

## General features for MPHR series battery

- ★ MPHR stands for "High Rate Discharge." The series is a modern hi-tech energy application product;
- ★ Lead-calcium alloy grids and the use of high purity lead account for superior shelf-life characteristics;
- ★ Precision plate pasting for higher consistency with 100% load testing to ensure uniform capacity;
- ★ When it is used in safe surroundings, the battery is maintenance free, and you never need to add electrolyte, It can be recycled repeatedly;
- ★ High energy, high intensity, high quality output electrical energy product series.



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**MPHR6-770W (6V200Ah)**

## Specifications

Nominal Voltage		6V
Number of cell		3 cells
Rated capacity (25°C)	Rated capacity/cell (15 minutes rate to 1.67V/cell)	770W
	Rated capacity (10 hour rate)	200Ah
Dimensions (±2mm)	Total Height	230 mm (9.05 inches)
	Height	224 mm (8.93 inches)
	Length	323 mm (12.7 inches)
	Width	178 mm (7.00 inches)
Weight Approx (±3%)		31.2 Kg (68.78 lbs)

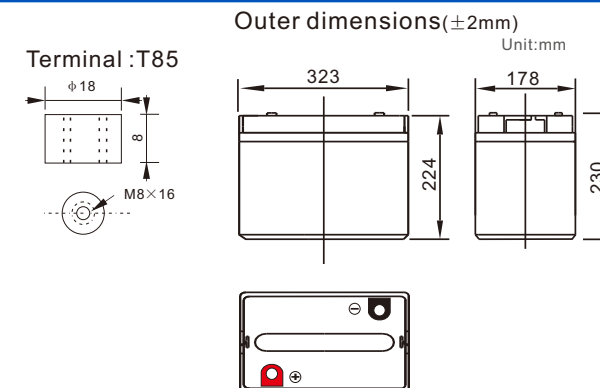
## Battery picture and construction



### 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)	30 minutes rate(247.1A,1.70V/cell) 15 minutes rate(418.3A,1.67V/cell) 5 minutes rate(715.3A,1.67V/cell)	1393W 2310W 3902W
Internal Resistance	Full charged battery at 25°C(77°F)	Approx1.5mΩ
Capacity affected by Temperature (20hour 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	T85	
Max. Discharge current 25°C/(77°F)	1510A (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 50 A Voltage 7.25-7.50V Temperature compensation:-30mV/°C
	Standby use	Voltage 6.75-6.90V Temperature compensation:-18mV/°C

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

Unit:A

Time F.V/cell	5min	15min	30min	45min	60min	90min	5hours	10hours
1.60V	755.3	435.7	266.6	194.9	152.2	112.9	33.6	21.9
1.67V	715.3	418.3	255.8	184.9	145.4	107.1	33.3	21.5
1.70V	665.2	403.2	247.1	180.8	140.7	102.5	33.0	21.0
1.75V	615.1	377.1	229.8	166.0	128.3	96.2	32.5	20.0
1.80V	586.5	333.8	207.6	150.0	118.1	90.2	32.2	19.8
1.85V	515.0	305.6	193.8	140.7	110.8	85.6	31.5	19.3

Note:  
the end voltage means Voltage per cell.  
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

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

Unit:watts

Time F.V/cell	5min	10min	15min	20min	30min	45min	60min	90min
1.60V	4076	3049	2363	1947	1452	1069	838	623
1.67V	3902	2950	2310	1914	1419	1030	818	602
1.70V	3728	2838	2257	1868	1393	1016	799	581
1.75V	3557	2772	2198	1835	1366	983	766	554
1.80V	3383	2482	1947	1703	1214	878	693	532
1.85V	3013	2218	1769	1571	1129	825	651	506

Note:  
the end voltage means Voltage per cell.  
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

## General features for MPRH12-535W (High rate discharge)

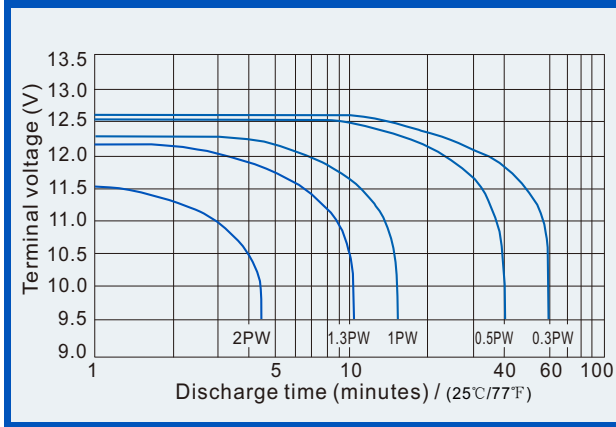
- \* Positive and negative plates in lead-calcium tin alloy
- \* Superior energy density
- \* Operates at a low internal pressure.
- \* Gas Recombination
- \* Very high power output
- \* Application specific designs
- \* Six months self-life at 25°C (77°F), then a freshening charge is required.
- \* Design life 10 years @ floating service at 25°C (77°F).



