

## 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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**MPHR6-22W (6V5Ah)**

## Specifications

Nominal Voltage		6V
Number of cell		3 cells
Rated capacity (25°C)	Rated capacity/cell (15 minutes rate to 1.67V/cell)	22W
	Rated capacity (20 hour rate)	5Ah
Dimensions (±1mm)	Total Height	106mm (4.17 inches)
	Height	101mm (3.98 inches)
	Length	70mm (2.76 inches)
	Width	47mm (1.85 inches)
Weight Approx (±3%)		0.9Kg (1.98 lbs)

## Battery picture and construction

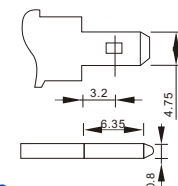


### Battery Construction

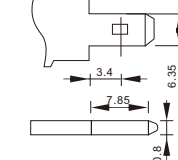
Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	Fiberglass	Rubber	Copper

## Outer dimension and terminal

T1

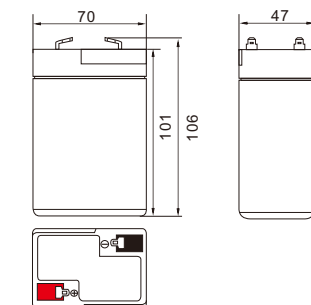


T2



Outer dimensions(±1mm)

Unit:mm



## Characteristics

Capacity 25°C(77°F)	30 minutes rate(5.69A, 1.70V/cell) 15 minutes rate(10.76A, 1.67V/cell) 10 minutes rate(15.2A, 1.6V/cell)	71W 126W 178.4W
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 15 mΩ
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	T1 (option T2)	
Max. Discharge current 25°C/(77°F)	75A (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 1.5A Voltage 7.25-7.50V Temperature compensation:-30mV/°C
	Standby use	Voltage 6.75-6.90V Temperature compensation:-9mV/°C

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

Unit:A

Time F.V/cell	5min	10min	15min	20min	30min	45min	60min	20hours
1.60V	24.1	14.8	11.6	9.22	6.39	4.58	3.62	0.26
1.65V	23.4	14.3	11.3	9.00	6.26	4.49	3.56	0.26
1.67V	23.0	14.1	11.2	8.85	6.18	4.43	3.52	0.26
1.70V	22.4	13.7	10.9	8.67	6.07	4.35	3.47	0.26
1.75V	21.4	13.1	10.6	8.37	5.92	4.24	3.40	0.26
1.80V	20.2	12.4	10.0	7.93	5.70	4.09	3.30	0.25

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	20hours
1.60V	137.4	85.5	68.7	54.6	37.8	27.06	21.36	1.56
1.65V	133.2	82.8	67.2	53.1	36.9	26.52	21.03	1.56
1.67V	131.1	81.6	66.0	52.2	36.6	26.19	20.82	1.53
1.70V	127.8	79.5	64.5	51.3	36.0	25.71	20.52	1.53
1.75V	122.4	76.2	62.4	49.5	35.1	25.08	20.10	1.53
1.80V	115.5	71.7	59.1	46.8	33.6	24.18	19.47	1.50

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 MPR6-22W (High rate discharge)

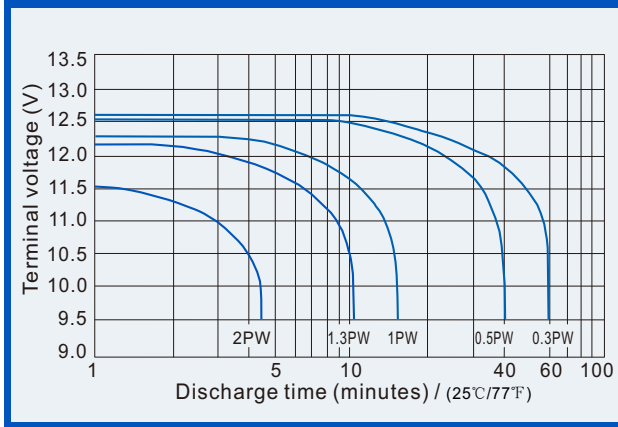
- \* Positive and negative plates in lead-calcium tin alloy
- \* Superior energy density
- \* Operates at a low internal pressure.
- \* Gas Recombination
- \* Very high power output
- \* Application specific designs
- \* Six months self-life at 25°C (77°F), then a freshening charge is required.
- \* Design life 5 years @ floating service at 25°C (77°F).



