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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MPE12-70 (12V70Ah)

Specifications

Nominal Voltage			12V
Rated capacity (10 hour rate)			70 Ah
Dimensions (±2mm)	Total Height	T16	216 mm (8.50 inches)
		T33	228 mm (8.98 inches)
	Height		208 mm (8.19 inches)
	Length		260 mm (10.2 inches)
	Width		169 mm (6.65 inches)
Weight Approx (±3%)			21.5 Kg (47.5 lbs)

Battery picture and construction

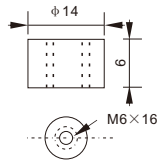
Battery Construction

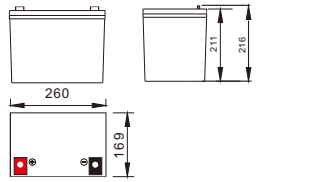
Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	Fiberglass	Rubber	Copper

Outer dimension and terminal

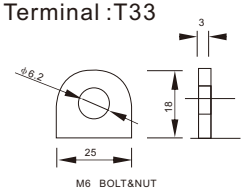
Outer dimensions(±2mm)
Unit:mm

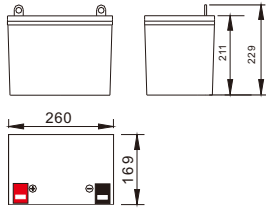
Terminal :T16





Terminal :T33





Characteristics

Capacity 25℃(77℉)	10 hour rate(7.0 A,10.8V) 5 hour rate(12.3A,10.5V) 1 hour rate(43.8 A,9.6V)	70Ah 61.5Ah 43.8Ah
Internal Resistance	Full charged battery at 25℃(77℉)	Approx 5.5mΩ
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		T16 (Option T33)
Max. Discharge current 25℃/(77℉)		700A (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 17.5A Voltage 14.5-15.0V Temperature compensation:-30mV/℃
	Standby use	Voltage 13.6-13.8V 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	224	148	119	79.8	42.0	24.5	18.0	14.0	11.6	8.19	7.35	3.97
	W	2314	1577	1277	858	454	269	200	158	131	94	85	46.2
10.20V	A	217	133	112	76.3	39.5	23.4	17.5	13.7	11.3	7.98	7.21	3.85
	W	2319	1488	1255	857	447	269	203	159	132	93	85	45.2
10.50V	A	210	119	98	71.4	38.2	22.8	17.1	13.4	11.2	7.91	7.07	3.85
	W	2294	1356	1119	822	443	265	199	157	131	93	84	45.5
10.80V	A	202	112	91	65.8	37.0	22.3	16.7	13.2	10.9	7.70	7.00	3.78
	W	2271	1296	1050	762	430	261	196	156	129	91	83	45.0
11.10V	A	196	105	84	58.8	35.7	21.7	16.1	12.9	10.6	7.49	6.65	3.57
	W	2219	1219	979	688	420	256	191	153	127	90	80.3	43.3

(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 Rechageable Battery

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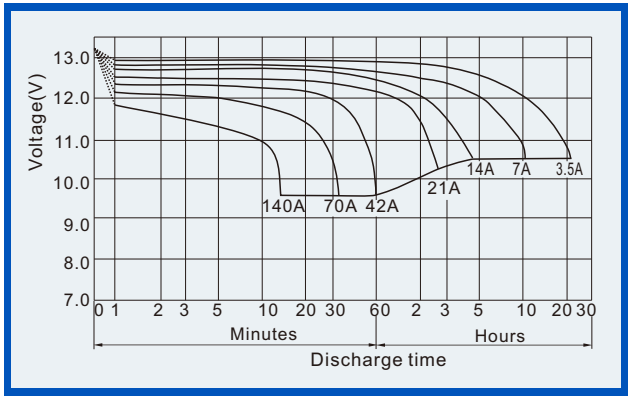
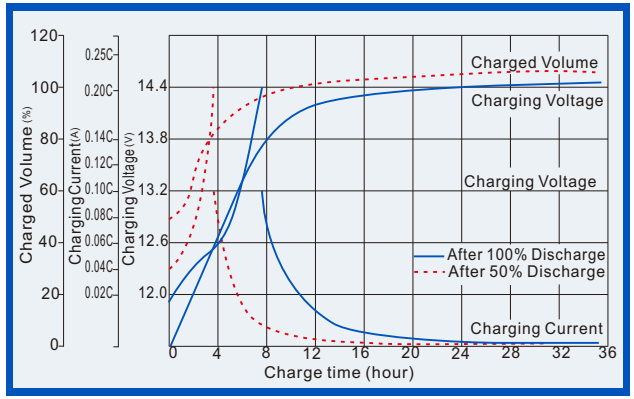
MPE12-70 (12V70Ah)

