

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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MPE12-180 (12V180Ah)

Specifications

Nominal Voltage		12V	
Rated capacity (10 hour rate)		180 Ah	
Dimensions (±2mm)	Total Height	T11	237mm (9.33inches)
		T60	221mm (8.70inches)
	Height	216 mm (8.50 inches)	
	Length	534 mm (21.1 inches)	
Width		209 mm (8.23 inches)	
Weight Approx (±3%)		50 Kg (110.0 lbs)	

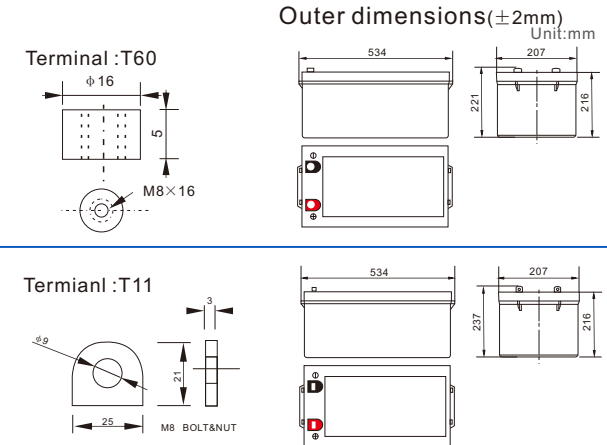
Battery picture and construction



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(18.0 A, 10.8V)	180 Ah
	5 hour rate(28.8A, 10.5V)	144Ah
	1 hour rate(108 A, 9.6V)	108 Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 3.5mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
	-15°C (5°F)	65%
Remaining capacity Self-Discharge At 25°C(77°F)	Capacity after 3 month storage	91%
	Capacity after 6 month storage	82%
	Capacity after 12 month storage	64%
Terminal type		T60 (Option T11)
Max. Discharge current 25°C/(77°F)		1300A (5Seconds)
Nominal operating temperature		25°C ±5°C(77°F ±9°F)
Operating Temperature Range	Discharge	-15°C ~50°C (5°F ~122°F)
	Charge	-10°C ~50°C (14°F ~122°F)
	Storage	-20°C ~50°C (-4°F ~122°F)
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use	Initial Charging Current less than 45 A 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

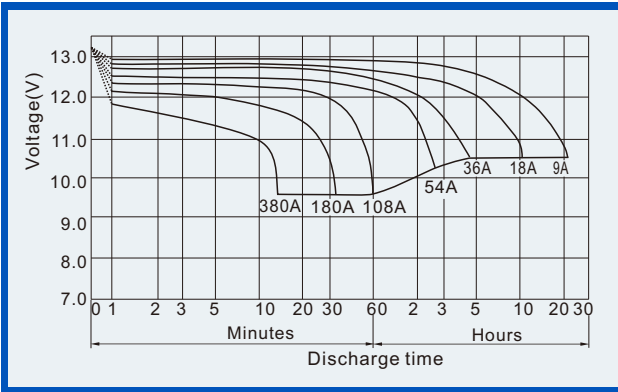
Unit:watts

Time	Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)												
	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h	
9.60V	A	577	380	306	205.2	108.0	63.0	46.3	36.0	29.7	21.06	18.90	10.21
	W	5950	4056	3283	2206	1166	692	515	405	338	241	218	118.7
10.20V	A	558	343	288	196.2	101.5	60.1	45.0	35.1	29.2	20.52	18.54	9.90
	W	5963	3827	3227	2203	1148	693	521	408	340	240	218	116.1
10.50V	A	540	307	252	183.6	98.3	58.7	43.9	34.6	28.8	20.34	18.18	9.90
	W	5899	3487	2878	2113	1138	681	512	404	338	239	215	117.0
10.80V	A	521	289	234	169.2	95.0	57.2	42.8	34.0	28.1	19.80	18.00	9.72
	W	5841	3332	2700	1960	1106	670	505	402	332	235	214	115.8
11.10V	A	503	271	216	151.2	91.8	55.8	41.4	33.1	27.4	19.26	17.10	9.18
	W	5705	3135	2518	1769	1080	660	492	394	327	231	206.4	111.3

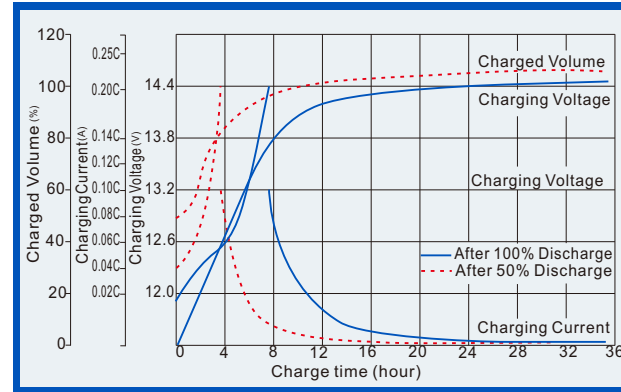
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