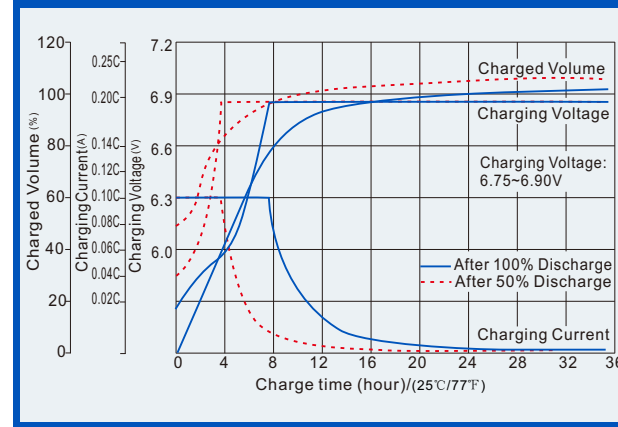
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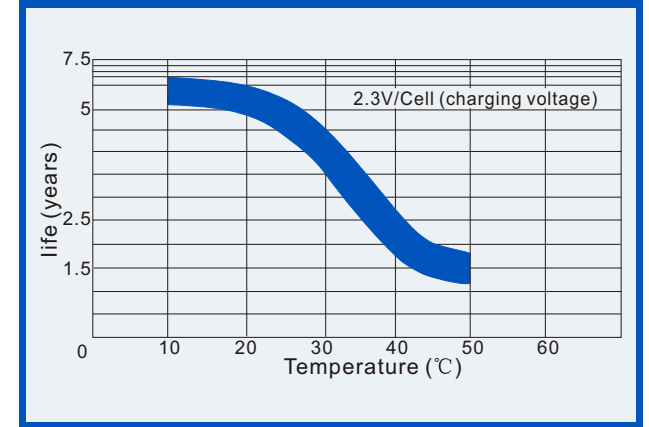
### Terminal voltage(V) and discharge time



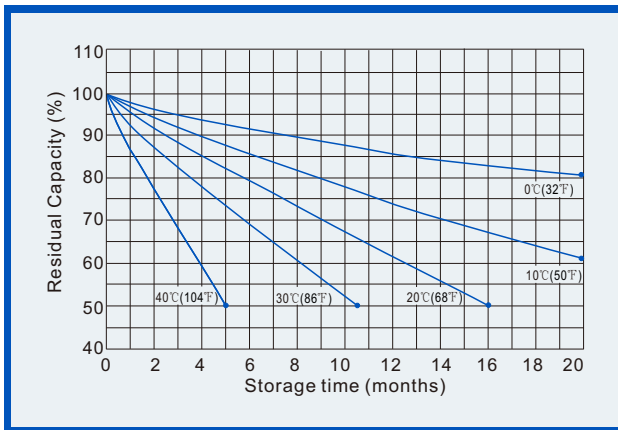
### Battery voltage and charge time for standby use



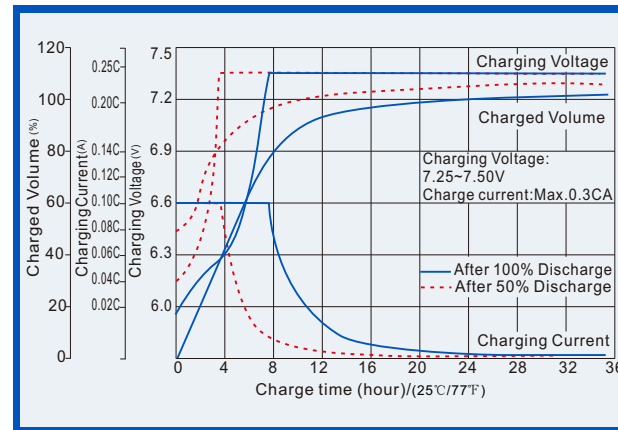
### Life Characteristics of float service



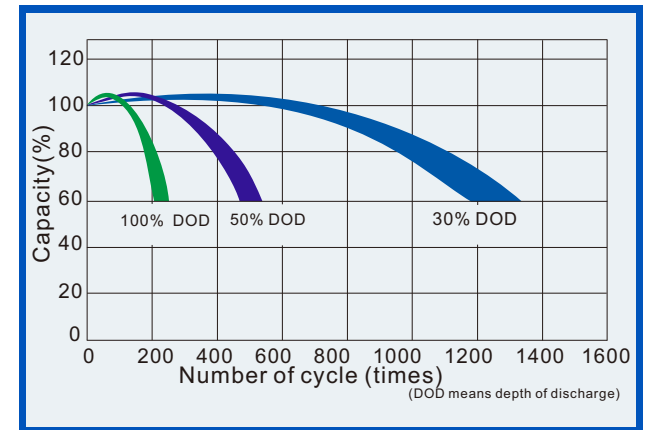
### Self-discharge characteristics



### 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	1.5A
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