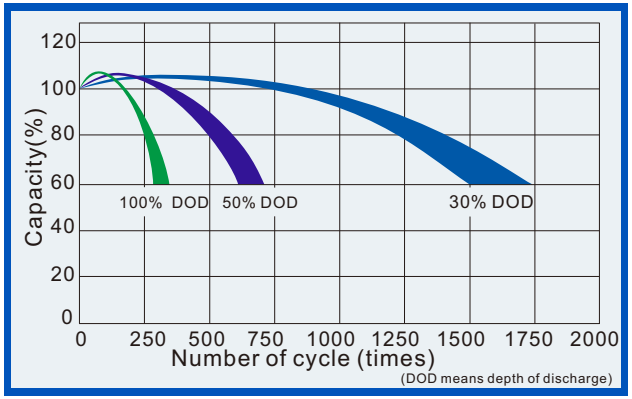
Discharge characteristics (25℃,77℉)



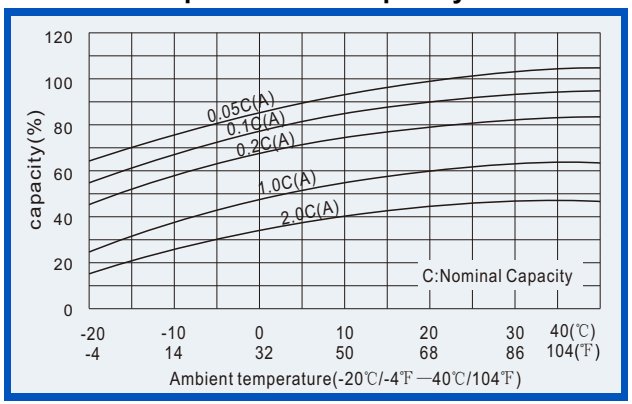
Charge characteristics (25℃,77℉)



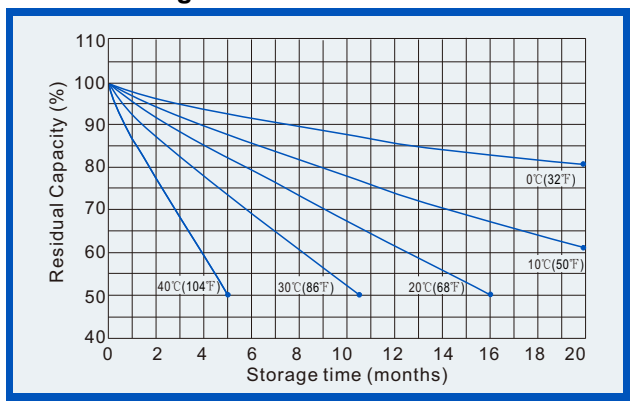
Life characteristics of Cyclic Use (25℃,77℉)



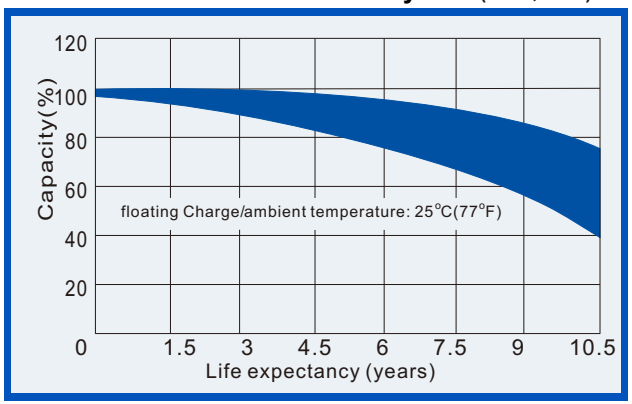
Effect of Temperature on capacity



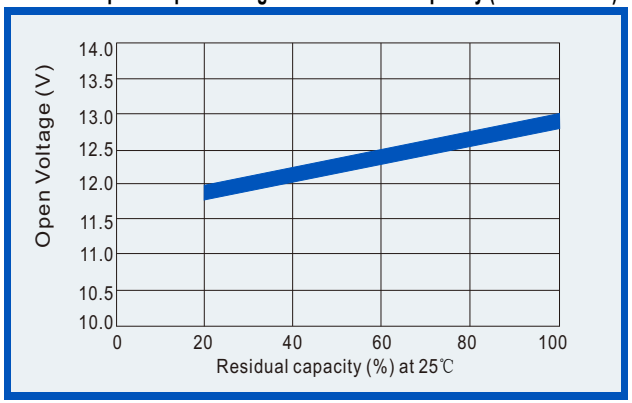
Self-discharge characteristics



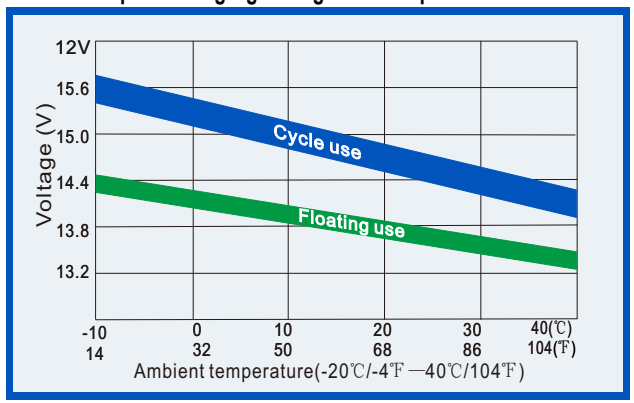
Life Characteristics of standby use (25℃,77℉)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life