

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.



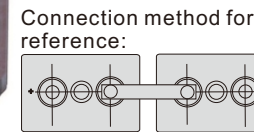
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MPPS2-600 (2V600Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		600 Ah
Dimensions (±3mm)	Total Height (Include terminal)	700mm (27.6inches)
	Height	645mm (25.4inches)
	Length	145mm (5.71inches)
	Width	206mm (8.11inches)
Approx Weight (±5%)	Without electrolyte	33.0Kg (72.8lbs)
	With Electrolyte	45.0Kg (99.3lbs)
	Electrolyte weight (d=1.25kg/l)	Approx 12Kg (26.46lbs)

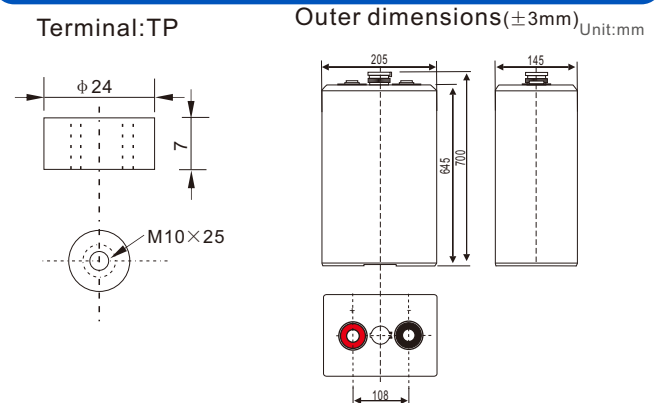
Battery picture and construction



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(60A, 1.8V) 3 hour rate(154.2A, 1.75V) 1 hour rate(336A, 1.60V)	600Ah 462.6Ah 336Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.65 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F)	103%
	25°C (77°F)	100%
Remaining capacity Self-Discharge At 25°C(77°F)	0°C (32°F)	85%
	-15°C (5°F)	65%
	Capacity after 3 month storage	≥ 88%
	Capacity after 6 month storage	≥ 76%
Terminal type	TP (copper)	
Max. Discharge current 25°C/(77°F)	3000A (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	0°C ~ 45°C (32°F ~ 113°F)
	Storage	-15°C ~ 45°C (5°F ~ 113°F)
Charge methods (constant Voltage) At 25°C(77°F)	Boost charge	Initial Charging Current less than 150 A Voltage 2.35-2.45V Temperature compensation:-3mV/°C
	Floating charge	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

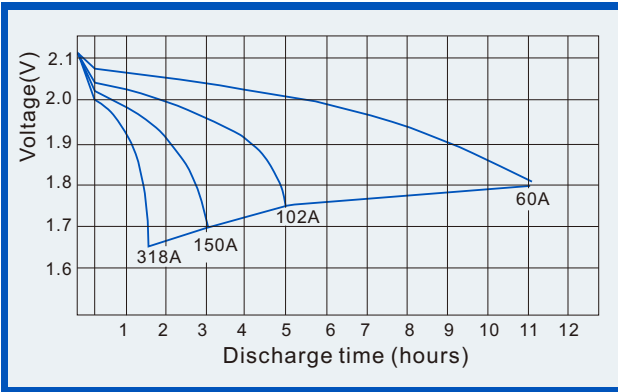
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
		1.65V	A	428.0	331.9	218.0	163.8	111.8	90.4	76.8	63.4	34.3	28.7
	W	898	678	490	328	220	204	174	126	65.3	58.8	38.9	20.2
1.70V	A	410.7	318.1	213.0	159.3	109.4	88.8	75.3	62.4	33.9	28.6	15.3	7.6
	W	833	659	485	326	216	198	171	124	64.6	58.2	38.8	20.1
1.75V	A	380.2	302.0	201.0	154.2	106.6	86.7	74.1	61.4	33.3	28.5	15.1	7.5
	W	745	639	482	321	213	194	168	123	63.9	57.6	38.7	20.0
1.80V	A	338.0	278.0	190.0	146.4	102.0	84.7	70.7	60.0	32.4	28.4	15.0	7.4
	W	612	578	471	310	210	192	162	120	63.4	57.0	38.6	19.9
1.85V	A	270.0	238.0	174.0	134.0	95.8	80.7	66.6	56.7	30.6	27.1	14.9	7.4
	W	451	509	430	287	202	189	155	117	62.4	54.4	38.5	19.8

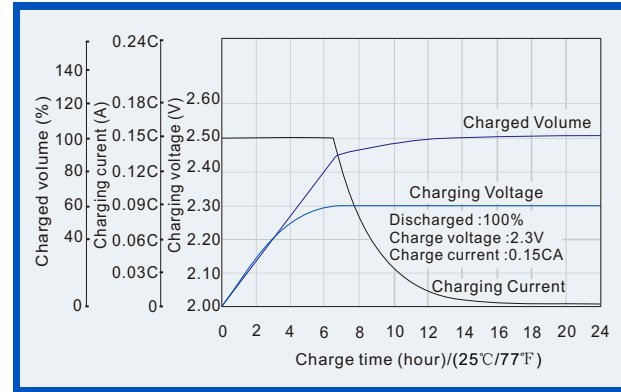
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

