

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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MPE12-55 (12V55Ah)

Specifications

Nominal Voltage		12V	
Rated capacity (10 hour rate)		55 Ah	
Dimensions (±2mm)	Total Height	T16	216 mm (8.50 inches)
		T9	228 mm (8.98 inches)
	Height	208 mm (8.19 inches)	
	Length	230 mm (9.1 inches)	
Weight Approx (±3%)		17.0Kg (37.4 lbs)	

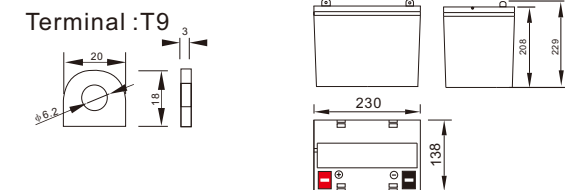
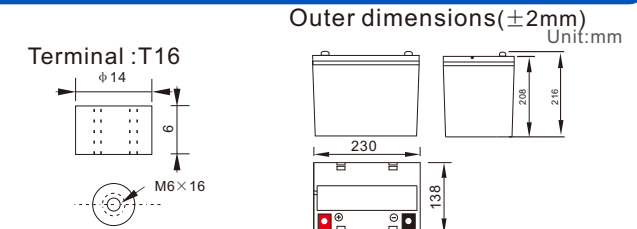
Battery picture and construction



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	Fiberglass	Rubber	Copper

Outer dimension and terminal



Characteristics

Capacity 25°C(77°F)	10 hour rate(5.5A,10.8V) 5 hour rate(8.8A,10.5V) 1 hour rate(133A,9.6V)	55Ah 44Ah 33Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 6.0mΩ
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 (Option T9)	
Max. Discharge current 25°C/(77°F)	550A (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	Initial Charging Current less than 13.8A Voltage 14.5-15.0V Temperature compensation:-30mV/°C
	Standby use	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

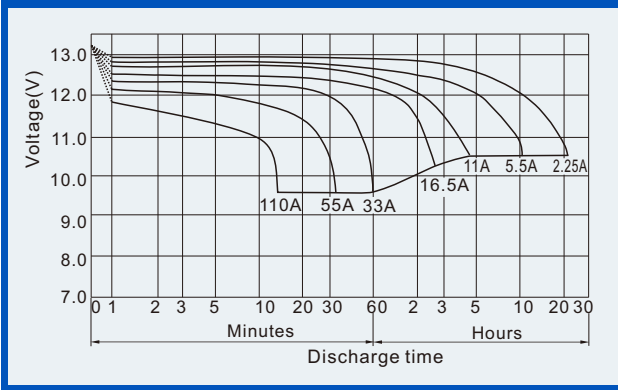
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
		9.60V	A	176	116	94	62.7	33.0	19.3	14.1	11.0	9.1	6.44
	W	1818	1239	1003	674	356	211	157	124	103	74	67	36.3
10.20V	A	171	105	88	60.0	31.0	18.4	13.8	10.7	8.9	6.27	5.67	3.03
	W	1822	1169	986	673	351	212	159	125	104	73	67	35.5
10.50V	A	165	94	77	56.1	30.0	17.9	13.4	10.6	8.8	6.22	5.56	3.03
	W	1802	1066	879	646	348	208	156	124	103	73	66	35.8
10.80V	A	159	88	72	51.7	29.0	17.5	13.1	10.4	8.6	6.05	5.50	2.97
	W	1785	1018	825	599	338	205	154	123	101	72	65	35.4
11.10V	A	154	83	66	46.2	28.1	17.1	12.7	10.1	8.4	5.89	5.23	2.81
	W	1743	958	770	541	330	202	150	121	100	70	63.1	34.0

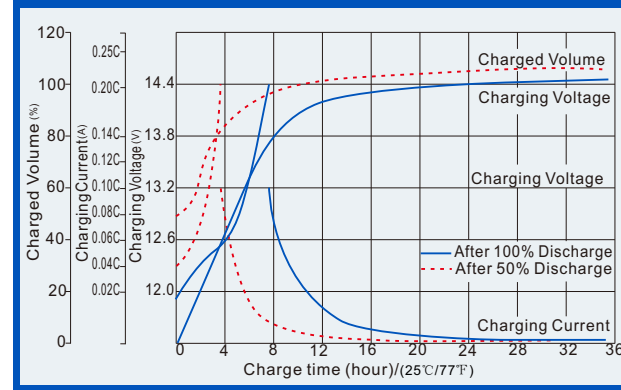
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

