

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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MPE12-150 (12V150Ah)

Specifications

Nominal Voltage		12V	
Rated capacity (10 hour rate)		150 Ah	
Dimensions (±2mm)	Total Height	T50	241mm (9.49inches)
		T12	241mm (9.49inches)
	Height	241 mm (9.49 inches)	
	Length	484 mm (19.1 inches)	
	Width	171 mm (6.73inches)	
Weight Approx (±3%)		43.0 Kg (94.8lbs)	

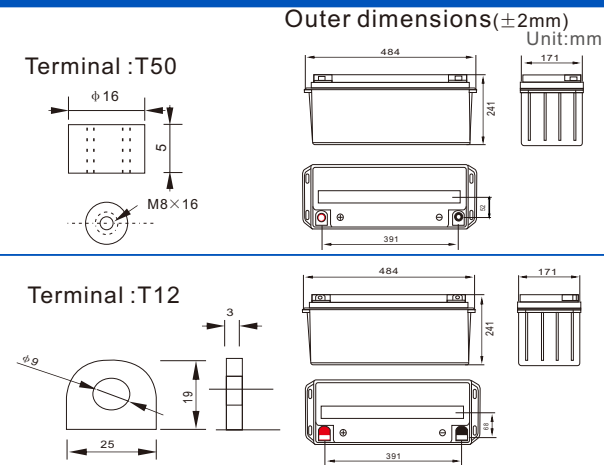
Battery picture and construction



Battery Construction

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

Outer dimension and terminal



Characteristics

Capacity 25°C(77°F)	10 hour rate(15.0 A,10.8V) 5 hour rate(24.0A,10.5V) 1 hour rate(90 A,9.6V)	150 Ah 120Ah 90 Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 3.6mΩ
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	T50 (Option T12)	
Max. Discharge current 25°C/(77°F)	1000A (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 37.5 A 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

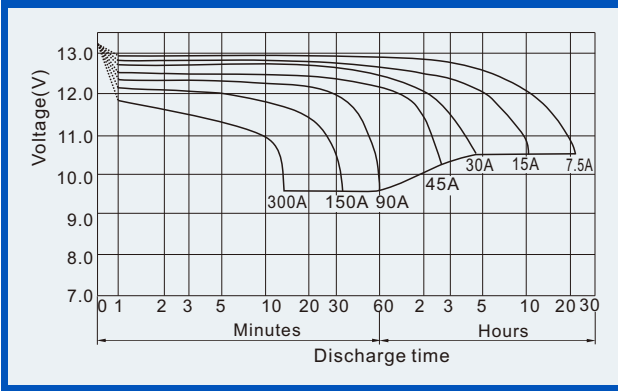
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	480	317	255	171.0	90.0	52.5	38.6	30.0	24.8	17.55	8.51
	W	4958	3380	2736	1839	972	576	429	338	281	201	98.9
10.20V	A	465	286	240	163.5	84.6	50.1	37.5	29.3	24.3	17.10	8.25
	W	4969	3189	2689	1835	957	577	434	340	283	200	96.8
10.50V	A	450	255	210	153.0	81.9	48.9	36.6	28.8	24.0	16.95	8.25
	W	4916	2906	2398	1761	948	567	426	337	281	199	97.5
10.80V	A	434	241	195	141.0	79.2	47.7	35.7	28.4	23.4	16.50	8.10
	W	4867	2776	2250	1634	922	559	421	335	277	196	96.5
11.10V	A	419	226	180	126.0	76.5	46.5	34.5	27.6	22.8	16.05	7.65
	W	4754	2612	2099	1474	900	550	410	329	272	192	92.7

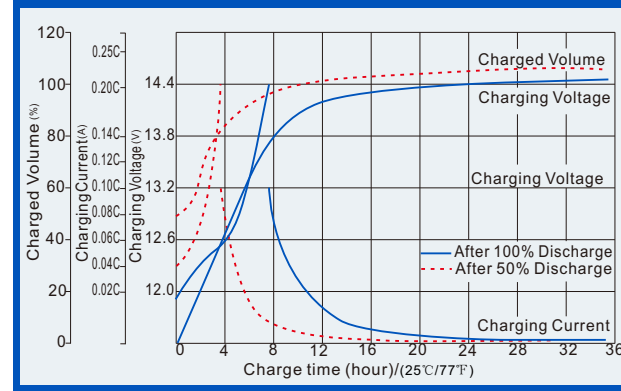
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

