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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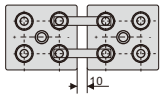
MPPV2-1000 (2V1000Ah)

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%)		72.0Kg (158.8lbs)

Battery picture and construction

Connection method for reference:

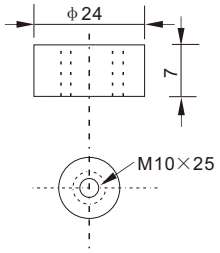


Battery Construction

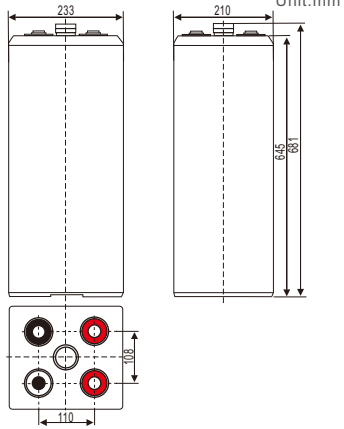
Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Gelled acid	PVC	Rubber	Copper

Outer dimension and terminal

Terminal:TP



Outer dimensions(±3mm) Unit:mm



Characteristics

Capacity 25℃(77℉)	10 hour rate(100A,1.8V) 3 hour rate(265A,1.75V) 1 hour rate(580A,1.60V)	1000Ah 795Ah 580Ah
Internal Resistance	Full charged battery at 25℃(77℉)	Approx 0.4 mΩ
Capacity affected by Temperature (10hour rate)	40℃ (104℉) 25℃ (77℉) 0℃ (32℉) -15℃ (5℉)	103% 100% 85% 65%
Remaining capaicty Self-Discharge At 25℃(77℉)	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℃/(77℉)		4000A (5Seconds)
Nominal operating temperature		25℃ ±5℃(77℉ ±9℉)
Operating Temperature Range	Discharge Charge Storage	-15℃～50℃ (5℉～122℉) -10℃～50℃ (14℉～122℉) -20℃～50℃ (-4℉～122℉)
Charge methods (constant Voltage) At 25℃(77℉)	Cycle use	Initial Charging Current less than 250 A Voltage 2.35-2.45V Temperature compensation:-3mV/℃
	Standby use	Voltage 2.25-2.30V Temperature compensation:-3mV/℃

Constant current discharge (25℃ , 77 ℉)

Unit:A

Constant power discharge (25℃ , 77 ℉)

Unit:watts

Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25℃(77℉)

Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
1.65V	A	870.0	575.0	376.7	295.0	203.3	164.5	133.3	116.7	60.2	49.8	26.7	13.1
	W	1825	1175	842	590	382	365	302	225	113	102	68	35
1.70V	A	845.0	550.0	355.0	278.3	191.7	155.5	127.8	110.0	58.8	49.7	26.5	13.1
	W	1715	1140	825	570	375	353	290	218	112	101	67	35
1.75V	A	800.0	525.0	335.0	265.0	181.7	147.8	122.2	105.0	57.0	49.5	26.2	13.0
	W	1568	1110	803	552	370	343	280	210	111	100	67	35
1.80V	A	770.0	500.0	316.7	250.0	170.0	141.2	117.8	100.0	54.0	49.3	26.0	12.9
	W	1395	1040	785	530	360	330	270	205	110	99	67	35
1.85V	A	725.0	475.0	301.7	235.0	163.3	134.5	111.0	94.5	51.0	47.0	25.8	12.9
	W	1210	1015	745	503	345	315	258	195	104	95	67	34

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

OPzV Battery
(Maintenance-free;Tubular plate & GEL technology)

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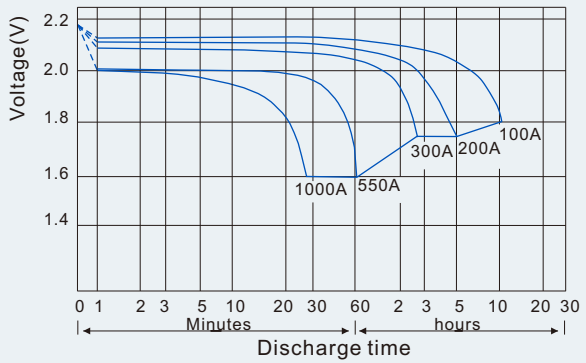
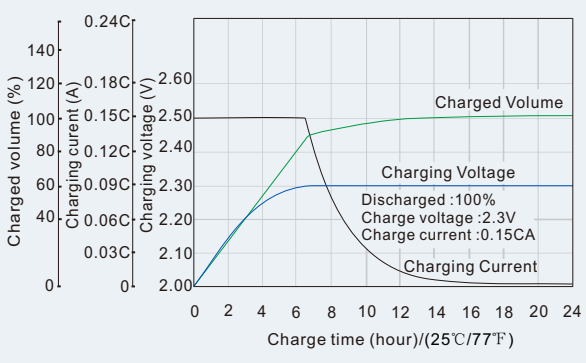
MPPV2-1000 (2V1000Ah)

