

General features for MPE Series (Deep-cycle) battery

- * Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- * Computer designed lead, calcium tin alloy grid for high power density.
- * UL-recognized component.
- * Long service life, float or cyclic applications.
- * Maintenance-free operation.
- * Low self discharge.
- * Case and cover are available in both standard and flame retardant ABS (Standard :UL94V0).



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MPE2-100 (2V100Ah)

Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		100 Ah
Dimensions (±2mm)	Total Height	208 mm (8.19 inches)
	Height	205 mm (8.07 inches)
	Length	171 mm (6.73 inches)
	Width	71 mm (2.80 inches)
Weight Approx (±3%)		5.7Kg (12.6 lbs)

Battery picture and construction



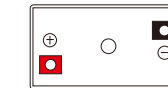
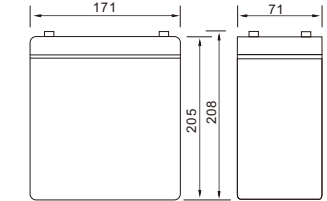
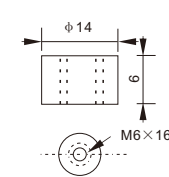
Battery Construction

Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	Fibreglass	Rubber	Copper

Outer dimension and terminal

Terminal:T16

Outer dimensions(±2mm)
Unit:mm



Characteristics

Capacity 25°C(77°F)	10 hour rate(10A, 1.8V) 5 hour rate(16A, 1.75V) 1 hour rate(60 A, 1.6V)	100Ah 80Ah 60Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 1.4 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 Capacity after 12 month storage	91% 82% 64%
Terminal type	T16	
Max. Discharge current 25°C/(77°F)	800A (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 25 A Voltage 2.42-2.50V 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)

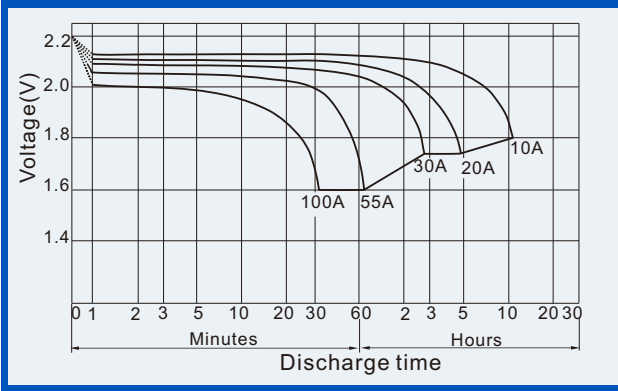
Unit:watts

Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)													
Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	A	320	211	170	114	60	35.0	25.7	20.0	16.5	11.7	10.5	6
	W	551	376	304	204	108	64	47.7	37.5	31.3	22.3	20.2	11
1.70V	A	310	190	160	109	56	33.4	25.0	19.5	16.2	11.4	10.3	5.5
	W	552	354	299	204	106	64	48.3	37.8	31.5	22.2	20.2	10.8
1.75V	A	300	170	140	102	55	32.6	24.4	19.2	16.0	11.3	10.1	5.5
	W	546	323	266	196	105	63	47.4	37.4	31.3	22.1	19.9	10.8
1.80V	A	289	161	130	94	53	31.8	23.8	18.9	15.6	11.0	10.0	5.4
	W	541	308	250	182	102	62	46.8	37.2	30.7	21.7	19.8	10.7
1.85V	A	280	150	120	84	51	31.0	23.0	18.4	15.2	10.7	9.5	5.1
	W	528	290	233	164	100	61	45.5	36.5	30.2	21.4	19.1	10.3

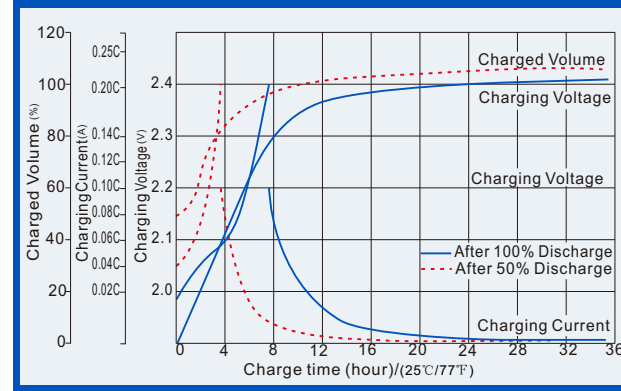
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

Deep Cycle Battery (VRLA Battery, AGM technology) Maintenance-free Sealed Lead Acid Rechargeable Battery

