

## 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..



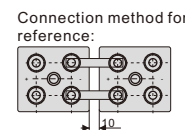
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**MPPV2-1200 (2V1200Ah)**

## 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%)		82.0Kg (180lbs)

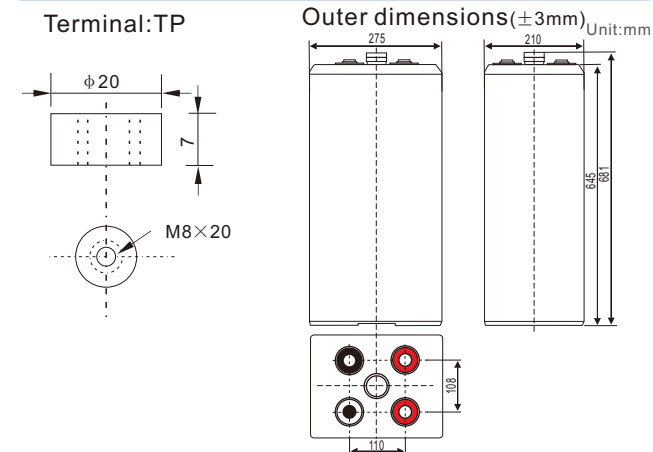
## Battery picture and construction



### 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) 3 hour rate(312A, 1.75V) 1 hour rate(684A, 1.60V)	1200Ah 936Ah 684Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.35 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)	6000A (5Seconds)	
Nominal operating temperature	25°C ±5°C(77°F ±9°F)	
Operating Temperature Range	Discharge Charge Storage	-15°C ~50°C (5°F ~122°F) -10°C ~50°C (14°F ~122°F) -20°C ~50°C (-4°F ~122°F)
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use Standby use	Initial Charging Current less than 300A Voltage 2.40-2.50V Temperature compensation:-3mV/°C Voltage 2.25-2.30V Temperature compensation:-3mV/°C

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

Unit:A

Constant Current(Amp) Discharge Table at 25°C(77°F)											
Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	
1.65V	1000	673	412	317	256	218	187	148	122	64.6	
1.70V	970	656	408	314	253	216	186	146	121	64.4	
1.75V	946	643	402	312	252	215	185	145	121	64.1	
1.80V	911	624	391	302	245	209	179	140	120	63.6	
1.85V	865	593	372	287	233	198	170	133	114	60.5	

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

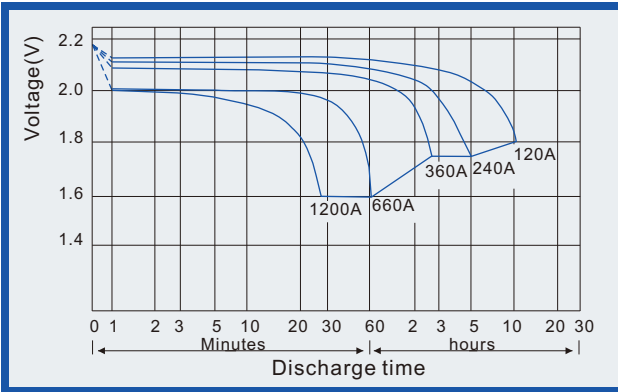
## Constant power discharge (25°C , 77 °F)

Unit:watts

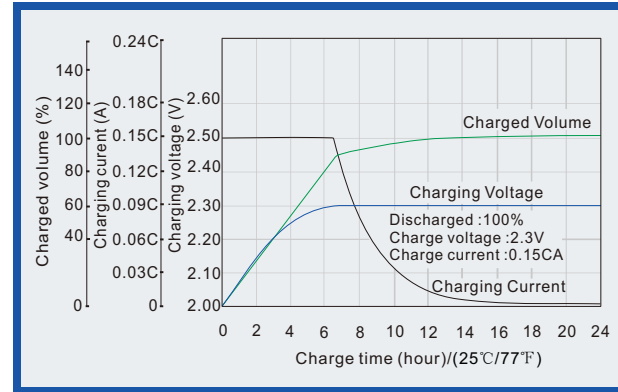
Constant Power(Watt) Discharge Table at 25°C(77°F)											
Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	
1.65V	1870	1280	794	620	500	430	370	292	242	130	
1.70V	1812	1248	787	616	497	426	367	289	242	128	
1.75V	1768	1223	775	612	494	424	364	288	240	128	
1.80V	1703	1186	756	593	479	410	353	278	239	127	
1.85V	1618	1127	719	563	455	390	335	264	227	121	

