

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..



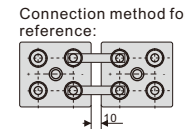
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MPPV2-1200 (2V1200Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		1200 Ah
Dimensions (±3mm)	Total Height (Include terminal)	681mm (26.8inches)
	Height	646mm (25.4inches)
	Length	275mm (10.8inches)
	Width	210mm (8.27inches)
Approx weight (±5%)		84.0Kg (185.3lbs)

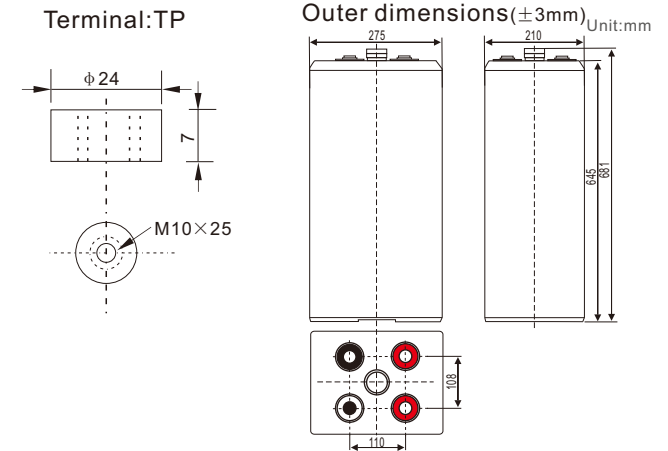
Battery picture and construction



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(120A, 1.8V)	1200Ah
	3 hour rate(318A, 1.75V)	954Ah
	1 hour rate(695A, 1.60V)	695Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.40mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	85%
Remaining capacity Self-Discharge At 25°C(77°F)	-15°C (5°F)	65%
	Capacity after 3 month storage	94%
	Capacity after 6 month storage	88%
	Capacity after 12 month storage	75%
Terminal type	TP (copper)	
Max. Discharge current 25°C/(77°F)	6000A (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 300 A Voltage 2.35-2.45V Temperature compensation:-3mV/°C
	Standby use	Voltage 2.25-2.30V Temperature compensation:-3mV/°C

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

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

Unit:A

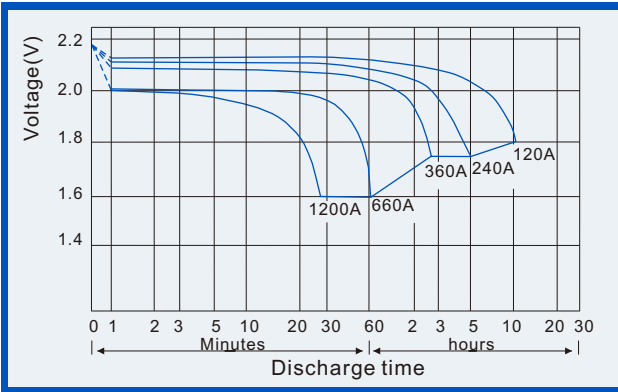
Unit:watts

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

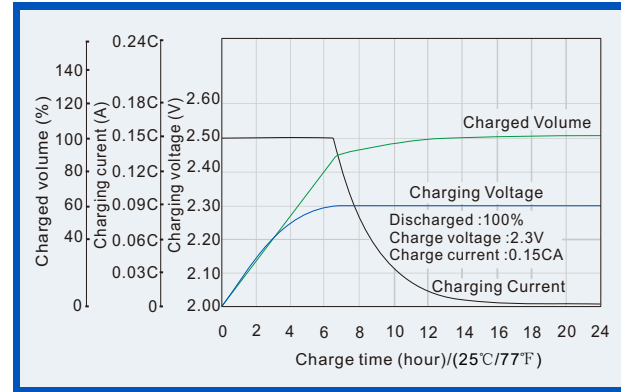
Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
1.65V	A	1044.0	690.0	452.0	354.0	244.0	197.4	160.0	140.0	72.2	59.8	32.0	15.8
	W	2190	1410	1010	708	458	438	362	270	136	122	81	42
1.70V	A	1014.0	660.0	426.0	334.0	230.0	186.6	153.4	132.0	70.6	59.6	31.8	15.7
	W	2058	1368	990	684	450	424	348	262	135	121	81	42
1.75V	A	960.0	630.0	402.0	318.0	218.0	177.4	146.6	126.0	68.4	59.4	31.4	15.6
	W	1882	1332	964	662	444	412	336	252	133	120	81	42
1.80V	A	924.0	600.0	380.0	300.0	204.0	169.4	141.4	120.0	64.8	59.2	31.2	15.5
	W	1674	1248	942	636	432	396	324	246	132	119	80	41
1.85V	A	870.0	570.0	362.0	282.0	196.0	161.4	133.2	113.4	61.2	56.4	31.0	15.5
	W	1452	1218	894	604	414	378	310	234	125	113	80	41