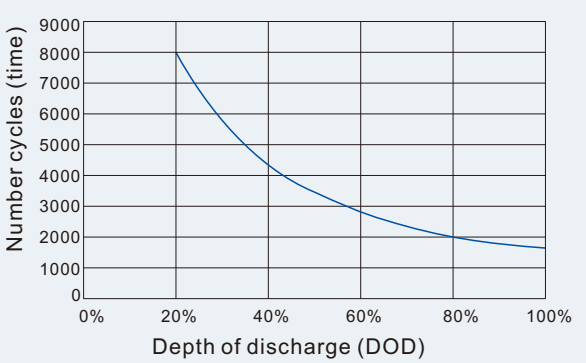
Discharge characteristics (25℃,77℉)



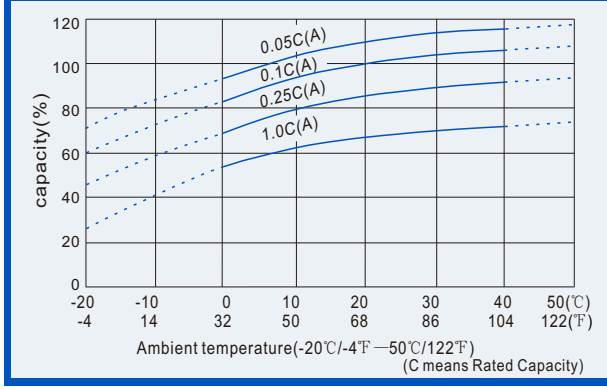
Charge characteristics (25℃,77℉)



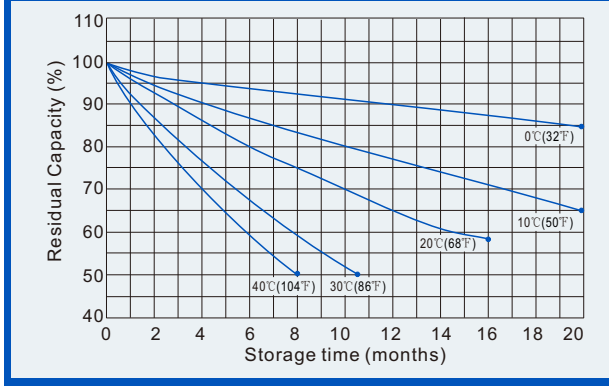
Life characteristics of Cyclic Use (25℃,77℉)



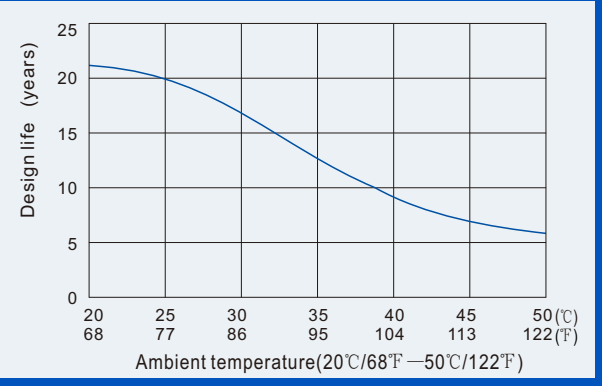
Effect of Temperature on capacity



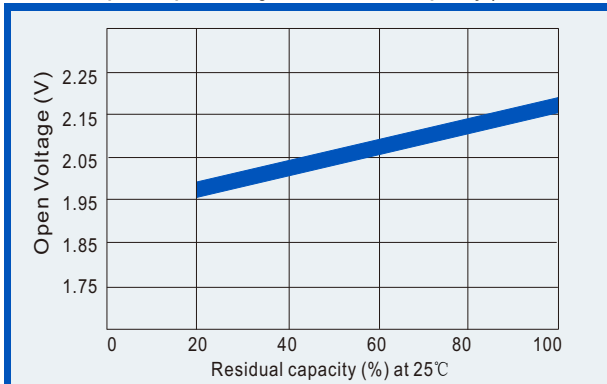
Self-discharge characteristics(with full charging)



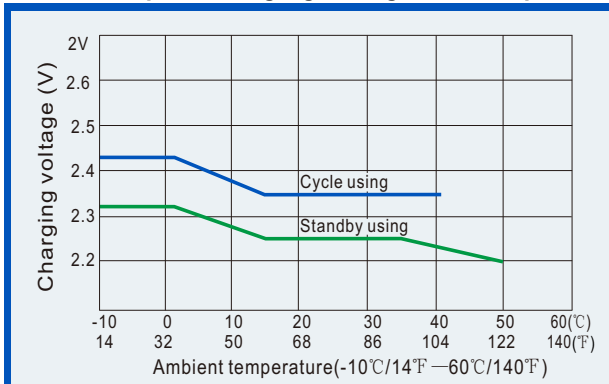
Relationships for design life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity