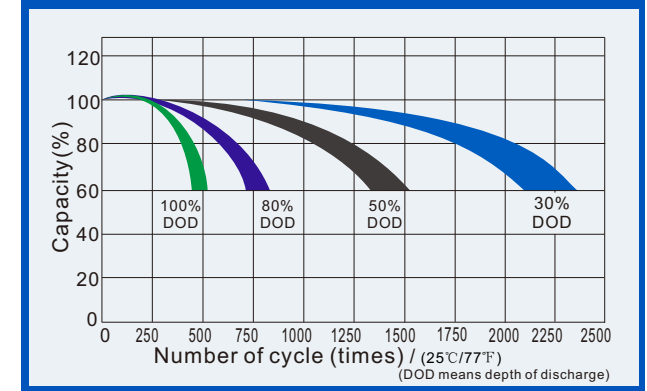
Discharge characteristics (25°C, 77°F)



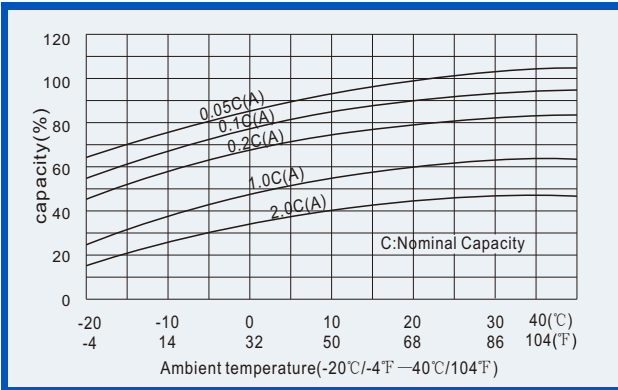
Charge characteristics (25°C, 77°F)



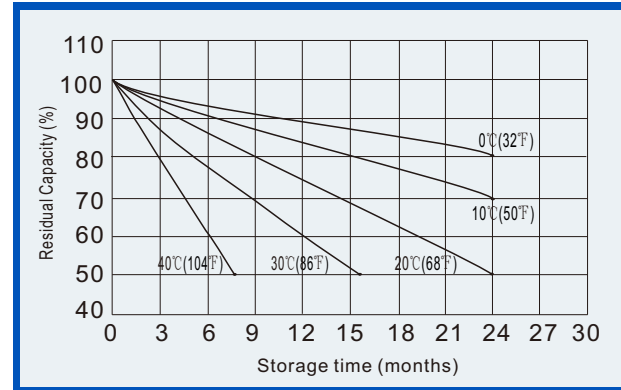
Life characteristics of Cyclic Use (25°C, 77°F)



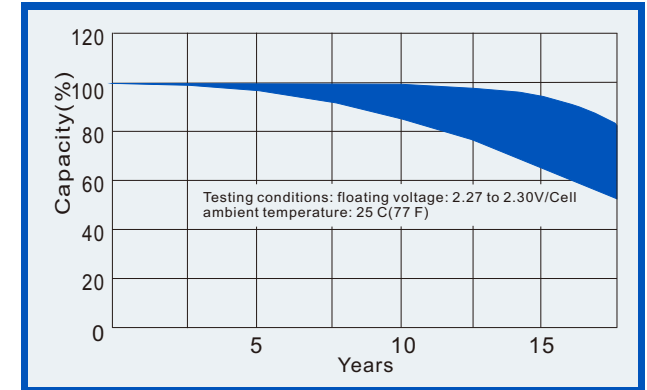
Effect of Temperature on capacity



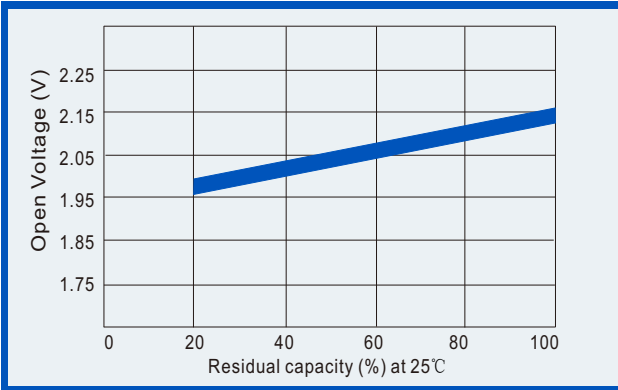
Self-discharge characteristics



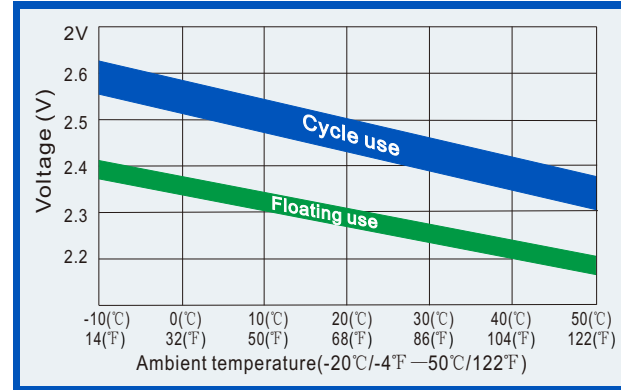
Life Characteristics of float service (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

