

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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MPE12-250 (12V250Ah)

Specifications

Nominal Voltage		12V	
Rated capacity (10 hour rate)		250 Ah	
Dimensions (±2mm)	Total Height	T12	241 mm (9.45inches)
		T19	225 mm (8.82inches)
	Height	220 mm (8.66 inches)	
	Length	520 mm (20.55 inches)	
Width		268 mm (10.55 inches)	
Weight Approx (±3%)		70.5 Kg (155.2lbs)	

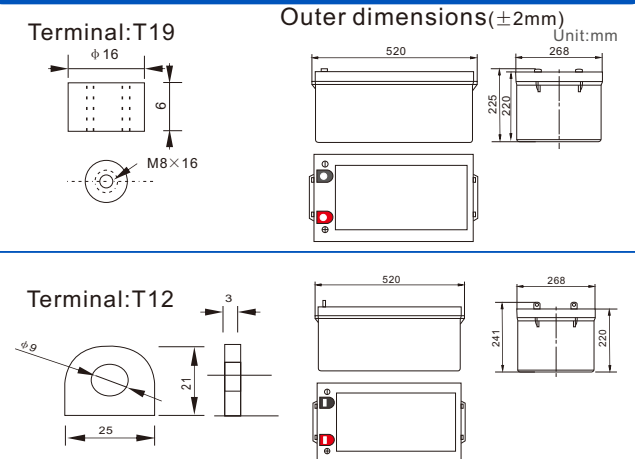
Battery picture and construction



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	Fiberglass	Rubber	Copper

Outer dimension and terminal



Characteristics

Capacity 25°C(77°F)	10 hour rate(25 A, 10.8V) 5 hour rate(40A, 10.5V) 1 hour rate(150 A, 9.6V)	250Ah 200Ah 150Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 2.3mΩ
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	T19 (Option T12)	
Max. Discharge current 25°C/(77°F)	1800A (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 62.5A Voltage 14.5-15.0V Temperature compensation:-30mV/°C Voltage 13.5-13.8V Temperature compensation:-18mV/°C

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

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

Unit:A

Unit:watts

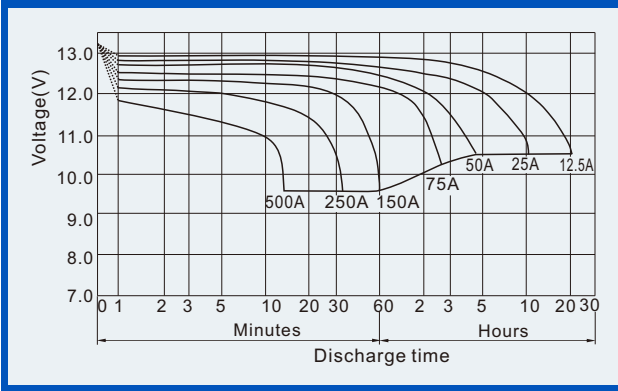
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	801	528	425	285.0	150.0	87.5	64.3	50.0	41.3	29.25	26.25	14.18
	W	8264	5634	4560	3064	1620	961	715	563	469	335	303	164.8
10.20V	A	776	476	401	272.5	141.0	83.5	62.5	48.8	40.5	28.50	25.75	13.75
	W	8282	5315	4482	3059	1595	962	724	567	472	333	303	161.3
10.50V	A	750	426	350	255.0	136.5	81.5	61.0	48.0	40.0	28.25	25.25	13.75
	W	8193	4843	3997	2935	1581	945	711	562	469	332	299	162.5
10.80V	A	723	401	326	235.0	132.0	79.5	59.5	47.3	39.0	27.50	25.00	13.50
	W	8112	4627	3750	2723	1536	931	702	558	461	326	297	160.8
11.10V	A	699	376	301	210.0	127.5	77.5	57.5	46.0	38.0	26.75	23.75	12.75
	W	7924	4354	3498	2457	1499	916	683	548	453	320	286.7	154.5

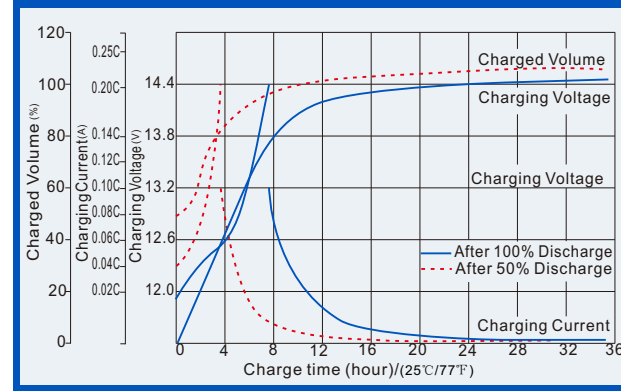
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