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

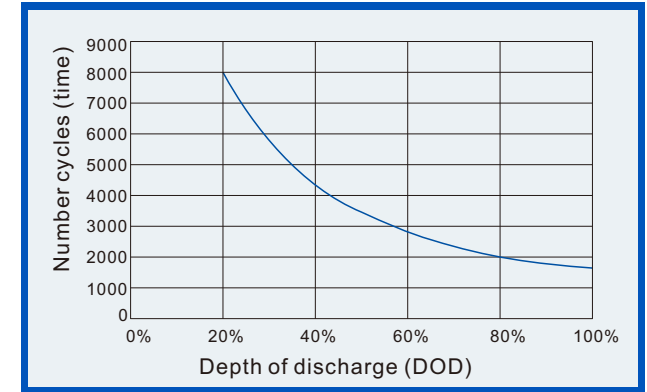
Discharge characteristics (25°C, 77°F)



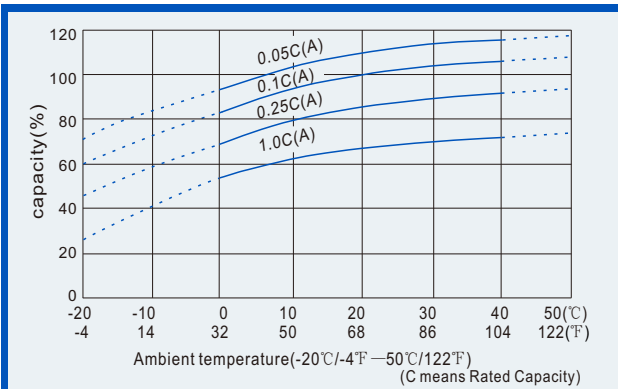
Charge characteristics (25°C, 77°F)



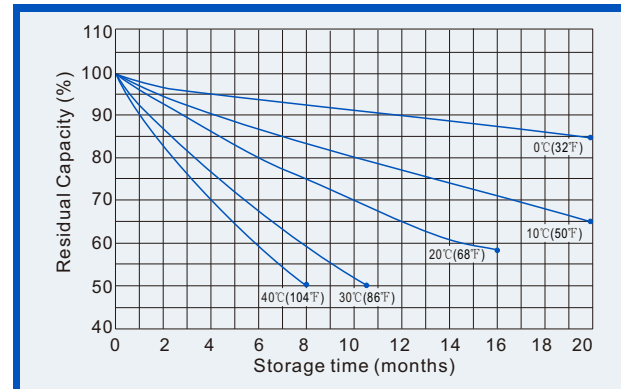
Life characteristics of Cyclic Use (25°C, 77°F)



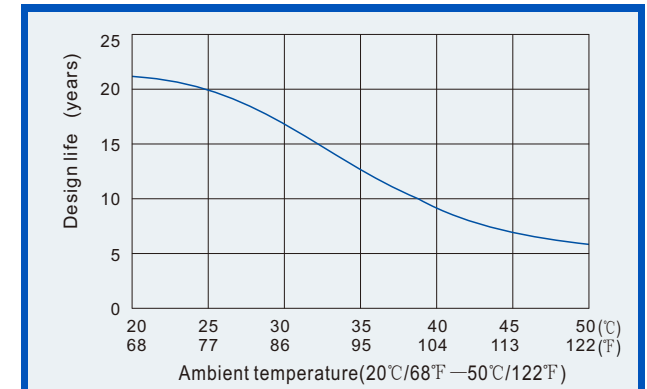
Effect of Temperature on capacity



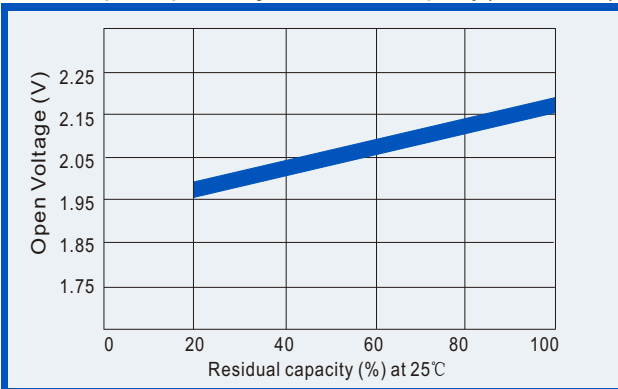
Self-discharge characteristics (with full charging)



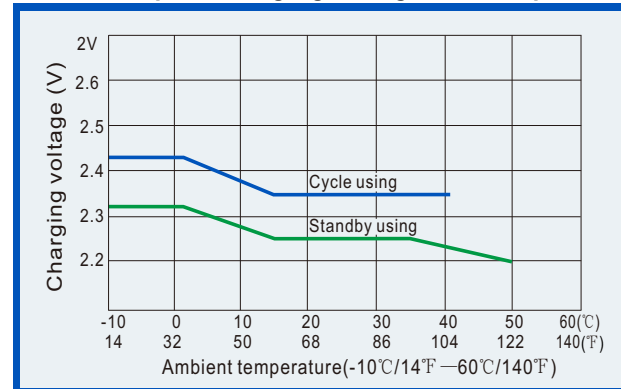
Relationships for design life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity