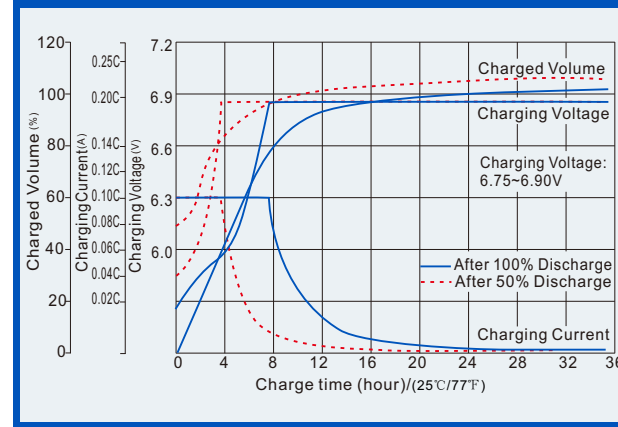
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## MPRH6-770W (6V200Ah)

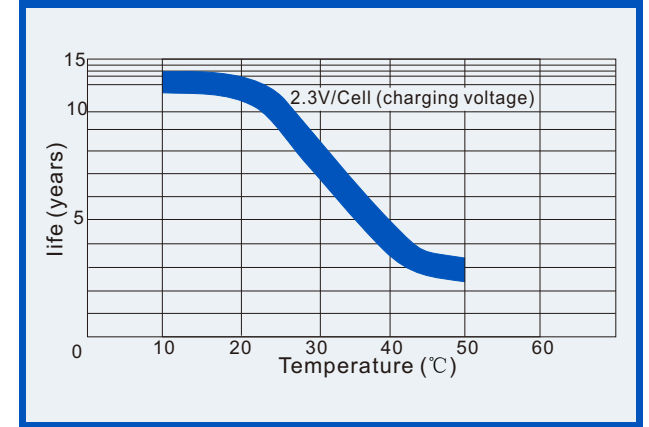
### Terminal voltage(V) and discharge time



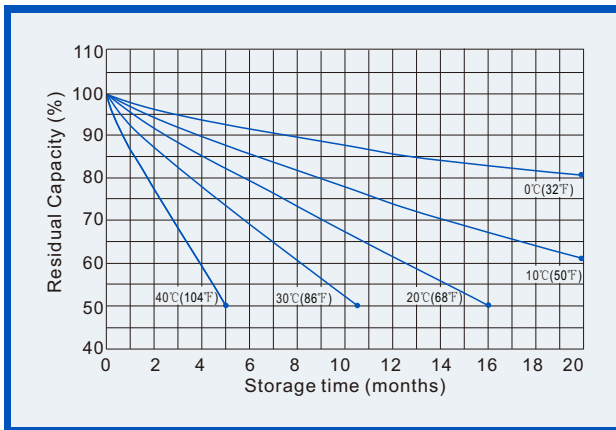
### Battery voltage and charge time for standby use



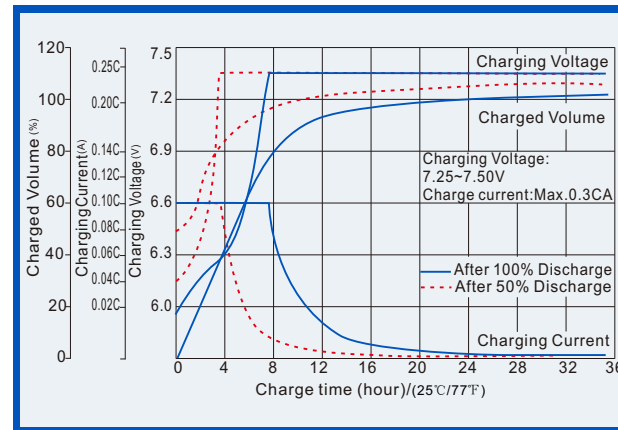
### Life Characteristics of float service



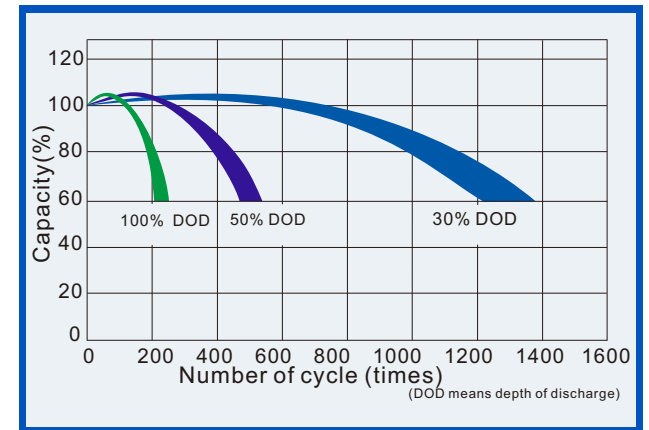
### Self-discharge characteristics



### Battery voltage and charge time for cycle use



### Life characteristics of Cyclic Use



### Charging procedures

Application	Charging voltage(V)			Max Charging current
	Temperature	Set Point	Allowable range	
Cycle Use	25°C(77°F)	7.35	7.25~7.50	50A
Standby Use		6.85	6.75~6.90	

### Discharging current & discharging voltage

Final Discharging Voltage (V)	5.25	5.10	4.80	3.90
Discharging Power (W)	W<0.1P	0.1P≥(W)<0.25P	0.25P≤(W)<1.0P	W≥1.0P