

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..



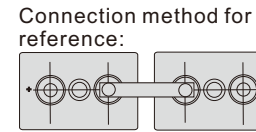
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MPPV2-600 (2V600Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		600 Ah
Dimensions (±3mm)	Total Height (Include terminal)	681mm (26.8inches)
	Height	646mm (25.4inches)
	Length	145mm (5.71inches)
	Width	206mm (8.11inches)
Approx weight (±5%)		43.0Kg (94.8lbs)

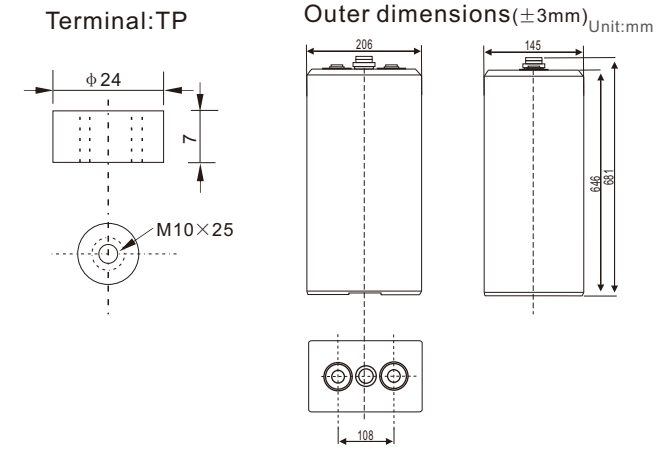
Battery picture and construction



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(60A, 1.8V) 3 hour rate(159A, 1.75V) 1 hour rate(315A, 1.75V)	600Ah 477Ah 315Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.65mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	103% 100% 85% 65%
Remaining capacity Self-Discharge At 25°C(77°F)	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°C/(77°F)	3000A (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 150 A Voltage 2.35-2.45V Temperature compensation:-3mV/°C Voltage 2.25-2.27V Temperature compensation:-3mV/°C

Constant current discharge (25°C , 77 °F)

Constant power discharge (25°C , 77 °F)

Unit:A

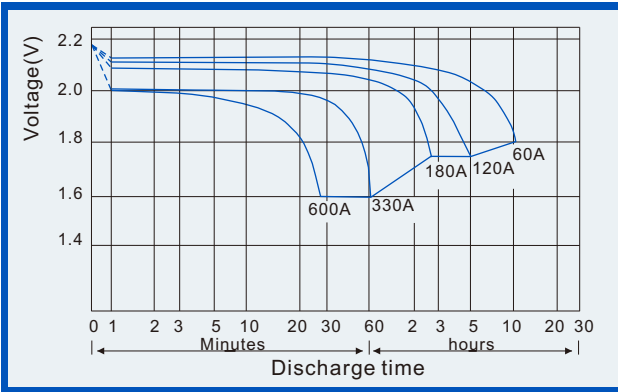
Unit:watts

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

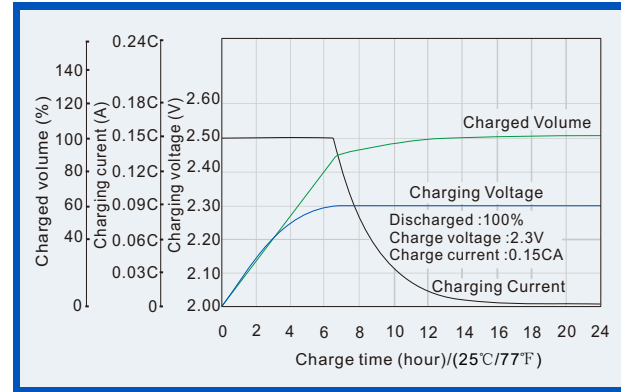
Time		30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h
1.65V	A	522.0	345.0	226.0	177.0	122.0	98.7	80.0	70.0	36.1	29.9	16.0	7.9
	W	1095	705	505	354	229	219	181	135	68	61	41	21
1.70V	A	507.0	330.0	213.0	167.0	115.0	93.3	76.7	66.0	35.3	29.8	15.9	7.9
	W	1029	684	495	342	225	212	174	131	67	61	40	21
1.75V	A	480.0	315.0	201.0	159.0	109.0	88.7	73.3	63.0	34.2	29.7	15.7	7.8
	W	941	666	482	331	222	206	168	126	67	60	40	21
1.80V	A	462.0	300.0	190.0	150.0	102.0	84.7	70.7	60.0	32.4	29.6	15.6	7.8
	W	837	624	471	318	216	198	162	123	66	59	40	21
1.85V	A	435.0	285.0	181.0	141.0	98.0	80.7	66.6	56.7	30.6	28.2	15.5	7.7
	W	726	609	447	302	207	189	155	117	62	57	40	21

