

### General features for MPF Series (AGM) battery

- \* Thick pasted plates with high quality lead-tin-calcium alloy grids for long service life ,design life 10+years in float service.
- \* Battery comply to the most popular international standards, like IEC60896-21/22, etc.
- \* Centralized venting system for gas ventilation.
- \* High conductivity connectors and terminal. High reliability terminal sealing.
- \* Self regulating relief valve: Lower-pressure self-return valve prevents ingress of oxygen in the atmosphere.
- \* Thick positive plates and balanced negative plates.
- \* Scientific grids designed to resist corrosion and increase battery service, also ensure optimum recombination efficiency.
- \* Low resistance microporous glassfibre, the electrolyte is absorbed within this materials.
- \* flame retardant ABS is available upon require.
- \* Easy installation: robust copper terminals providing high conductivity, easy connection, front access terminals for easy & quick connection.



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**MPF12-100 (12V100Ah)**

### Specifications

Nominal Voltage		12V
Rated capacity (10 hour rate)		100Ah
Dimensions (±2mm)	Total Height	287 mm (11.29 inches)
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	Length	395 mm (15.51 inches)
	Width	110 mm (4.29 inches)
Weight Approx (±3%)		32.0 Kg (70.54 lbs)

### Battery picture and construction

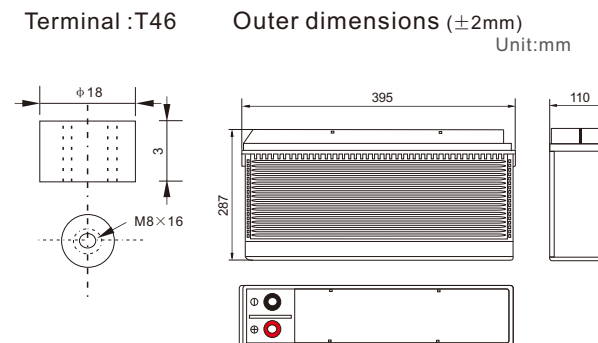


Terminal:

#### 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	Fibreglass	Rubber	Copper

### Outer dimension and terminal



### Characteristics

Capacity 25°C(77°F)	10 hour rate(10A,10.8V) 5 hour rate(16A,10.5V) 1 hour rate(60 A,9.6V)	100Ah 80Ah 60Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 5.0 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F) -15°C (5°F)	85% 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	T46	
Max. Discharge current 25°C/(77°F)	800A (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 25 A Voltage 14.5-14.9V Temperature compensation:-30mV/°C
	Standby use	Voltage 13.5-13.8V Temperature compensation:-18mV/°C

### Constant current discharge (25°C , 77 °F)

Unit:A

### Constant power discharge (25°C , 77 °F)

Unit:watts

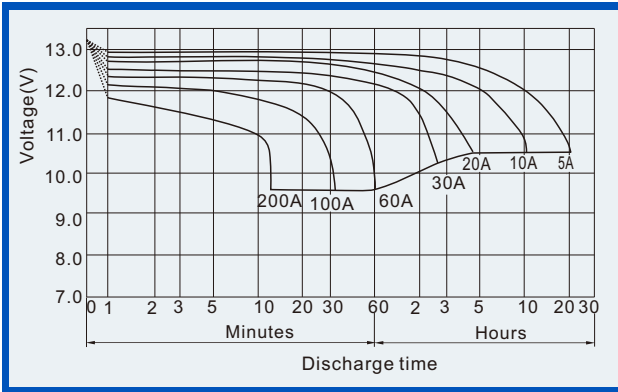
**Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)**

Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
		9.60V	A	320	211	170	114.0	60.0	35.0	25.7	20.0	16.5	11.70
	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

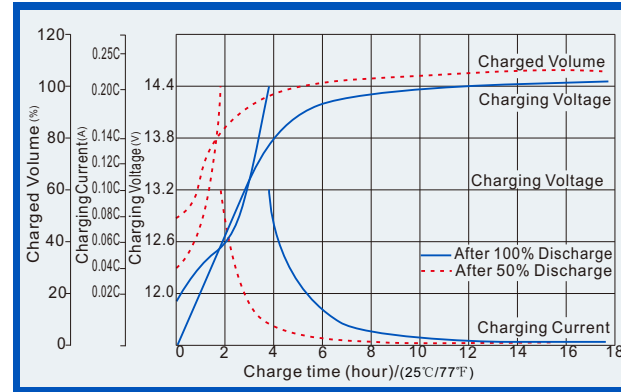
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

