

LEAD ACID (DEEP CYCLE) BATTERY

MG33-12

Applications

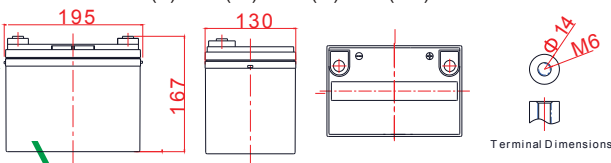
- > Solar / wind energy and other new energy storage
- > UPS/EPS
- > Power systems
- > Telecommunications system
- > Emergency lighting, Auto control system
- > Other general purpose

General Features

- > Nanosilica colloidal electrolyte and high tin positive plate alloy design to enhance battery performance
- > Relatively rich electrolyte, high temperature and low temperature performance is superior
- > Long cycle life, excellent deep cycle discharge ability
- > Excellent charge acceptance ability
- > Precision sealing technology
- > Long life



Dimension: 195(L)×130(W)×167(H)×167(TH) Unit: mm



MADE IN VIETNAM / CHINA

Specification

Nominal Voltage	12V									
Nominal Capacity	33Ah									
Design life	12 years									
Terminal	M6									
Approx. Weight	Approx 10.0kg (22.0lbs)									
Container Material	ABS									
Rated Capacity	<table border="0"> <tr> <td>33.0Ah</td> <td>10Hour Rate</td> <td>(3.30A to 10.8V)</td> </tr> <tr> <td>26.0Ah</td> <td>3Hour Rate</td> <td>(8.68A to 10.8V)</td> </tr> <tr> <td>21.2Ah</td> <td>1Hour Rate</td> <td>(21.2A to 10.5V)</td> </tr> </table>	33.0Ah	10Hour Rate	(3.30A to 10.8V)	26.0Ah	3Hour Rate	(8.68A to 10.8V)	21.2Ah	1Hour Rate	(21.2A to 10.5V)
33.0Ah	10Hour Rate	(3.30A to 10.8V)								
26.0Ah	3Hour Rate	(8.68A to 10.8V)								
21.2Ah	1Hour Rate	(21.2A to 10.5V)								
Internal resistance	Full charged at 25°C: 13.2 mΩ									
Max. Discharge Current	396A(5S)									
Operating Temperature	Discharge: -40 ~60°C (-40~ 140°F) Charge: -20 ~50°C (-4~ 122°F) Storage: -20 ~50°C (-4~ 122°F)									
Charge current:	Max. 8.3A ; Recom.3.3A									
Charge Method (25 °C)	Float Charge: 13.5-13.8V, recom. 13.8V(-18mV/ °C) Equalize charge: 13.8-14.1V, recom. 14.1V(-24mV/ °C) Cycle charge: 14.4-15.0V, recom. 14.7V(-30mV/ °C)									
Self discharge	3% of capacity declined per month at 25°C									

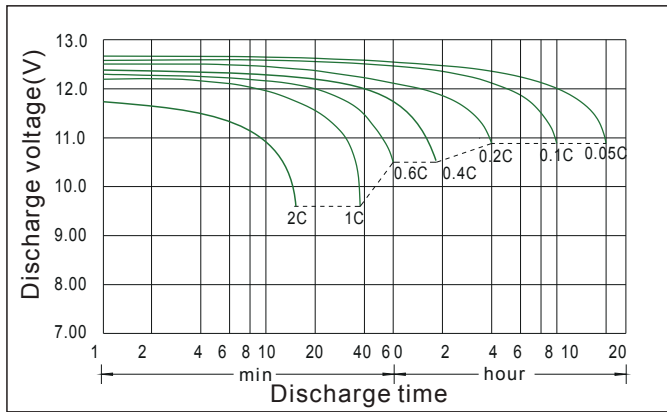
Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

FV/Time	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	60.6	36.9	21.8	12.5	9.06	6.09	3.99	3.41	1.80
1.65V	58.8	36.2	21.6	12.4	8.97	6.02	3.96	3.38	1.79
1.70V	57.5	35.6	21.5	12.3	8.84	5.96	3.93	3.35	1.78
1.75V	55.6	35.3	21.2	12.1	8.75	5.89	3.90	3.32	1.77
1.80V	51.9	33.8	20.6	11.9	8.68	5.74	3.87	3.30	1.76
1.85V	46.2	30.8	19.1	11.3	8.18	5.45	3.71	3.18	1.73