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

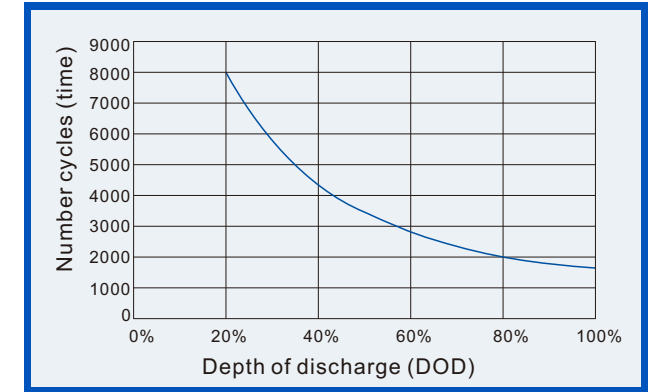
Discharge characteristics (25°C, 77°F)



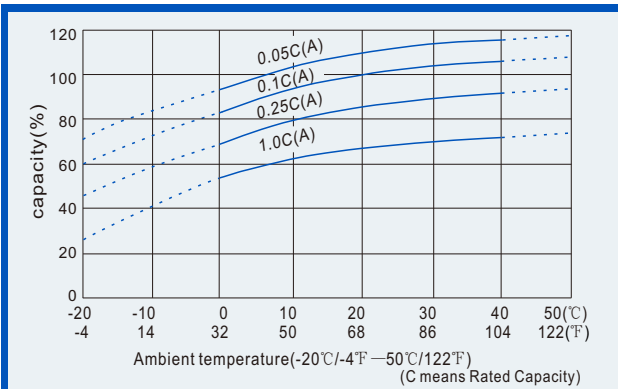
Charge characteristics (25°C, 77°F)



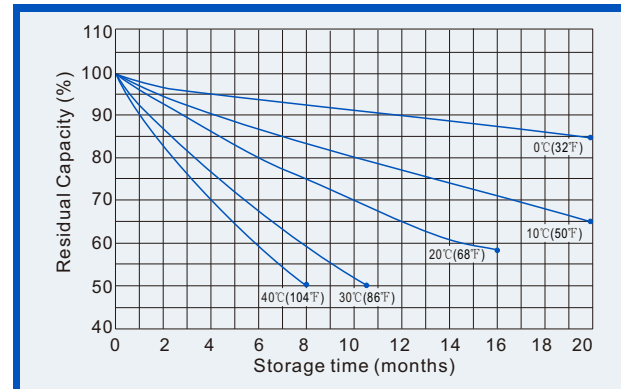
Life characteristics of Cyclic Use (25°C, 77°F)



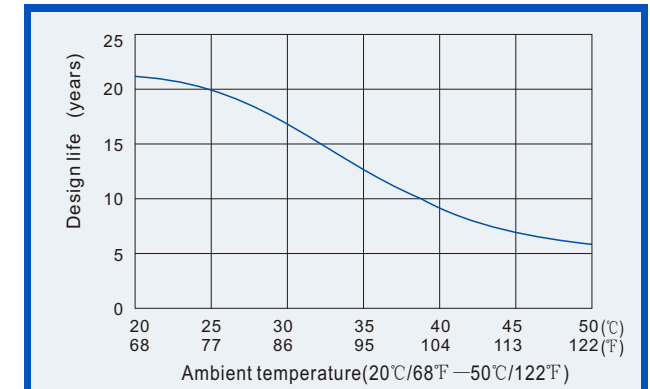
Effect of Temperature on capacity



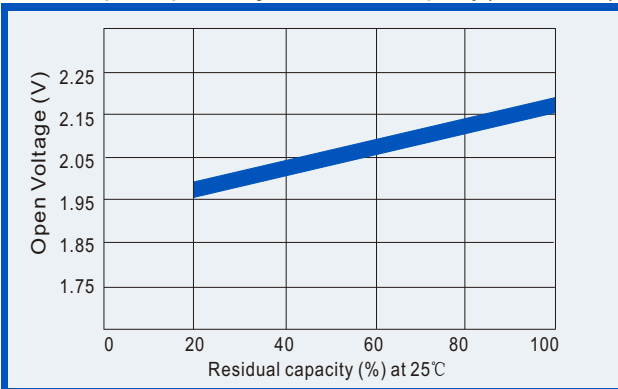
Self-discharge characteristics (with full charging)



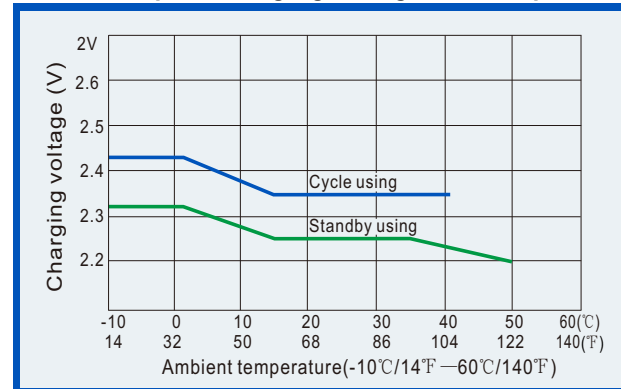
Relationships for design life and temperature



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Effect of temperature on capacity