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

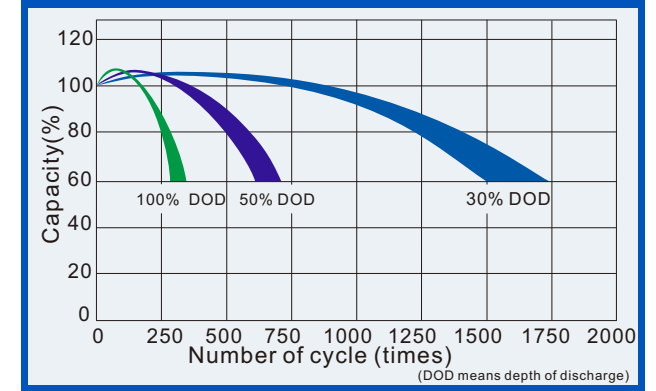
Discharge characteristics (25°C, 77°F)



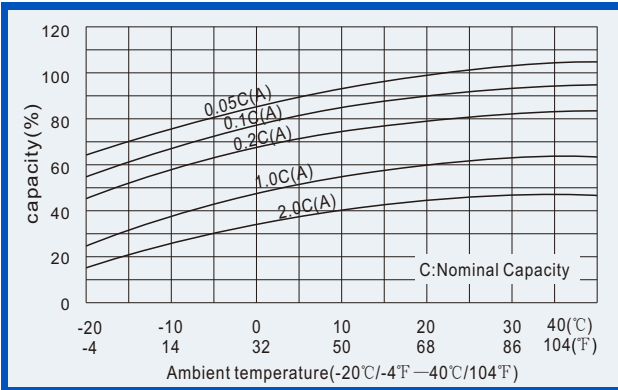
Charge characteristics (25°C, 77°F)



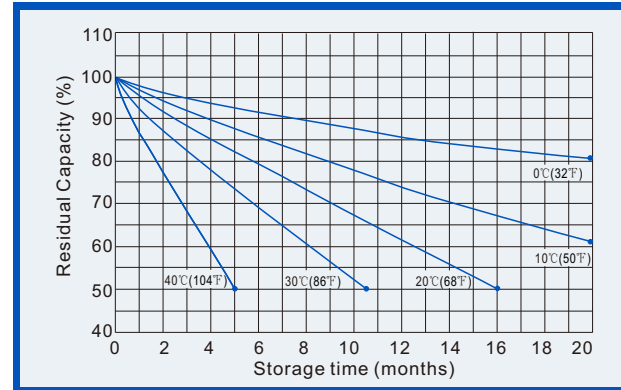
Life characteristics of Cyclic Use (25°C, 77°F)



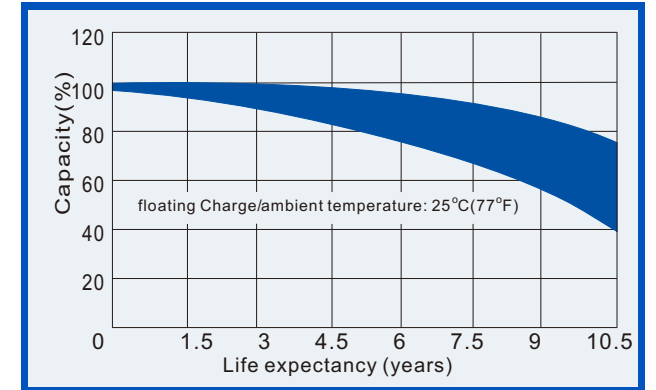
Effect of Temperature on capacity



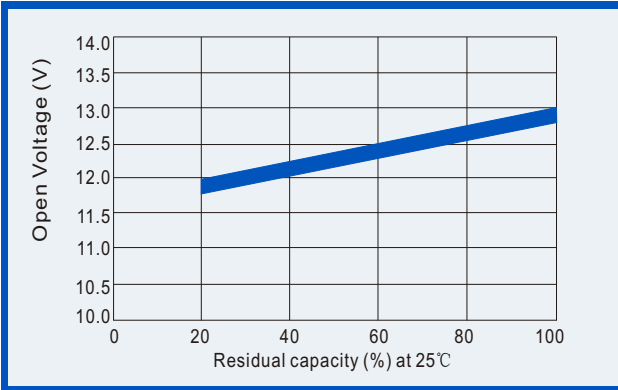
Self-discharge characteristics



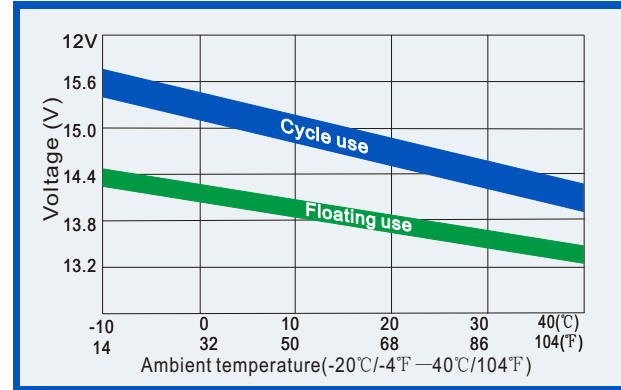
Life Characteristics of standby use (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