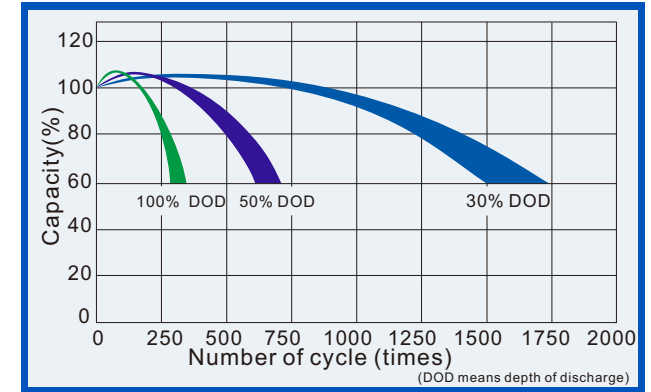
Discharge characteristics (25°C, 77°F)



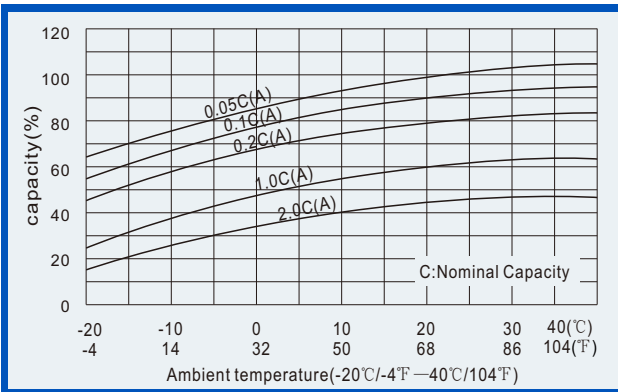
Charge characteristics (25°C, 77°F)



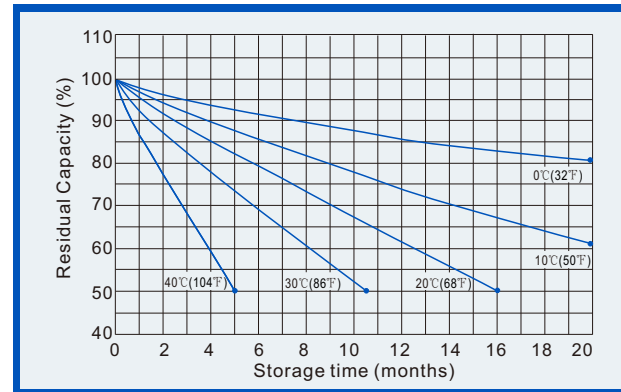
Life characteristics of Cyclic Use (25°C, 77°F)



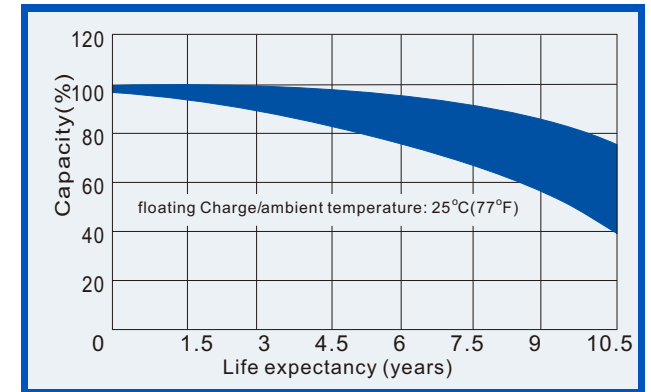
Effect of Temperature on capacity



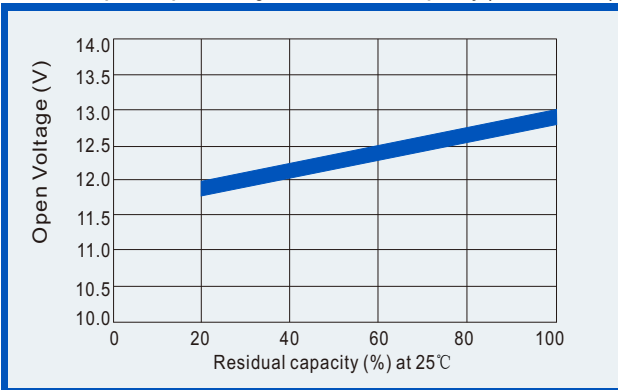
Self-discharge characteristics



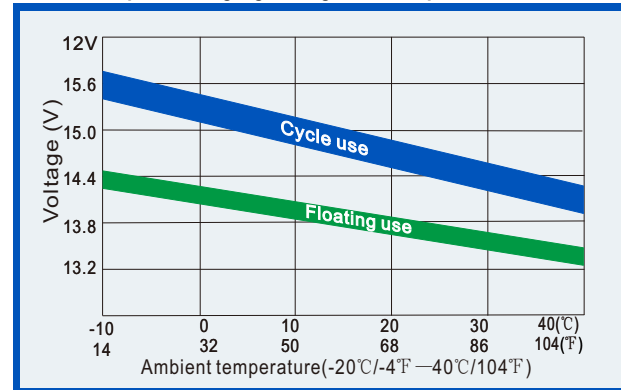
Life Characteristics of standby use (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

