

General features for MPPS Series battery (OPzS)

- * Tubular positive plate;separator with the combined application of porous rubber and porous PVC,separator is with a high porosity & good corrosion resistance.
- * Computer designed lead, calcium tin alloy grid for high power density.
- * Long service life, float or cyclic applications:designed floating life is 15~20years at 25°C;Designed cycle life more than 1200 cycles at 80% DOD at 25°C/77 F.
- * Acid-proof bolt:
It is of a special shape of funnel having the function of filtering acid smog and retarding flame,it can measure the density and temperature of electrolyte.
- * Ensuring sufficient electrolyte for battery discharge.
- * Battery container is transparent ,easy checks electrolyte.



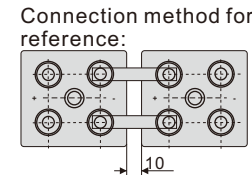
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MPPS2-1000 (2V1000Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		1000 Ah
Dimensions (±3mm)	Total Height (Include terminal)	701mm (27.60 inches)
	Height	646mm (25.43inches)
	Length	233mm (9.17 inches)
	Width	210mm (8.27inches)
Approx Weight (±5%)	Without electrolyte	57.0Kg (125.7lbs)
	With Electrolyte	77.0Kg (169.8lbs)
	Electrolyte weight (d=1.25kg/l)	Approx 20.0Kg (44.0lbs)

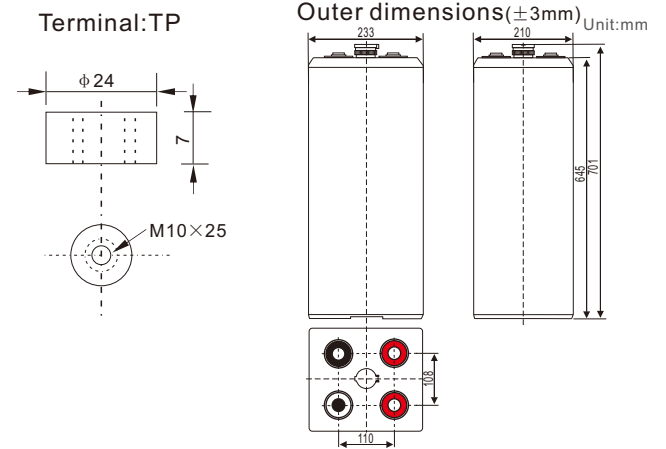
Battery picture and construction



Battery Construction

Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	SAN transparent	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	PVC	Porous rubber	Copper

Outer dimension and terminal



Characteristics

Capacity 25°C(77°F)	10 hour rate(100A,1.8V) 3 hour rate(257A,1.75V) 1 hour rate(560 A,1.60V)	1000Ah 771Ah 560Ah
Internal Resistance	Full charged battery at 25°C(77°F) Approx 0.45 mΩ	
Capacity affected by Temperature (10hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	102% 100% 85% 65%
Remaining capacity Self-Discharge At 25°C(77°F)	Capacity after 3 month storage Capacity after 6 month storage	≥ 88% ≥ 76%
Terminal type	TP (copper)	
Max. Discharge current 25°C/(77°F)	2000A (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 250A Voltage 2.35-2.45V Temperature compensation:-5mV/°C 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

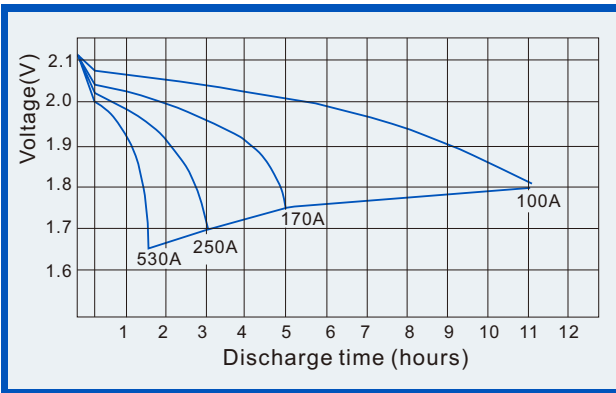
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time	30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
1.65V	A 713.4	553.2	363.3	273.0	186.3	150.7	128.0	105.7	57.2	47.8	25.6	12.6
	W 1497	1130	816	546	366	339	290	209	108.8	97.9	64.8	33.6
1.70V	A 684.5	530.2	355.0	265.5	182.3	147.9	125.5	104.0	56.5	47.7	25.4	12.6
	W 1389	1099	809	544	360	330	285	206	107.7	97.0	64.6	33.4
1.75V	A 633.6	503.4	335.0	257.0	177.7	144.6	123.5	102.3	55.6	47.5	25.1	12.5
	W 1242	1064	803	535	355	323	280	205	106.6	96.0	64.5	33.3
1.80V	A 563.3	463.4	316.7	244.0	170.0	141.2	117.8	100.0	54.0	47.4	25.0	12.4
	W 1021	964	785	517	349	320	270	200	105.6	95.0	64.3	33.1
1.85V	A 450.0	396.7	290.0	223.3	159.7	134.5	111.0	94.5	51.0	45.1	24.8	12.4
	W 751	848	716	478	337	315	258	195	104.0	90.7	64.2	33.0

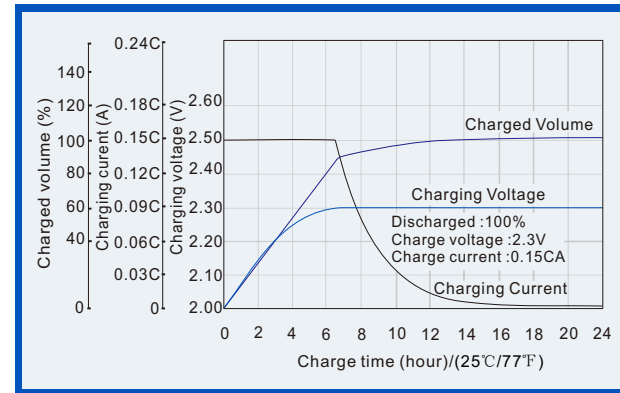
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

