

## 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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**MPE12-35 (12V35Ah)**

## Specifications

Nominal Voltage		12V	
Rated capacity (10 hour rate)		35 Ah	
Dimensions (±2mm)	Total Height	T65	180 mm (7.09 inches)
		T16	168 mm (6.61 inches)
	Height	155 mm (6.10 inches)	
	Length	196 mm (7.70 inches)	
Width		131mm (5.16 inches)	
Weight Approx (±3%)		10.1Kg (22.3 lbs)	

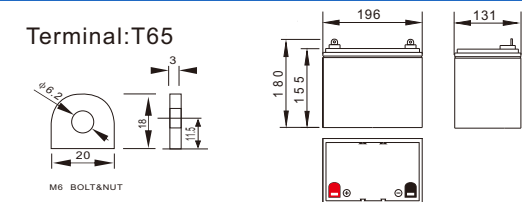
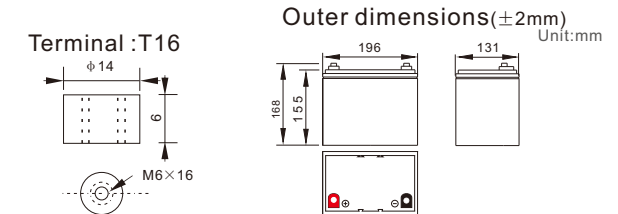
## Battery picture and construction



### 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(3.5 A, 10.8V) 5 hour rate(5.6A, 10.5V) 1 hour rate(21 A, 9.6V)	35Ah 28Ah 21Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 9.2mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
Remaining capacity Self-Discharge At 25°C(77°F)	-15°C (5°F)	65%
	Capacity after 3 month storage	91%
	Capacity after 6 month storage	82%
Capacity after 12 month storage		64%
Terminal type	T16 (Option T65)	
Max. Discharge current 25°C/(77°F)	350A (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 10.5A 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

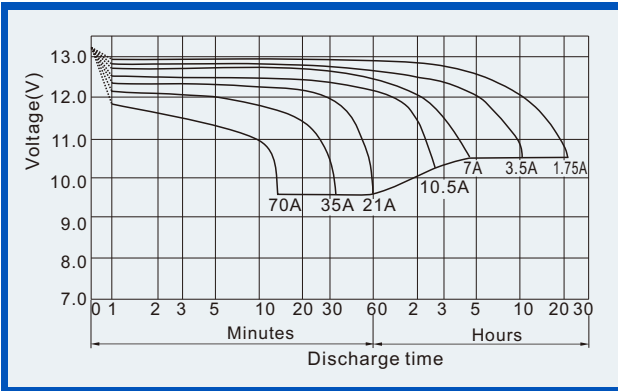
### Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	130	95	67	40	21	12	9.0	7.0	5.8	4.1	1.98
	W	1375	1004	706	427	243	142	104	81	67	47	23.0
10.20V	A	114	86	60	38.2	19.7	11.7	8.8	6.8	5.7	4.0	3.6
	W	1267	956	660	423	229	135	101	79	66	46	22.4
10.50V	A	110	82	56	37	19	11.4	8.5	6.7	5.6	4.0	3.5
	W	1246	929	635	421	221	132	99	78	65	46	22.1
10.80V	A	106	78	53	36	18	11.1	8.3	6.6	5.5	3.9	3.5
	W	1230	904	611	420	215	130	97	76	64	45	22.0
11.10V	A	102	74	49	35	18	10.9	8.1	6.4	5.3	3.7	3.33
	W	1208	875	583	417	212	129	96	76	63	45	21.4

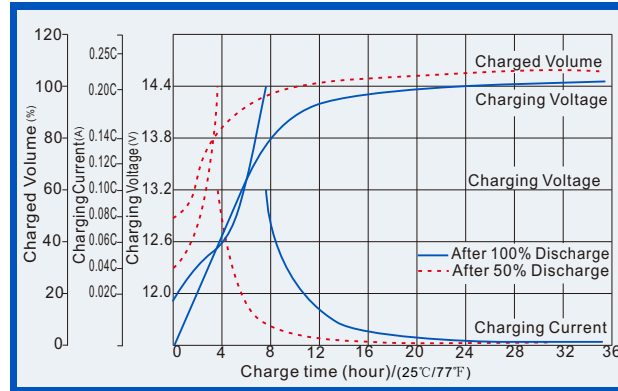
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

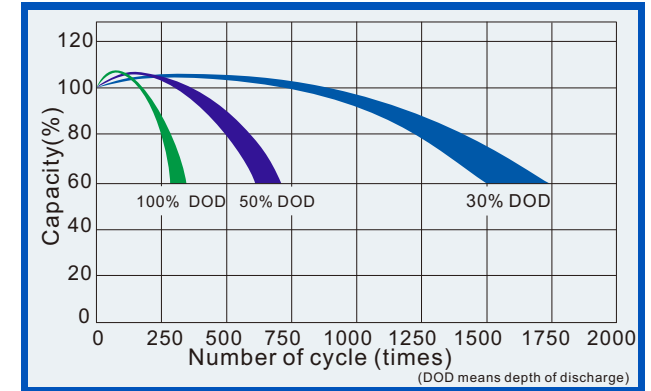
**Discharge characteristics (25°C, 77°F)**



