

## 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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**MPE2-200** (2V200Ah)

## Specifications

Nominal Voltage		2 V
Rated capacity (10 hour rate)		200 Ah
Dimensions (±2mm)	Total Height (Include top cover)	364 mm (14.3 inches)
	Height	330 mm (13.0 inches)
	Length	172 mm (6.77 inches)
	Width	111 mm (4.37 inches)
Weight Approx (±3%)		12.5 Kg (27.60 lbs)

## Battery picture and construction



Terminal position:

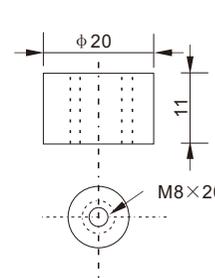


### Battery Construction

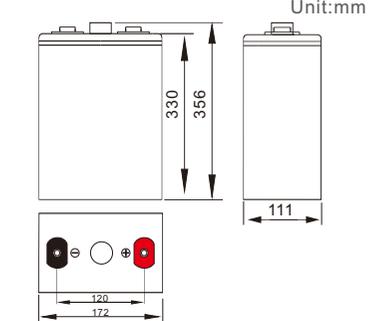
Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	Fibreglass	Rubber	Copper

## Outer dimension and terminal

Terminal: T20



Outer dimensions(±2mm)  
Unit:mm



(Total height 364mm includes the top cover)

## Characteristics

Capacity 25°C(77°F)	10 hour rate(20A, 1.8V) 5 hour rate(31.2A, 1.75V) 1 hour rate(120 A, 1.6V)	200Ah 156Ah 120Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 0.9 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	T20	
Max. Discharge current 25°C/(77°F)	1500A (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 50 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)

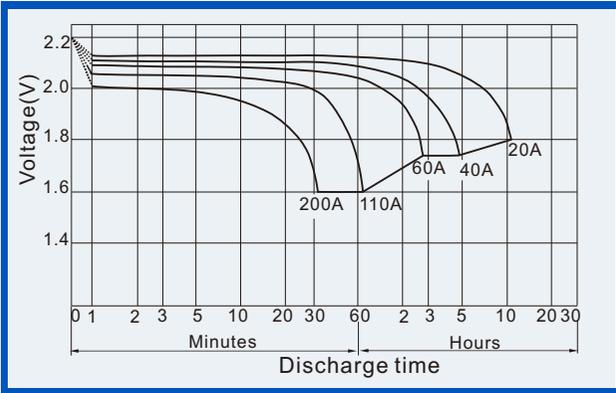
Unit:watts

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	641	422	340	228	120	70.0	51.4	40.0	33.0	23.4	21.0	11
	W	1102	751	608	409	216	128	95.3	75.0	62.5	44.7	40.4	22
1.70V	A	620	381	320	218	113	66.8	50.0	39.0	32.4	22.8	20.6	11.0
	W	1104	709	598	408	213	128	96.5	75.6	63.0	44.5	40.3	21.5
1.75V	A	600	341	280	204	109	65.2	48.8	38.4	32.0	22.6	20.2	11.0
	W	1092	646	533	391	211	126	94.8	74.9	62.5	44.3	39.8	21.7
1.80V	A	578	321	260	188	106	63.6	47.6	37.8	31.2	22.0	20.0	10.8
	W	1082	617	500	363	205	124	93.5	74.4	61.5	43.5	39.6	21.4
1.85V	A	559	301	240	168	102	62.0	46.0	36.8	30.4	21.4	19.0	10.2
	W	1057	581	466	328	200	122	91.1	73.0	60.5	42.7	38.2	20.6

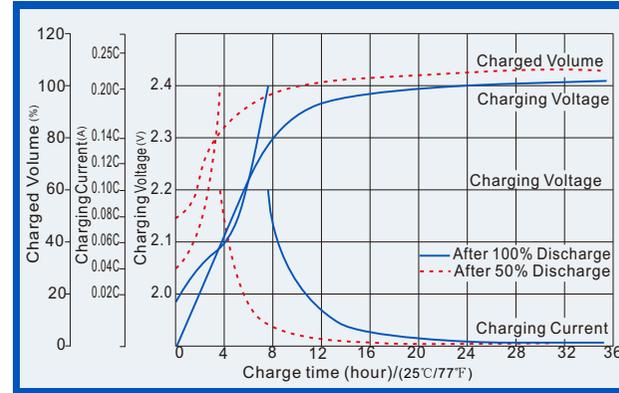
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