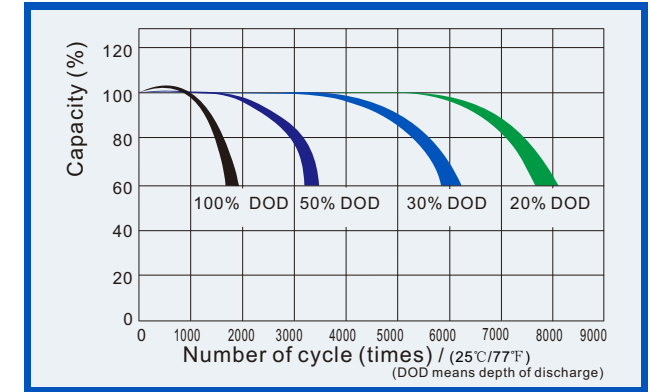
Discharge characteristics (25°C, 77°F)



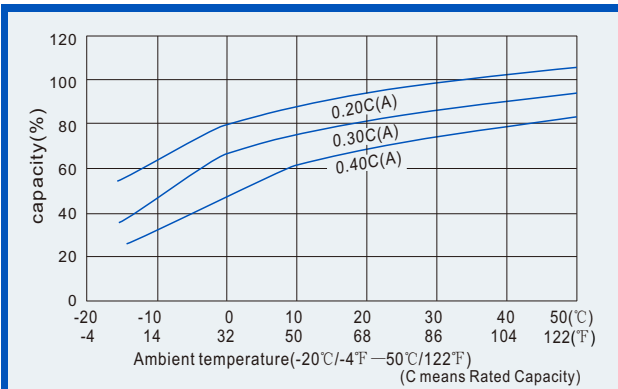
Charge characteristics (25°C, 77°F)



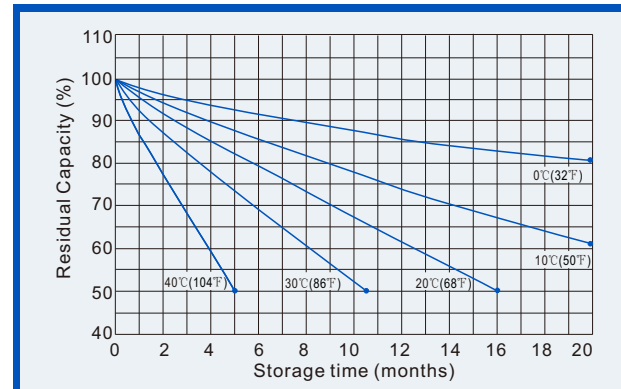
Life characteristics of Cyclic Use (25°C, 77°F)



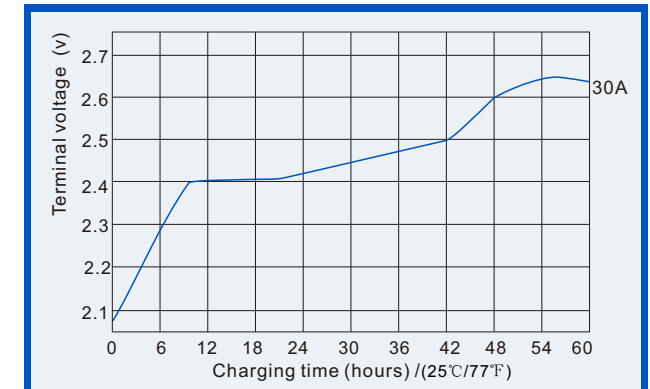
Effect of Temperature on capacity



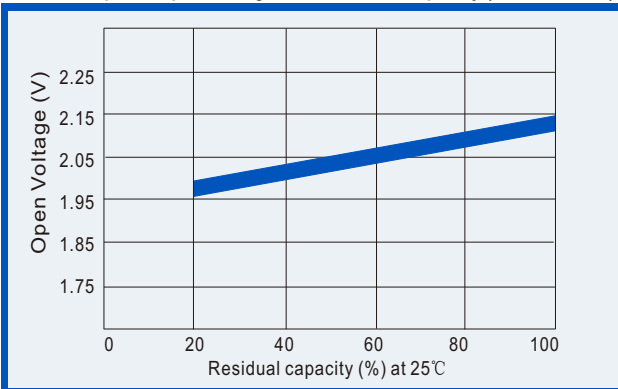
Self-discharge characteristics (with full charging)



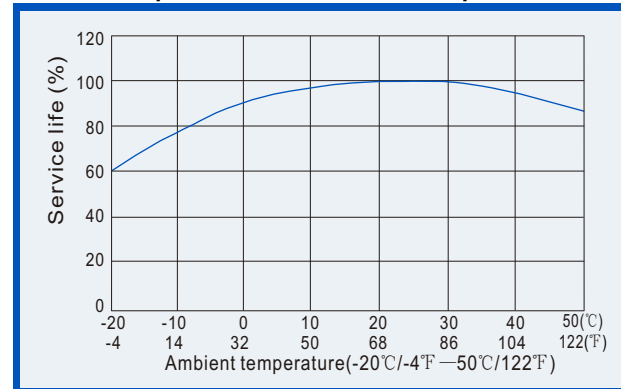
Initial charging characteristics



Relationships for open voltage and remained capacity (for reference)



Relationship for service life and temperature



Effect of discharge rate on capacity