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

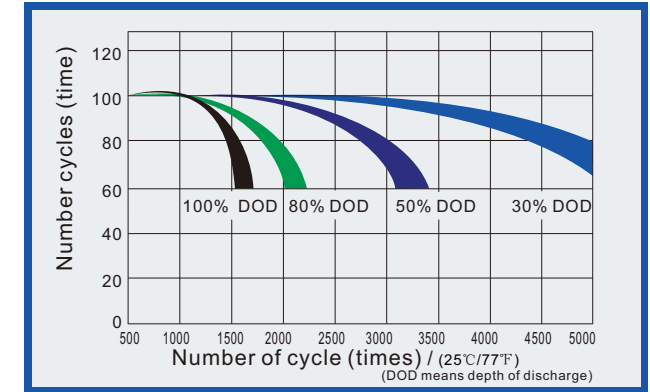
**Discharge characteristics (25°C, 77°F)**



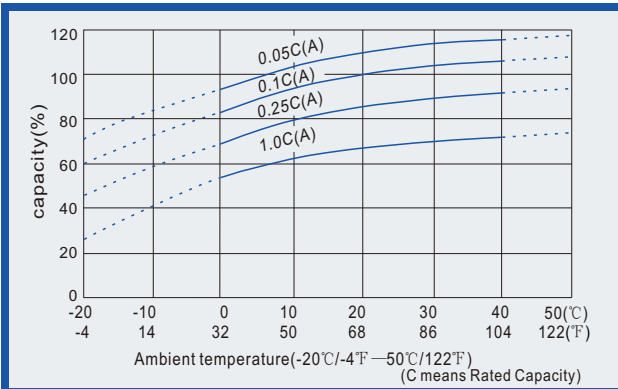
**Charge characteristics (25°C, 77°F)**



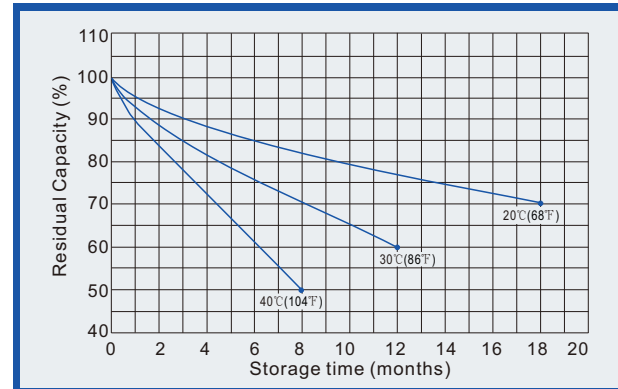
**Life characteristics of Cyclic Use (25°C, 77°F)**



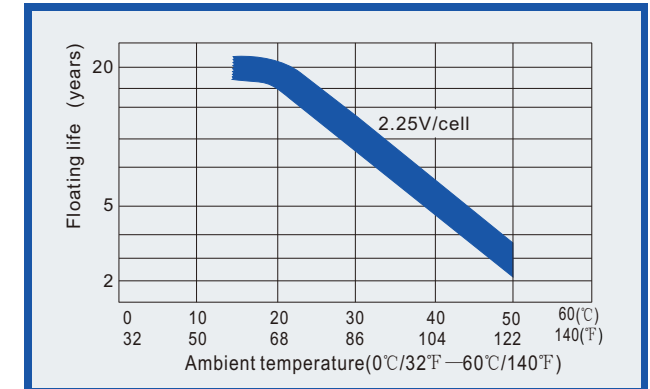
**Effect of Temperature on capacity**



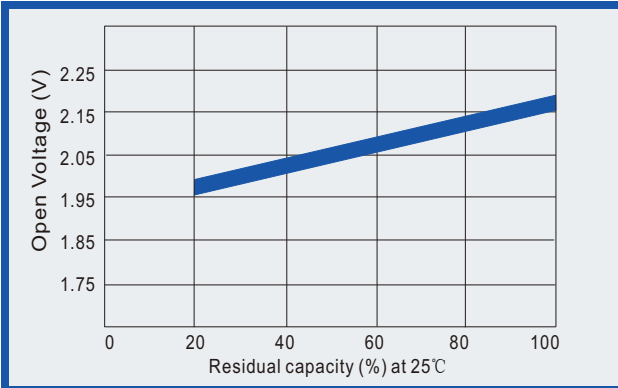
**Self-discharge characteristics (with full charging)**



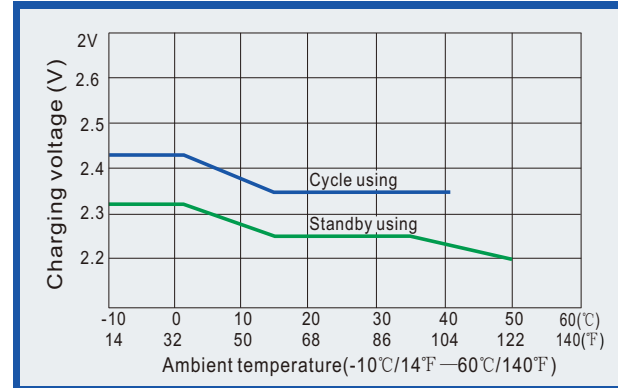
**Relationships for floating life and temperature**



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



**Relationship for charging voltage and temperature**



**Effect of temperature on capacity**