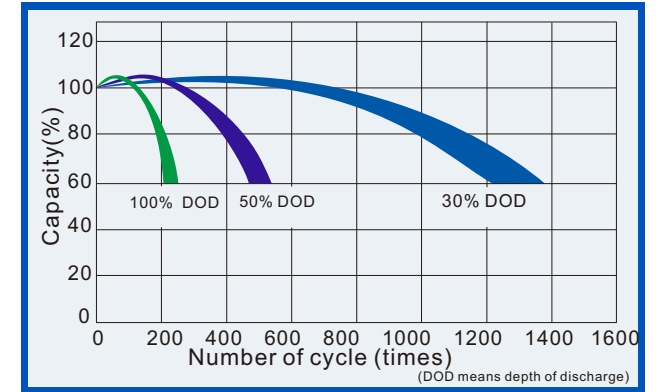
**Discharge characteristics (25°C, 77°F)**



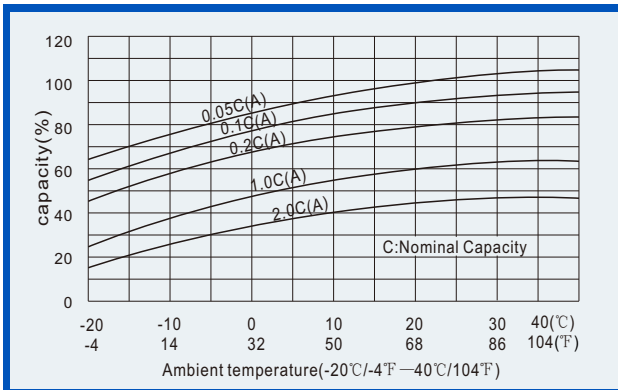
**Charge characteristics (25°C, 77°F)**



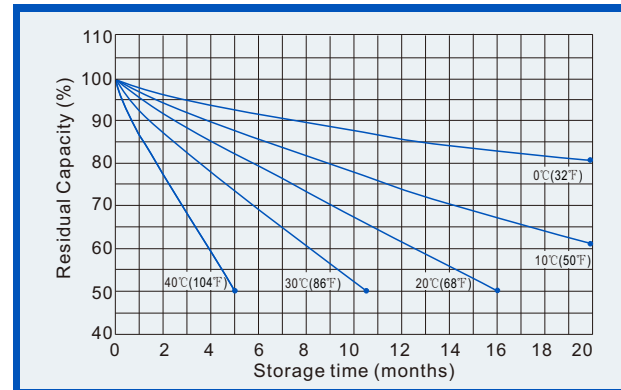
**Life characteristics of Cyclic Use (25°C, 77°F)**



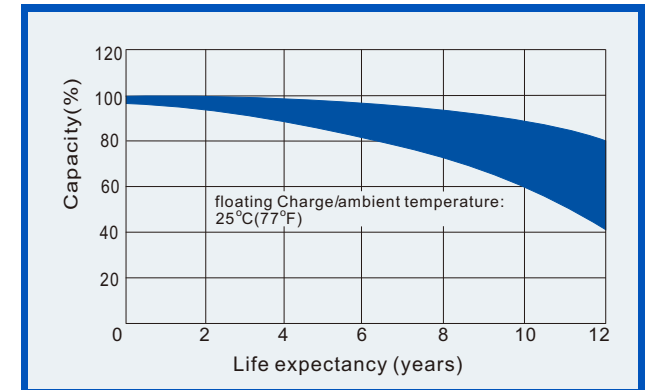
**Effect of Temperature on capacity**



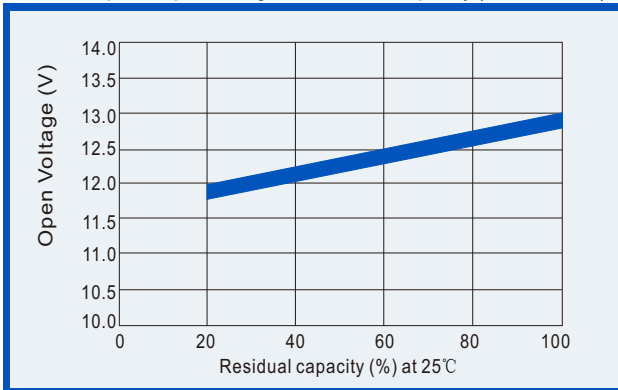
**Self-discharge characteristics**



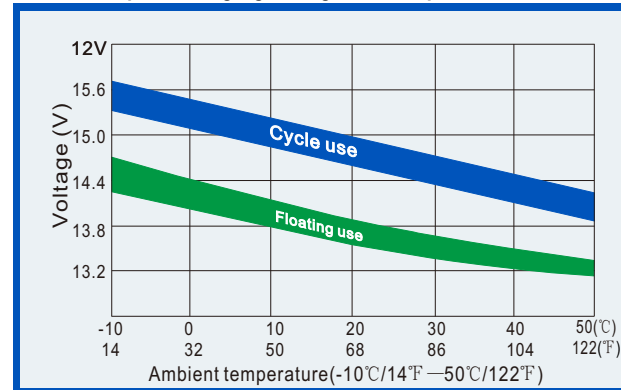
**Life Characteristics of float service (25°C, 77°F)**



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



**Relationship for charging voltage and temperature**



**Temperature effects on floating life**

