

General features for MPPV Series battery (OPzV)

- * Tubular positive plate; separator with the combined application of porous rubber and porous PVC, separator is with a high porosity & good corrosion resistance. Gelled electrolyte technology.
- * Computer designed lead, calcium tin alloy grid for high power density.
- * Long service life, maintenance-free during the whole service life.
- * Alloy (no antimony) and internal oxygen recombination ensure low gassing.
- * High cyclic ability, no internal short circuits in the GEL structure.
- * Easy to move and handle, easy using cable connectors or copper connectors in the battery connection..



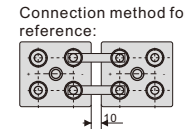
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MPPV2-1000 (2V1000Ah)

Specifications

Nominal Voltage	2 V	
Rated capacity (10 hour rate)	1000 Ah	
Dimensions (±3mm)	Total Height (Include terminal)	681mm (26.8inches)
	Height	646mm (25.4inches)
	Length	233mm (9.17inches)
	Width	210mm (8.27inches)
Approx weight (±5%)	68.6Kg (151lbs)	

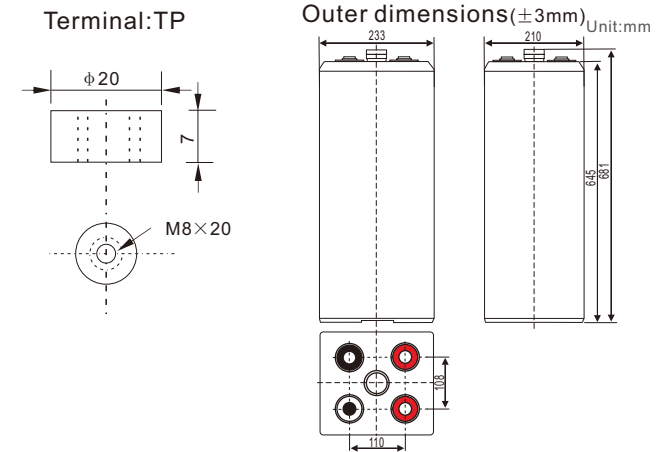
Battery picture and construction



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



Characteristics

Capacity 25°C(77°F)	10 hour rate(100A, 1.8V) 3 hour rate(260A, 1.75V) 1 hour rate(570A, 1.60V)	1000Ah 780Ah 570Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.4 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	103% 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	94% 88% 75%
Terminal type	TP (copper)	
Max. Discharge current 25°C/(77°F)	4000A (5Seconds)	
Nominal operating temperature	25°C ±5°C(77°F ±9°F)	
Operating Temperature Range	Discharge: -15°C ~50°C (5°F ~122°F) Charge: -10°C ~50°C (14°F ~122°F) Storage: -20°C ~50°C (-4°F ~122°F)	
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use: Initial Charging Current less than 250A Voltage 2.40-2.50V Temperature compensation:-3mV/°C Standby use: Voltage 2.25-2.30V Temperature compensation:-3mV/°C	

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

Unit:A

Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.65V	833	561	343	264	213	182	156	123	102	53.8
1.70V	808	547	340	262	211	180	155	122	101	53.7
1.75V	788	536	335	260	210	179	154	121	101	53.4
1.80V	759	520	326	252	204	174	149	117	100	53.0
1.85V	721	494	310	239	194	165	142	111	95	50.4

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

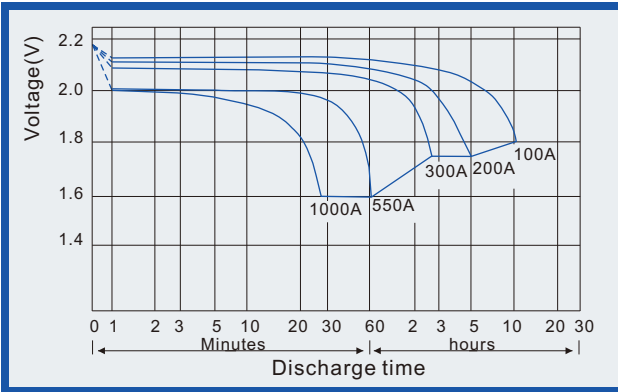
Constant power discharge (25°C , 77 °F)

Unit:watts

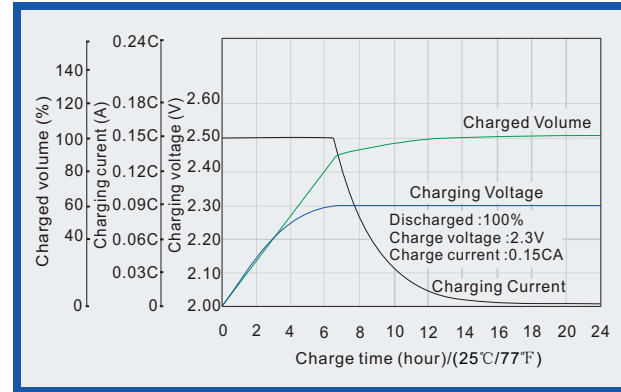
Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.65V	1558	1067	662	517	417	358	308	243	202	108
1.70V	1510	1040	656	513	414	355	306	241	202	107
1.75V	1473	1019	646	510	412	353	303	240	200	107
1.80V	1419	988	630	494	399	342	294	232	199	106
1.85V	1348	939	599	469	379	325	279	220	189	100

