

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 20 years 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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MPPS2-2500 (2V2500Ah)

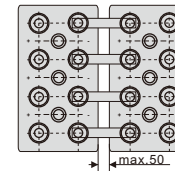
Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		2500 Ah
Dimensions (±3mm)	Total Height (Include terminal)	826mm (32.5inches)
	Height	771mm (30.4inches)
	Length	487mm (19.2 inches)
Approx Weight (±5%)	Width	212mm (8.4inches)
	Without electrolyte	133.0Kg (293.2lbs)
	With Electrolyte	185.0Kg (407.8lbs)
Electrolyte weight (d=1.25kg/l)		Approx 52.0Kg (114.6lbs)

Battery picture and construction



Connection method for reference:

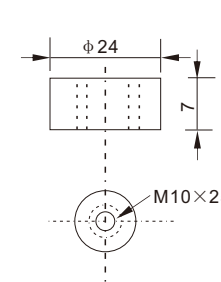


Battery Construction

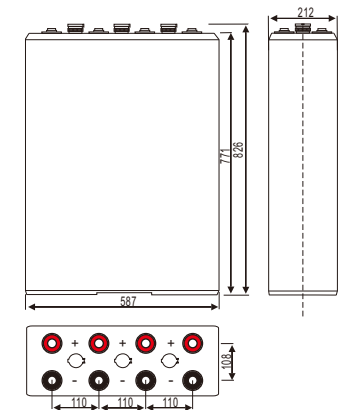
Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	SAN transparent	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	PVC	Porous rubber	Copper

Outer dimension and terminal

Terminal: TP



Outer dimensions(±3mm) Unit:mm



Characteristics

Capacity 25°C(77°F)	10 hour rate(250A, 1.8V) 3 hour rate(642.5A, 1.75V) 1 hour rate(1400 A, 1.60V)	2500Ah 1927.5Ah 1400Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.25 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)	12500A (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	Initial Charging Current less than 625A Voltage 2.35-2.45V Temperature compensation:-5mV/°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

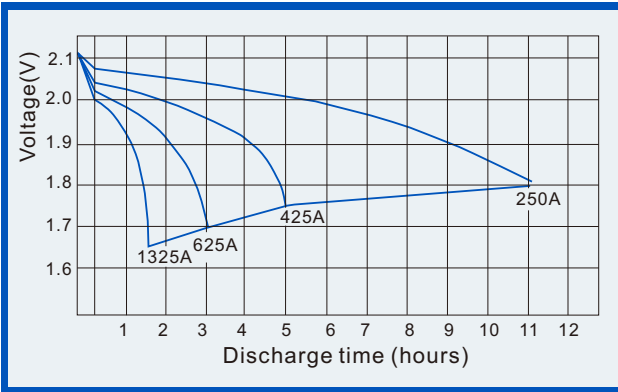
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time	30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h	
1.65V	A	1783.5	1382.9	908.3	682.6	465.8	376.9	320.0	264.2	142.9	119.6	64.0	31.5
	W	374.1	2826	2041	1365	916	849	724	523	272.0	244.8	162.0	84.0
1.70V	A	1711.1	1325.5	887.5	663.8	455.8	369.8	313.8	260.0	141.2	119.2	63.6	31.5
	W	347.3	2747	2021	1359	900	826	712	516	269.2	242.4	161.6	83.6
1.75V	A	1584.0	1258.4	837.5	642.5	444.2	361.5	308.7	255.8	138.9	118.8	62.8	31.2
	W	310.5	2661	2008	1338	888	807	700	512	266.4	240.0	161.2	83.2
1.80V	A	1408.3	1158.4	791.7	610.0	425.0	352.9	294.6	250.0	135.0	118.4	62.4	31.0
	W	255.1	2409	1963	1293	873	800	675	499	264.0	237.6	160.8	82.8
1.85V	A	1125.0	991.7	725.0	558.4	399.2	336.3	277.5	236.3	127.5	112.8	62.0	30.9
	W	1878	2119	1790	1196	843	788	646	488	260.0	226.8	160.4	82.4

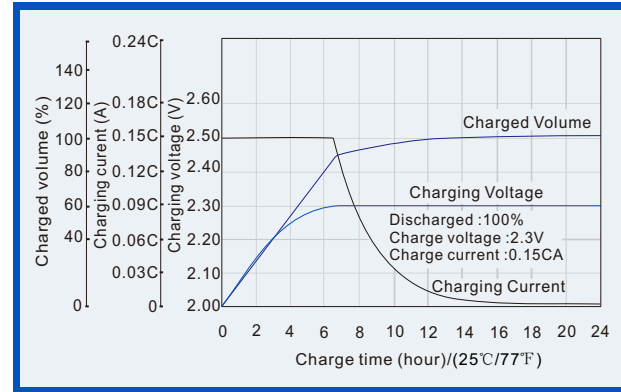
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