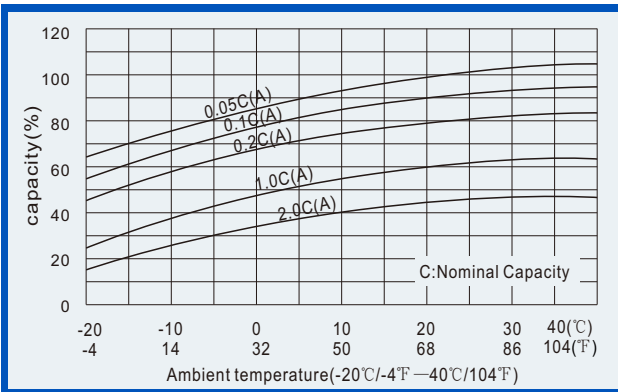
**Charge characteristics (25°C, 77°F)**



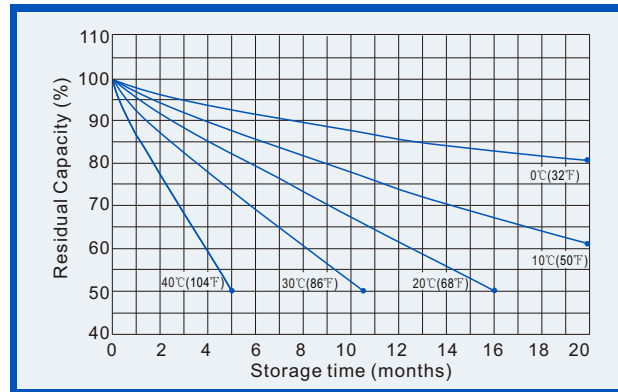
**Life characteristics of Cyclic Use (25°C, 77°F)**



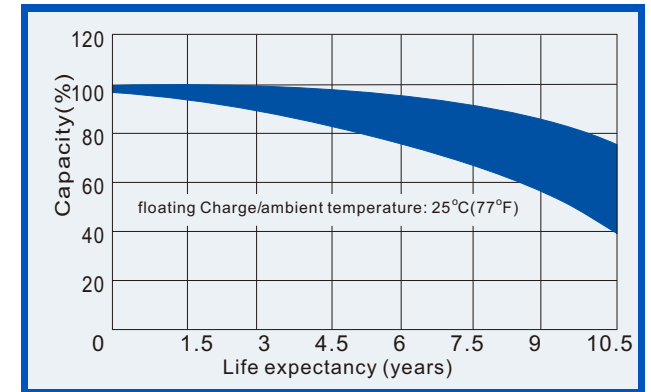
**Effect of Temperature on capacity**



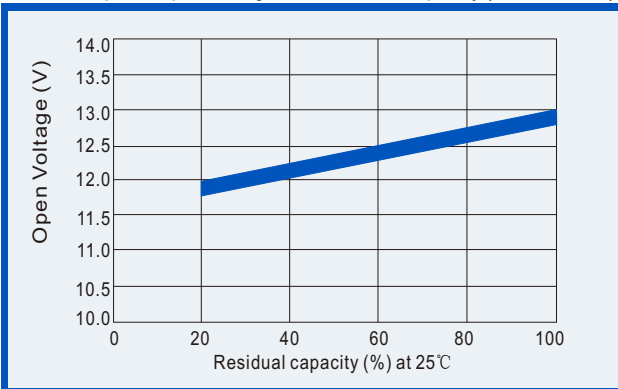
**Self-discharge characteristics**



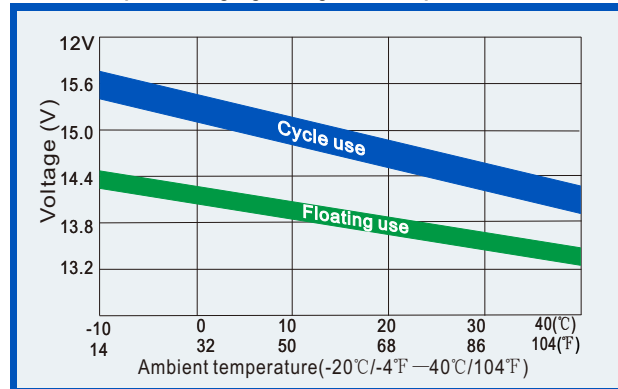
**Life Characteristics of standby use (25°C, 77°F)**



**Relationships for open voltage and remained capacity (for reference)**



**Relationship for charging voltage and temperature**



**Temperature effects on floating life**

