

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..



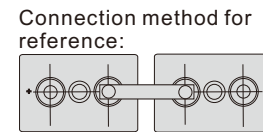
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MPPV2-200 (2V200Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		200 Ah
Dimensions (±3mm)	Total Height (Include terminal)	390mm (15.3inches)
	Height	355mm (13.9inches)
	Length	103mm (4.05inches)
	Width	206mm (8.11inches)
Approx weight (±5%)		17.0Kg (37.5lbs)

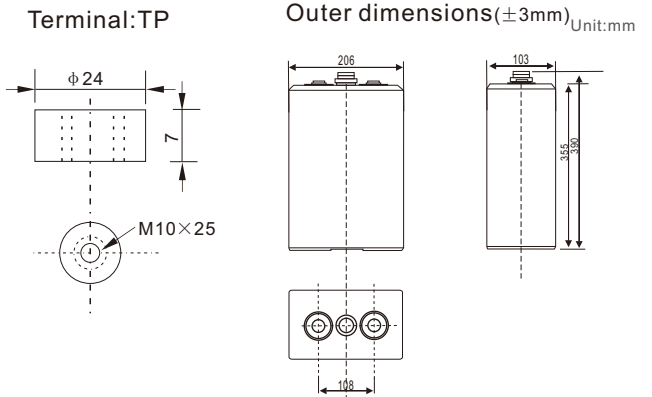
Battery picture and construction



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(20A, 1.8V) 3 hour rate(53A, 1.75V) 1 hour rate(108A, 1.75V)	200Ah 159Ah 105Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 1.1mΩ
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)	1000A (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	-15°C ~50°C (-4°F ~122°F)
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use	Initial Charging Current less than 50 A Voltage 2.35-2.45V Temperature compensation:-4mV/°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

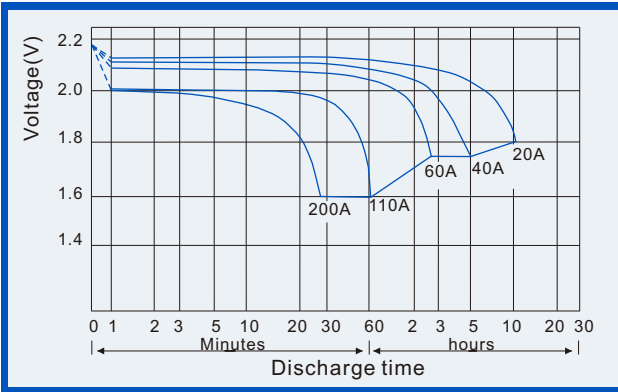
Unit:watts

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

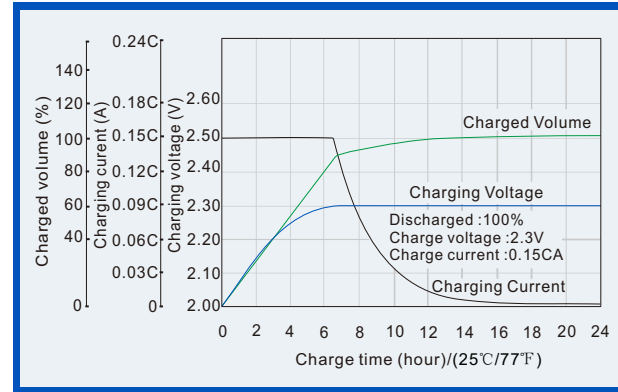
Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
1.65V	A	174	115	75	59	41	33	27	23	12	10	5	2.6
	W	365	235	168	118	76	73	60	45	23	20	14	7.0
1.70V	A	169	110	71	56	38	31	26	22	12	10	5	2.6
	W	343	228	165	114	75	71	58	44	22	20	13	7.0
1.75V	A	160	105	67	53	36	30	24	21	11	10	5	2.6
	W	314	222	161	110	74	69	56	42	22	20	13	6.9
1.80V	A	154	100	63	50	34	28	24	20	11	10	5	2.6
	W	279	208	157	106	72	66	54	41	22	20	13	6.9
1.85V	A	145	95	60	47	33	27	22	19	10	9	5	2.6
	W	242	203	149	101	69	63	52	39	21	19	13	6.9

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

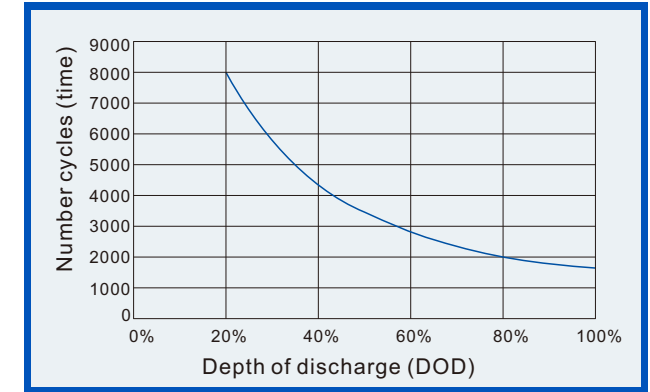
Discharge characteristics (25°C, 77°F)



