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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MPE12-100 (12V100Ah)

Specifications

Nominal Voltage			12V
Rated capacity (10 hour rate)			100 Ah
Dimensions (±2mm)	Total Height	T16	218mm (8.58inches)
		T10	235mm (9.25inches)
	Height		213 mm (8.39 inches)
	Length		331 mm (13.0 inches)
	Width		173 mm (6.81inches)
Weight Approx (±3%)			30.0 Kg (66.1lbs)

Battery picture and construction

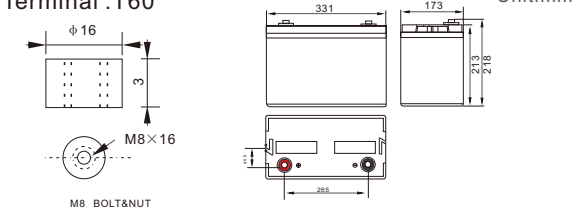
Battery Construction

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

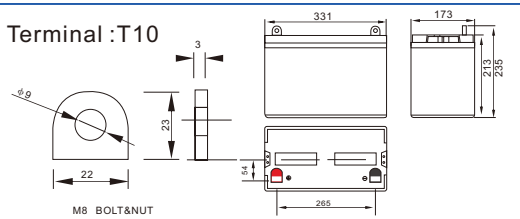
Outer dimension and terminal

Outer dimensions(±2mm) Unit:mm

Terminal :T60



Terminal :T10



Characteristics

Capacity 25℃(77℉)	10 hour rate(10.0 A,10.8V) 5 hour rate(16.0A,10.5V) 1 hour rate(60 A,9.6V)	100 Ah 80Ah 60Ah
Internal Resistance	Full charged battery at 25℃(77℉)	Approx 4.6mΩ
Capacity affected by Temperature (10hour rate)	40℃ (104℉) 25℃ (77℉) 0℃ (32℉) -15℃ (5℉)	102% 100% 85% 65%
Remaining capaicty Self-Discharge At 25℃(77℉)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Terminal type		T60 (Option T10)
Max. Discharge current 25℃/(77℉)		830A (5Seconds)
Nominal operating temperature		25℃ ±5℃(77℉ ±9℉)
Operating Temperature Range	Discharge Charge Storage	-15℃～50℃ (5℉～122℉) -10℃～50℃ (14℉～122℉) -20℃～50℃ (-4℉～122℉)
Charge methods (constant Voltage) At 25℃(77℉)	Cycle use	Initial Charging Current less than 25 A Voltage 14.5-15.0V Temperature compensation:-30mV/℃
	Standby use	Voltage 13.5-13.8V Temperature compensation:-18mV/℃

Constant current discharge (25℃ , 77 ℉)

Unit:A

Constant power discharge (25℃ , 77 ℉)

Unit:watts

Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25℃(77℉)

Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	320	211	170	114.0	60.0	35.0	25.7	20.0	16.5	11.70	10.50	5.67
	W	3305	2253	1824	1226	648	384	286	225	188	134	121	65.9
10.20V	A	310	190	160	109.0	56.4	33.4	25.0	19.5	16.2	11.40	10.30	5.50
	W	3313	2126	1793	1224	638	385	290	227	189	133	121	64.5
10.50V	A	300	170	140	102.0	54.6	32.6	24.4	19.2	16.0	11.30	10.10	5.50
	W	3277	1937	1599	1174	632	378	284	225	188	133	120	65.0
10.80V	A	289	161	130	94.0	52.8	31.8	23.8	18.9	15.6	11.00	10.00	5.40
	W	3245	1851	1500	1089	615	372	281	223	184	130	119	64.3
11.10V	A	280	150	120	84.0	51.0	31.0	23.0	18.4	15.2	10.70	9.50	5.10
	W	3170	1742	1399	983	600	366	273	219	181	128	114.7	61.8

(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 Rechageable Battery

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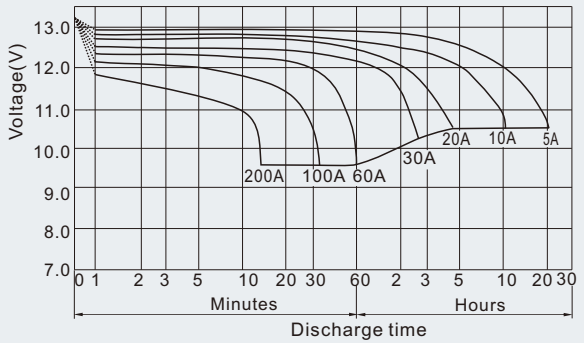
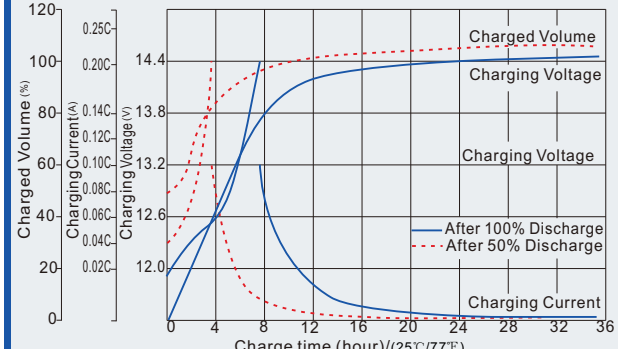
MPE12-100 (12V100Ah)