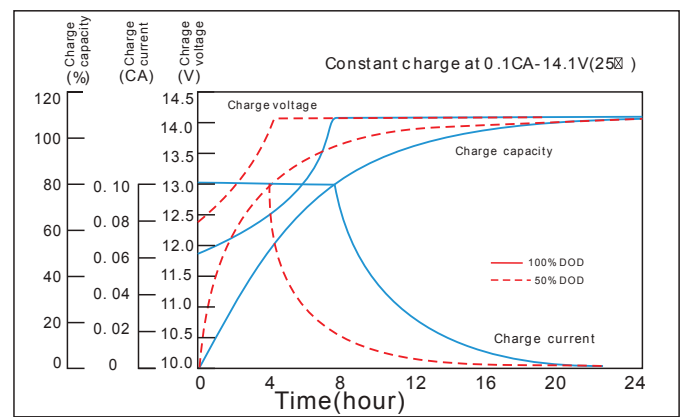
Constant Power Discharge Characteristics Unit: W/cell (25°C, 77°F)

FV/Time	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	107	66.7	41.2	23.6	17.2	11.5	7.76	6.57	3.56
1.65V	105	66.1	40.9	23.5	17.0	11.5	7.70	6.50	3.54
1.70V	104	66.1	40.5	23.5	16.9	11.4	7.67	6.44	3.52
1.75V	103	65.8	40.2	23.3	16.8	11.3	7.60	6.37	3.51
1.80V	97.4	64.2	39.9	23.3	16.8	11.2	7.54	6.30	3.49
1.85V	87.0	58.8	37.0	22.2	15.9	10.7	7.29	6.21	3.46

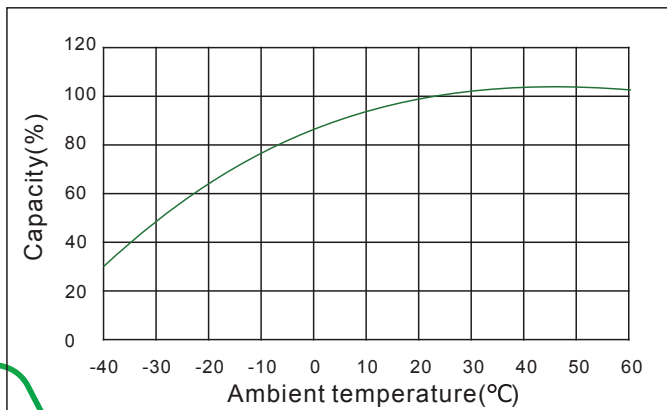
Discharge characteristic



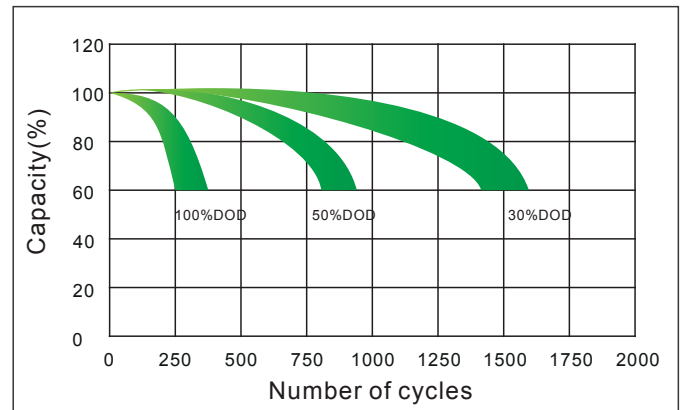
Charging characteristic



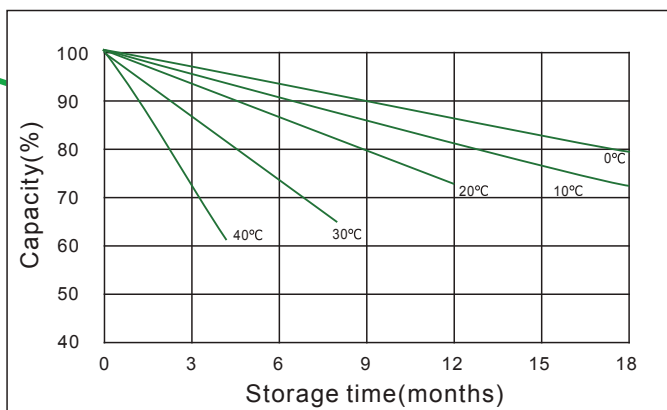
The effect of temperature on capacity



The effect of discharge depth on cycle life



Curves of self-discharge



Curves of open circuit voltage vs. capacity