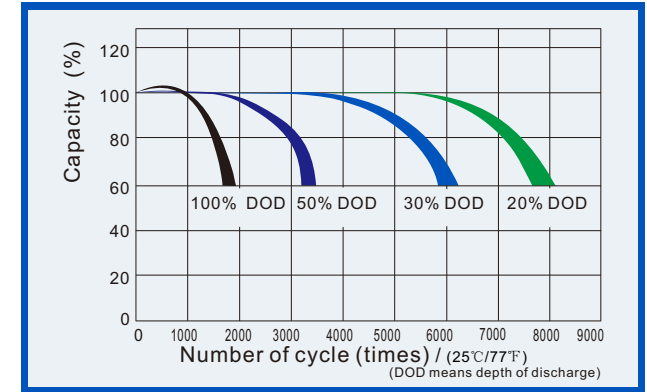
Discharge characteristics (25°C, 77°F)



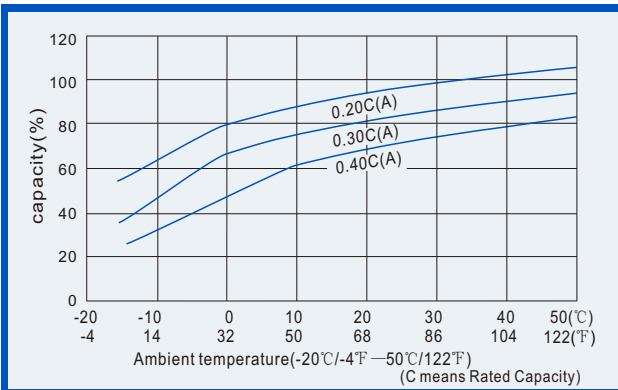
Charge characteristics (25°C, 77°F)



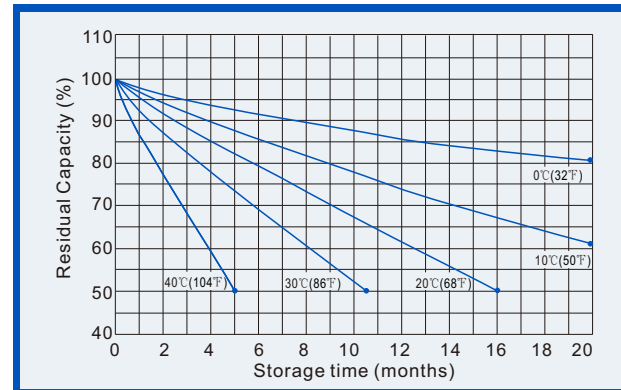
Life characteristics of Cyclic Use (25°C, 77°F)



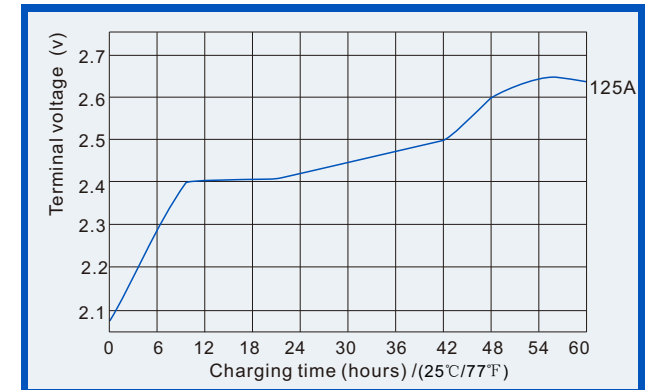
Effect of Temperature on capacity



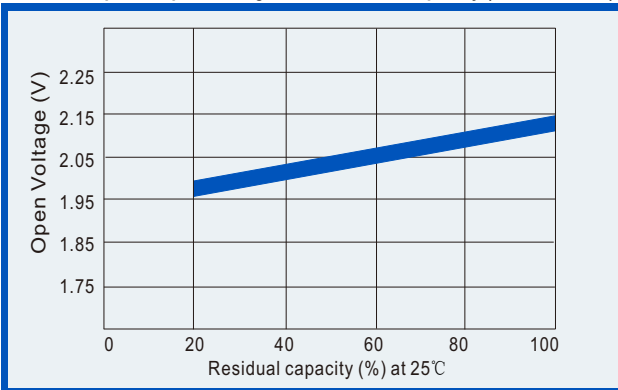
Self-discharge characteristics (with full charging)



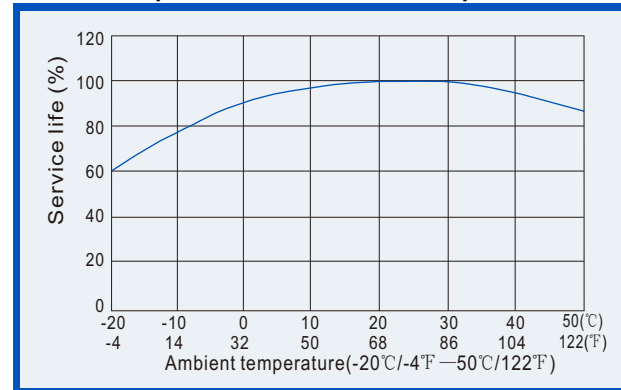
Initial charging characteristics



Relationships for open voltage and remained capacity (for reference)



Relationship for service life and temperature



Effect of discharge rate on capacity