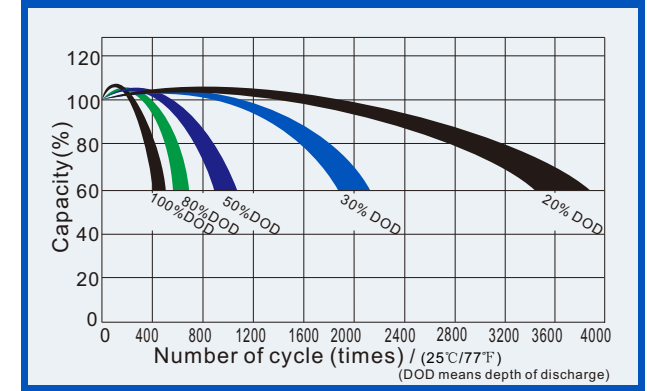
Discharge characteristics (25°C, 77°F)



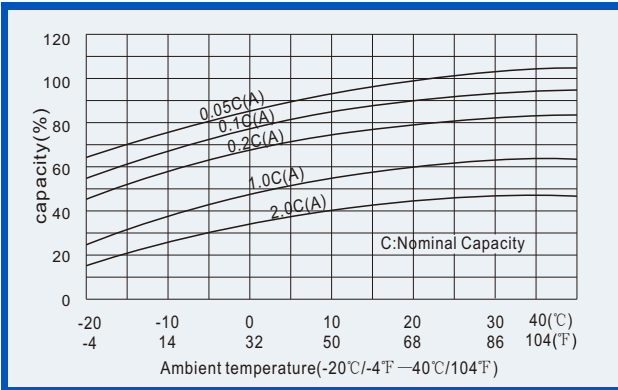
Charge characteristics (25°C, 77°F)



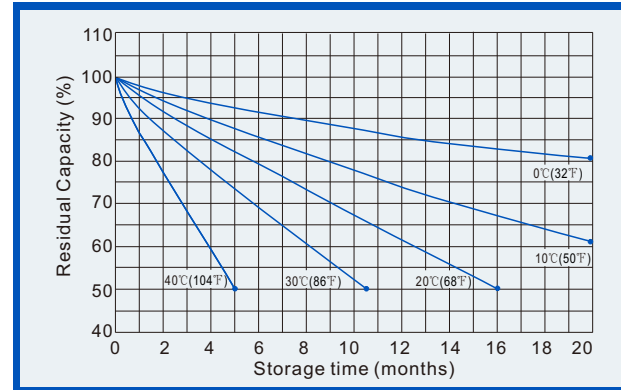
Life characteristics of Cyclic Use (25°C, 77°F)



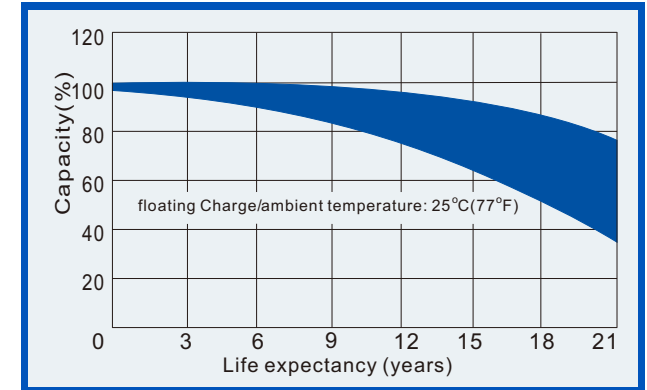
Effect of Temperature on capacity



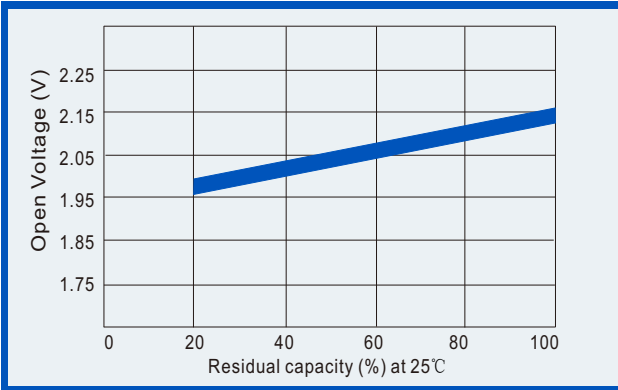
Self-discharge characteristics



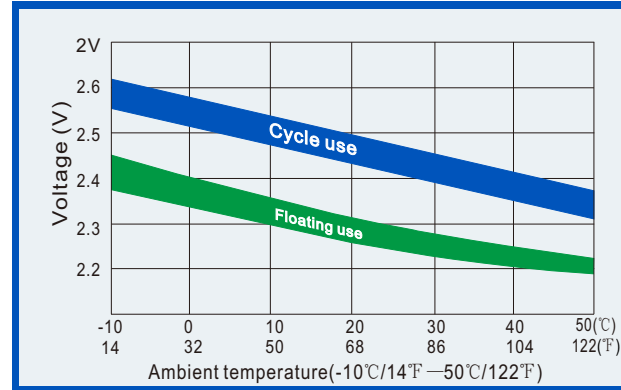
Life Characteristics of float service (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