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

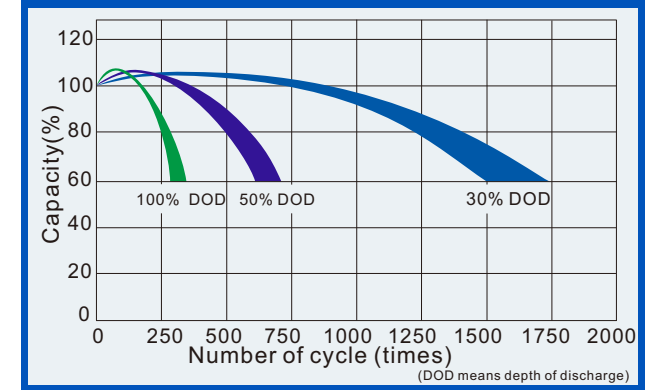
Discharge characteristics (25°C, 77°F)



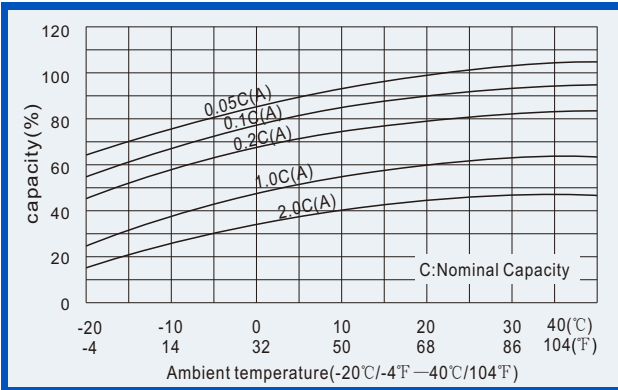
Charge characteristics (25°C, 77°F)



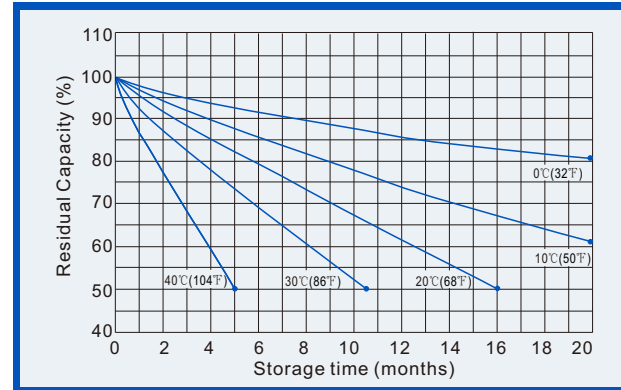
Life characteristics of Cyclic Use (25°C, 77°F)



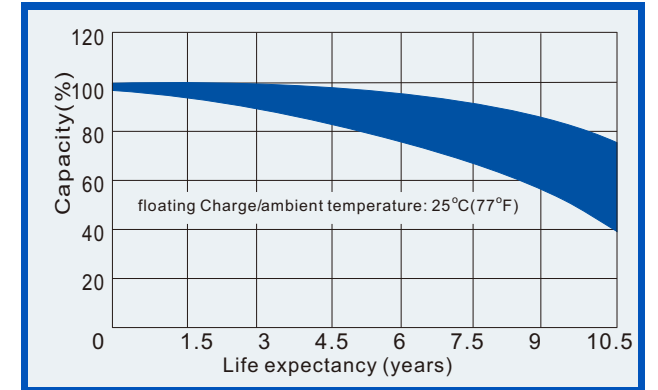
Effect of Temperature on capacity



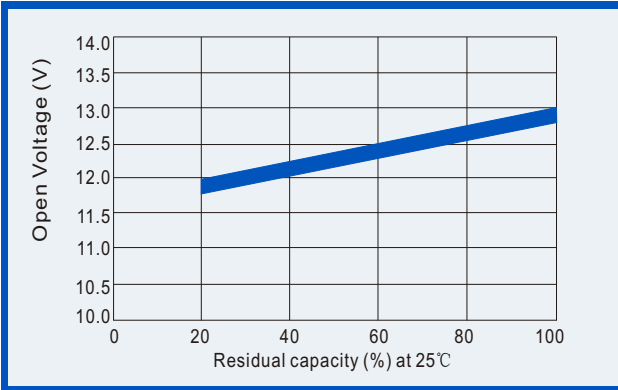
Self-discharge characteristics



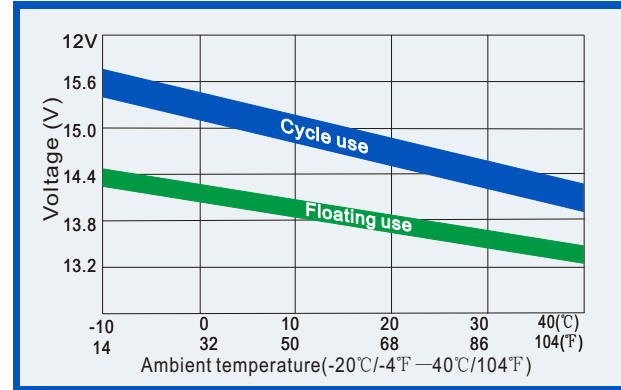
Life Characteristics of standby use (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