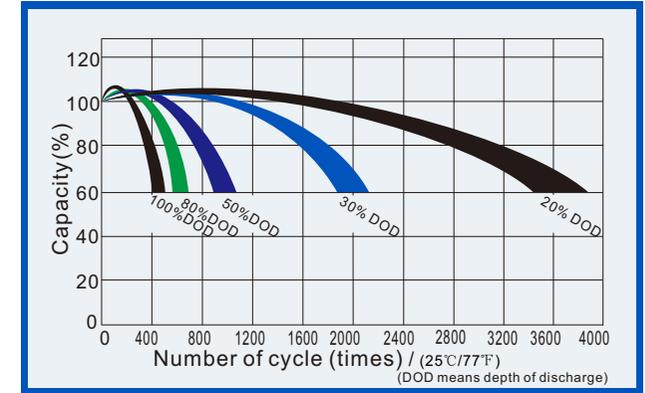
**Discharge characteristics (25°C, 77°F)**



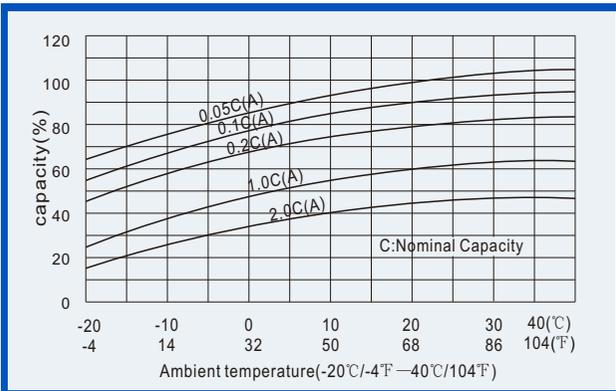
**Charge characteristics (25°C, 77°F)**



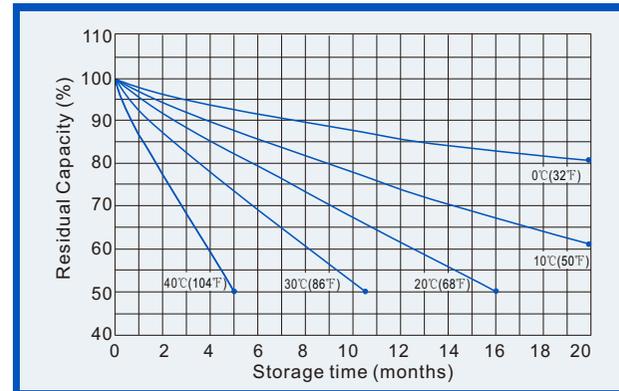
**Life characteristics of Cyclic Use (25°C, 77°F)**



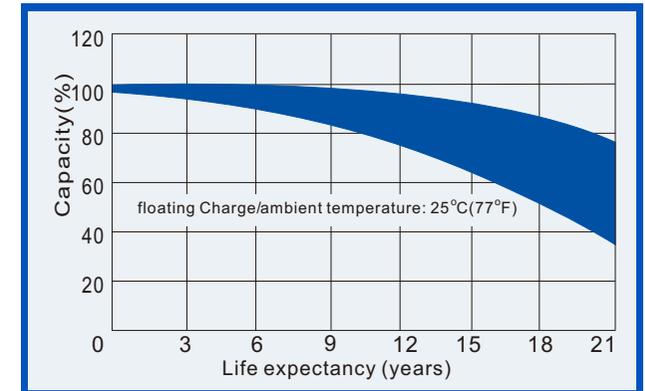
**Effect of Temperature on capacity**



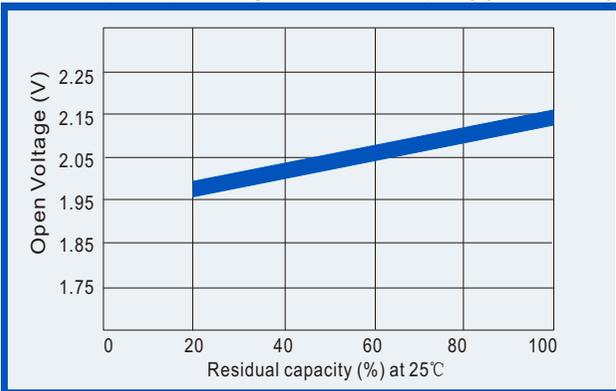
**Self-discharge characteristics**



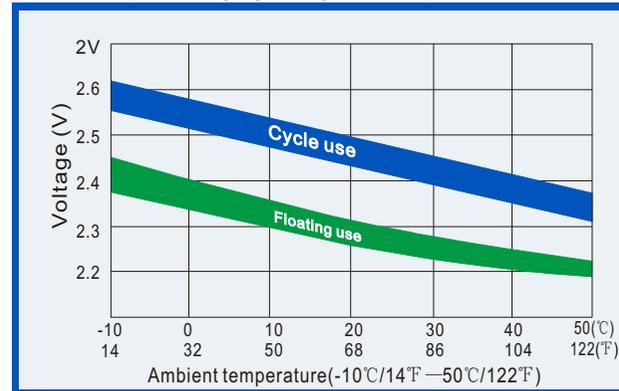
**Life Characteristics of float service (25°C, 77°F)**



**Relationships for open voltage and remained capacity (for reference)**



**Relationship for charging voltage and temperature**



**Temperature effects on floating life**

