

## 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..



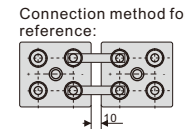
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**MPPV2-1200 (2V1200Ah)**

## 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)

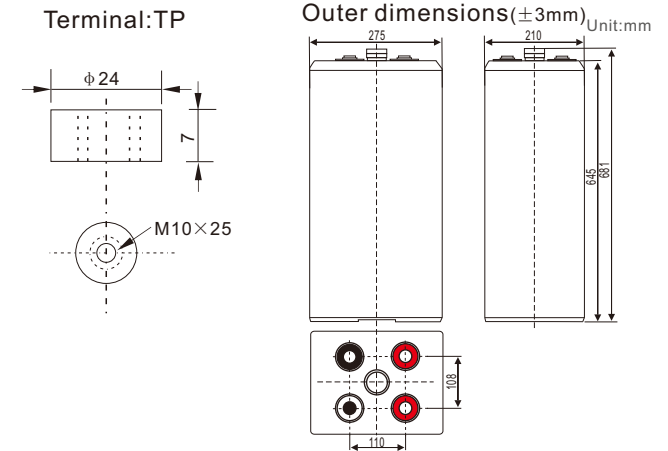
## Battery picture and construction



### 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(630A, 1.75V)	630Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.60mΩ
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)

Unit:A

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

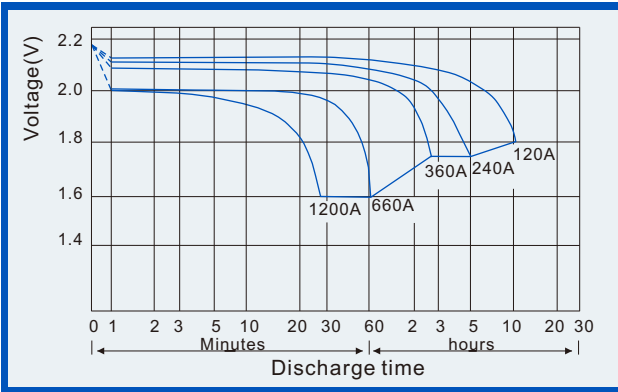
Unit:watts

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

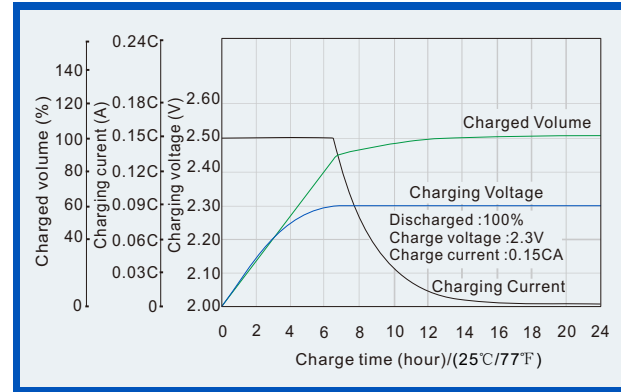
Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
1.65V	A	1044.0	690.0	452.0	354.0	244.0	197.4	160.0	140.0	72.2	59.8	32.0	15.8
	W	2190	1410	1010	708	458	438	362	270	136	122	81	42
1.70V	A	1014.0	660.0	426.0	334.0	230.0	186.6	153.4	132.0	70.6	59.6	31.8	15.7
	W	2058	1368	990	684	450	424	348	262	135	121	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.)

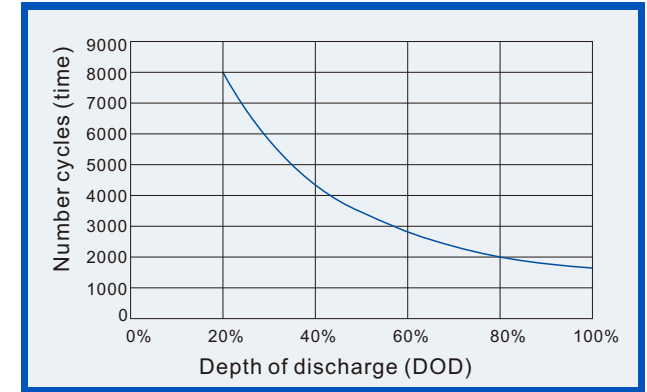
**Discharge characteristics (25°C, 77°F)**