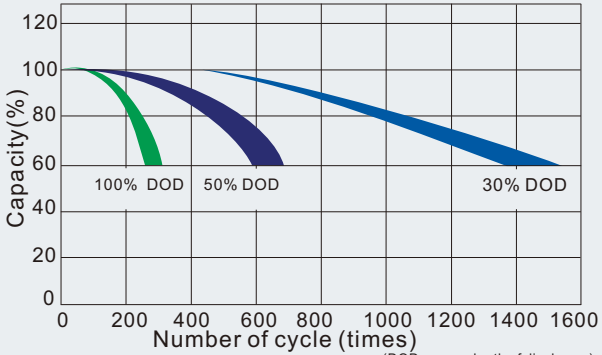
Discharge characteristics (25℃,77℉)



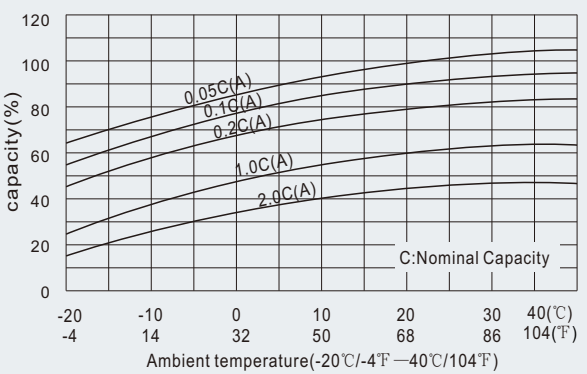
Charge characteristics (25℃,77℉)



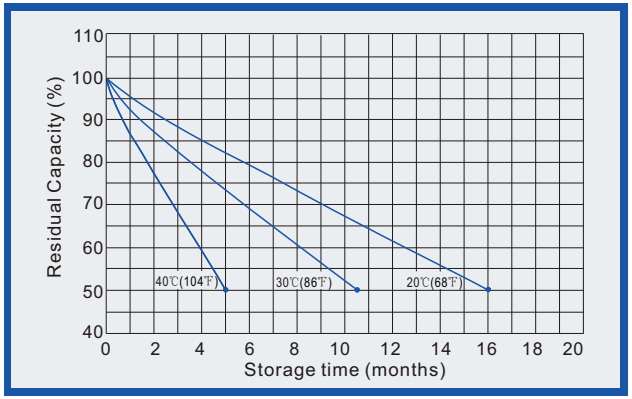
Life characteristics of Cyclic Use (25℃,77℉)



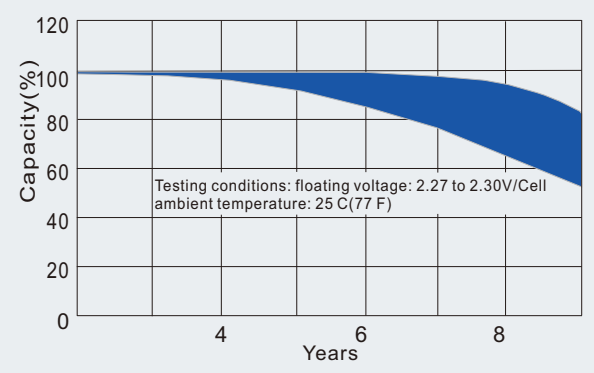
Effect of Temperature on capacity



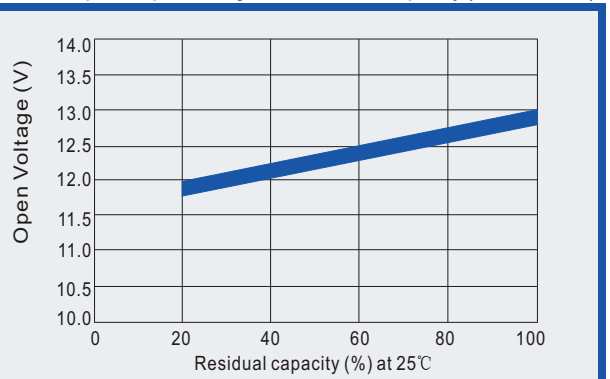
Self-discharge characteristics



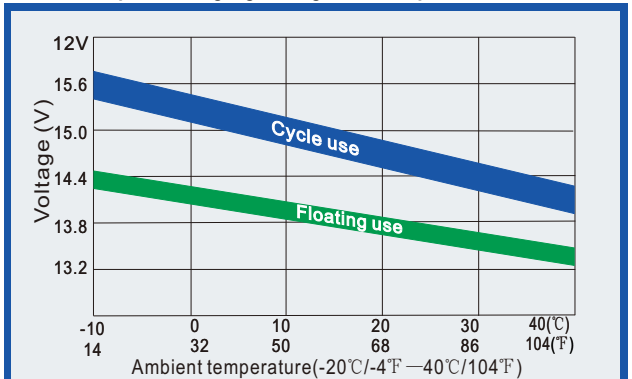
Life Characteristics of standby use (25℃,77℉)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life