OPzS Battery (Tubular plate technology) Flooded Lead Acid Rechargeable Battery

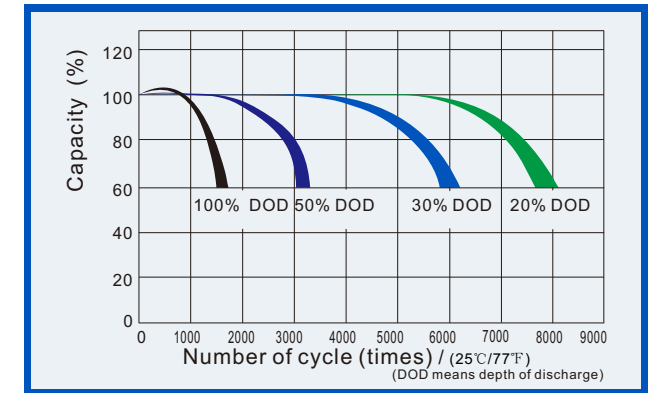
Discharge characteristics (25°C, 77°F)



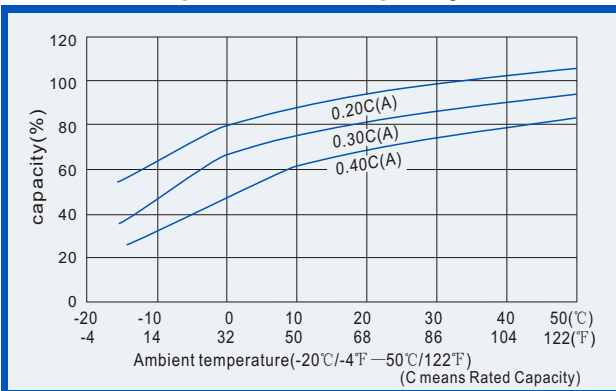
Charge characteristics (25°C, 77°F)



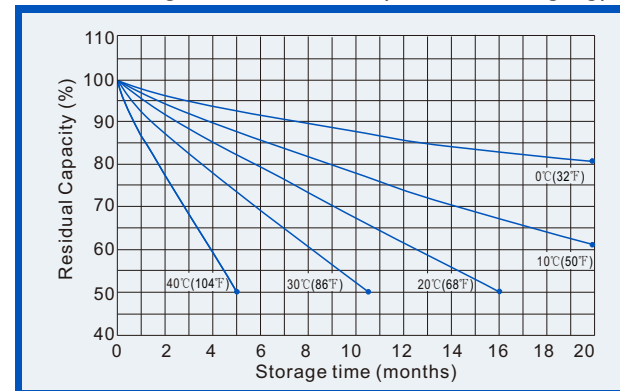
Life characteristics of Cyclic Use (25°C, 77°F)



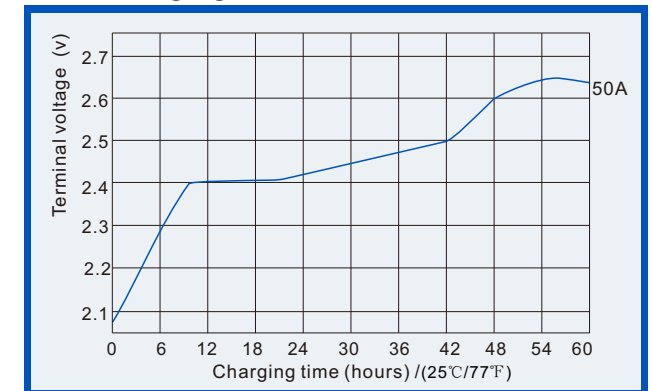
Effect of Temperature on capacity



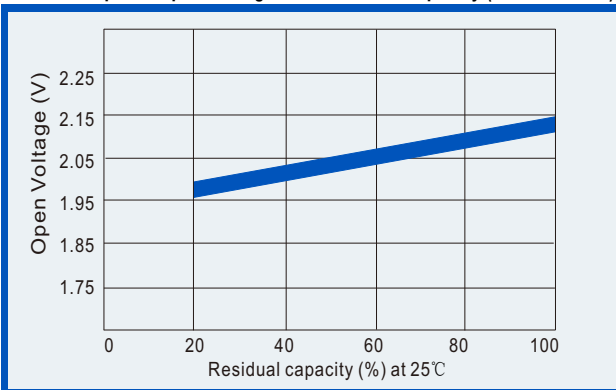
Self-discharge characteristics (with full charging)



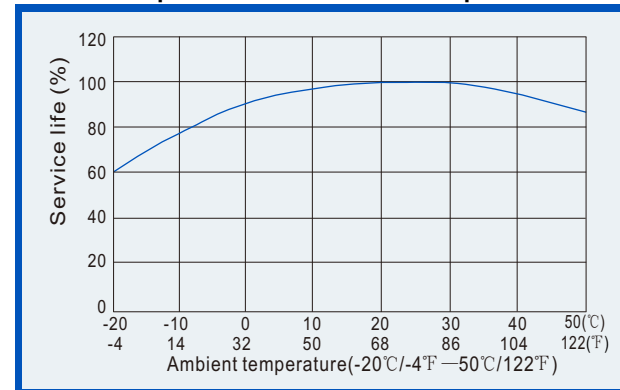
Initial charging characteristics



Relationships for open voltage and remained capacity (for reference)



Relationship for service life and temperature



Effect of discharge rate on capacity