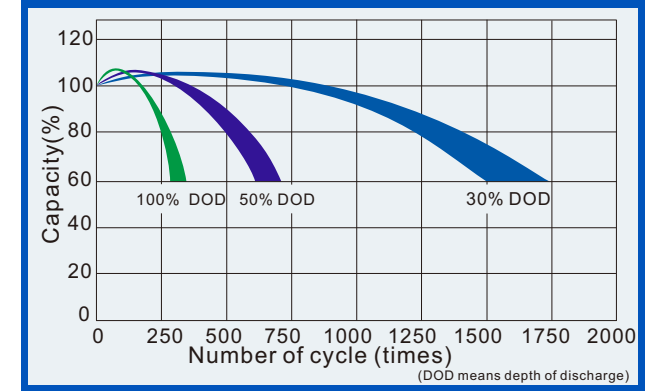
Discharge characteristics (25°C, 77°F)



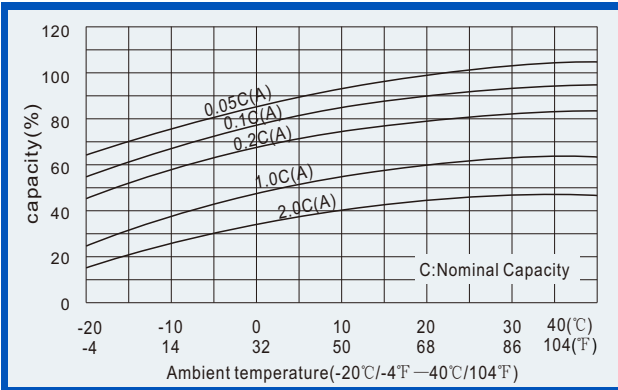
Charge characteristics (25°C, 77°F)



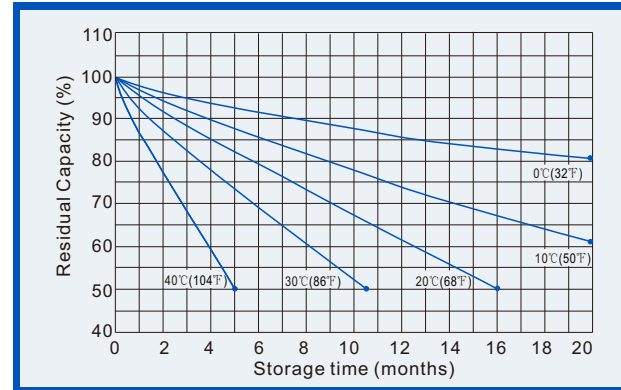
Life characteristics of Cyclic Use (25°C, 77°F)



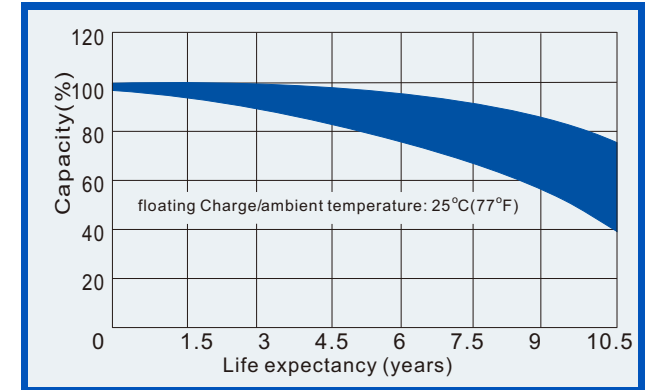
Effect of Temperature on capacity



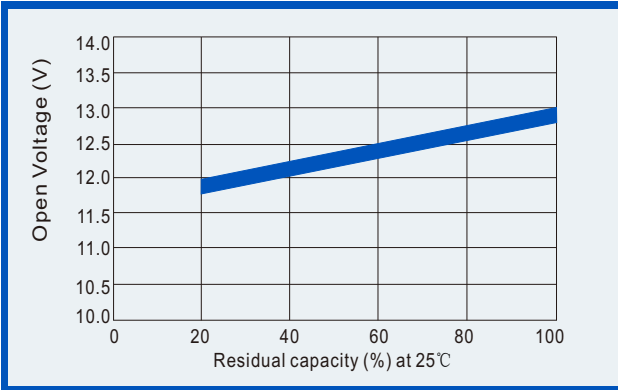
Self-discharge characteristics



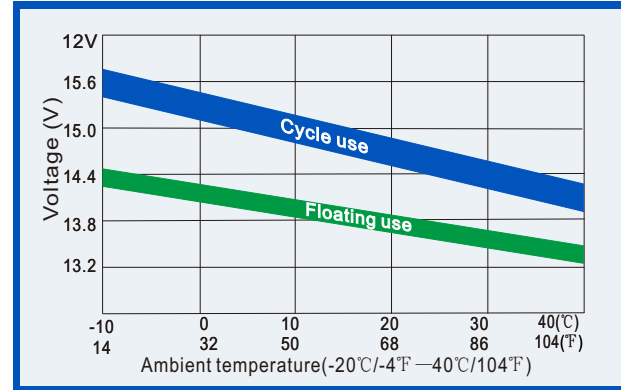
Life Characteristics of standby use (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