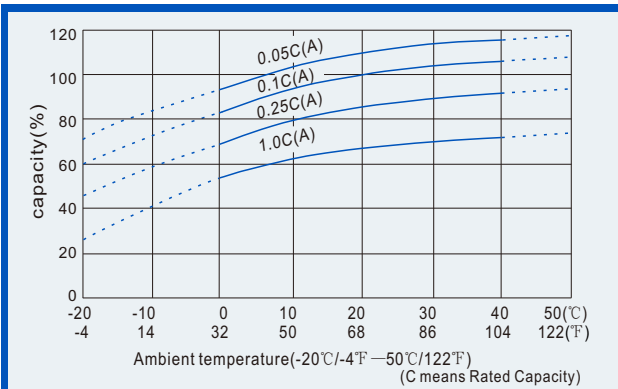
Charge characteristics (25°C, 77°F)



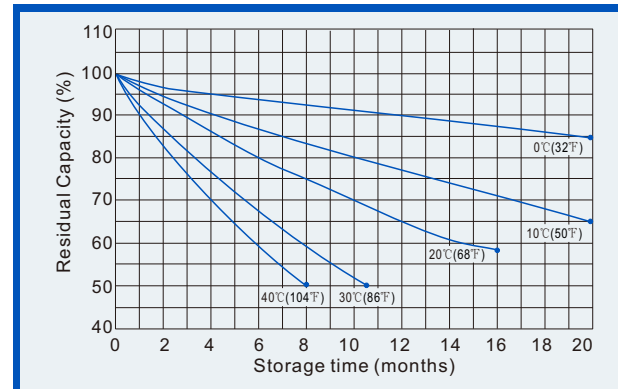
Life characteristics of Cyclic Use (25°C, 77°F)



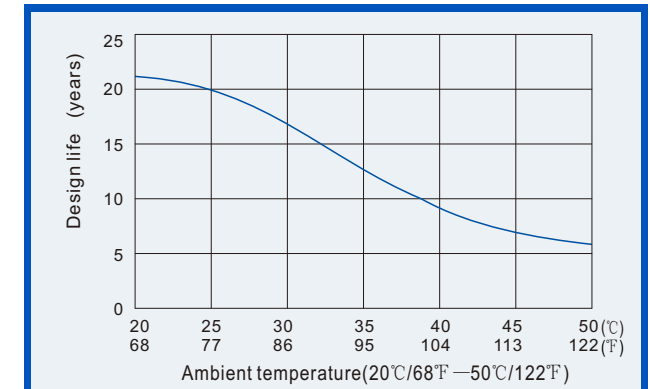
Effect of Temperature on capacity



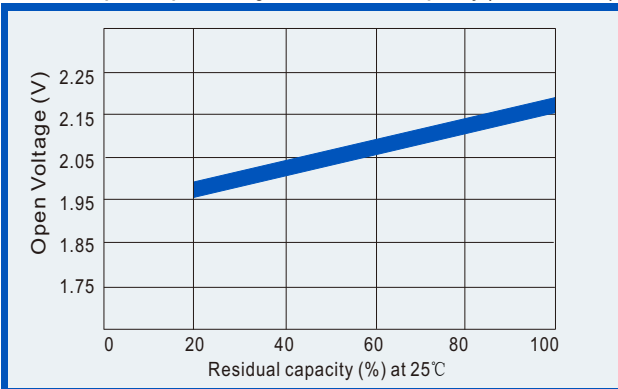
Self-discharge characteristics (with full charging)



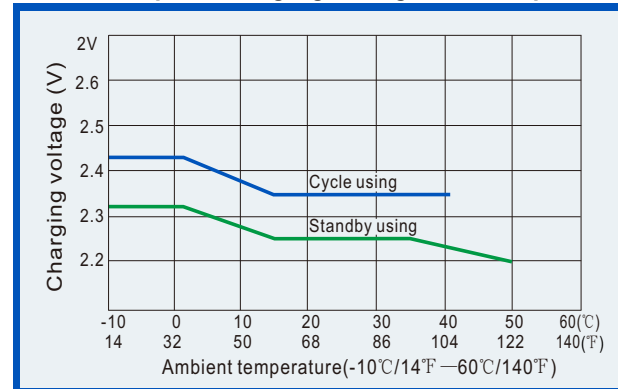
Relationships for design life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity