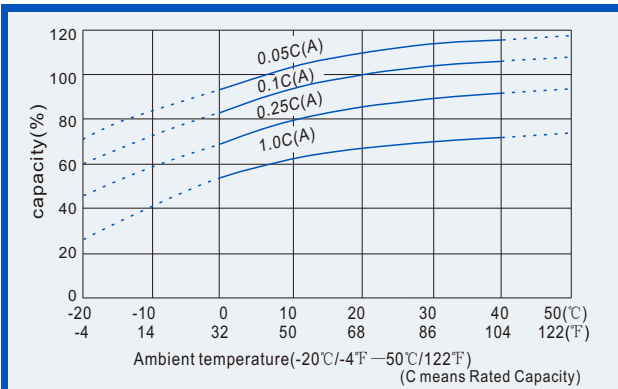
**Charge characteristics (25°C, 77°F)**



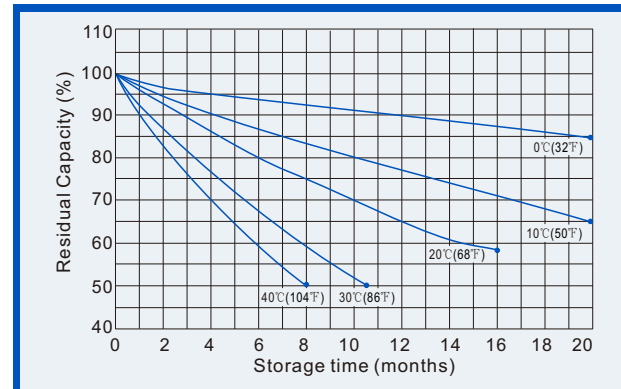
**Life characteristics of Cyclic Use (25°C, 77°F)**



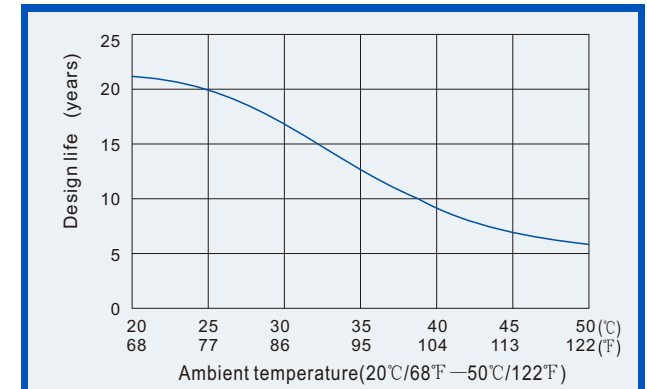
**Effect of Temperature on capacity**



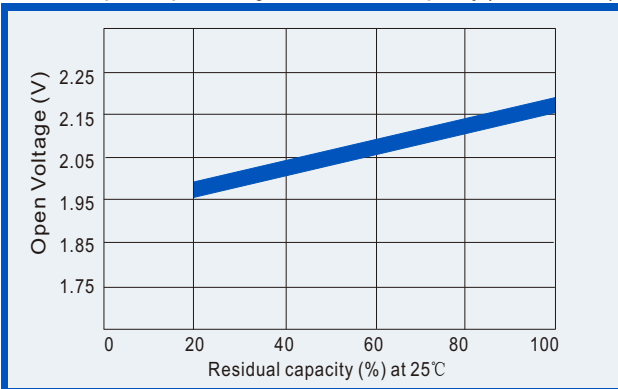
**Self-discharge characteristics (with full charging)**



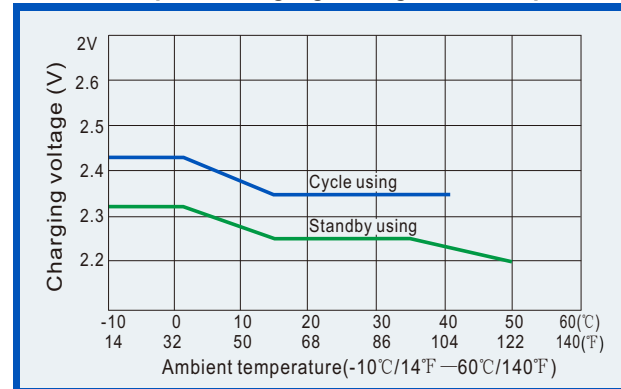
**Relationships for design life and temperature**



**Relationships for open voltage and remained capacity (for reference)**



**Relationship for charging voltage and temperature**



**Effect of temperature on capacity**