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

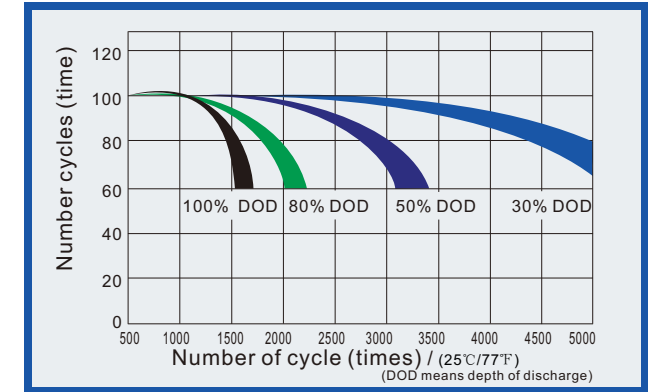
Discharge characteristics (25°C, 77°F)



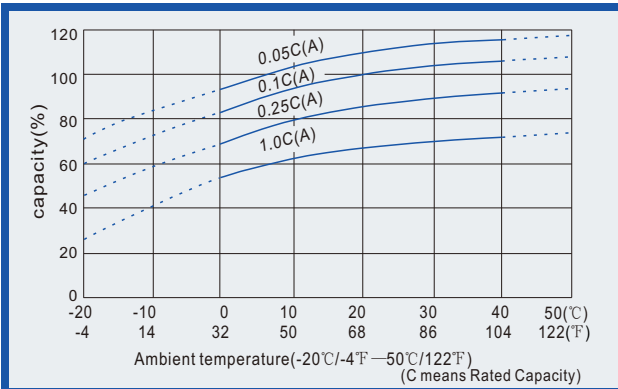
Charge characteristics (25°C, 77°F)



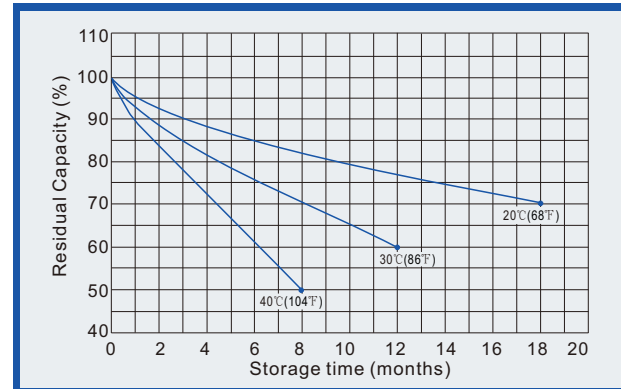
Life characteristics of Cyclic Use (25°C, 77°F)



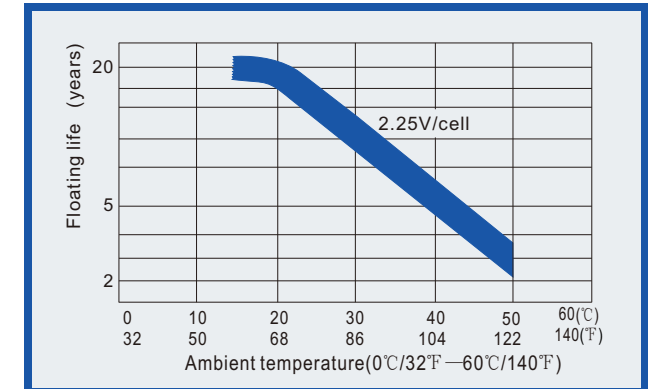
Effect of Temperature on capacity



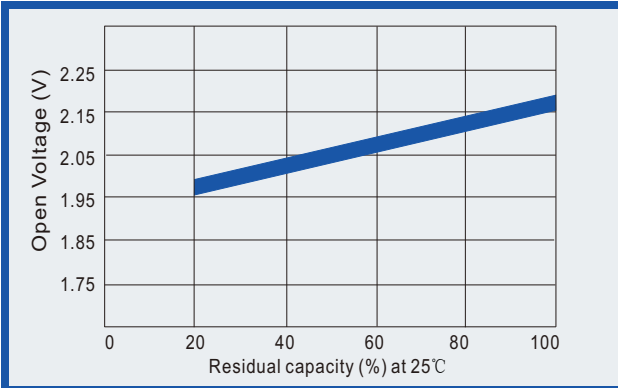
Self-discharge characteristics (with full charging)



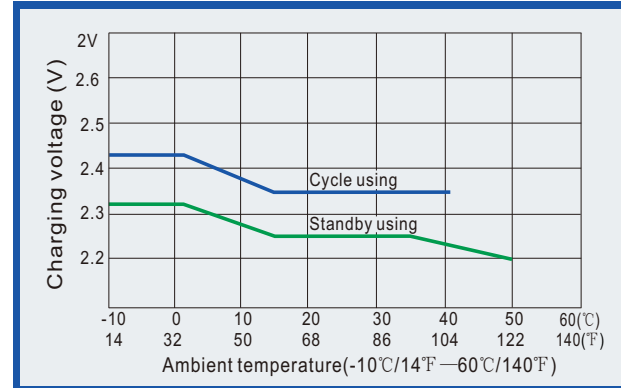
Relationships for floating life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity

