

DEEP CYCLE GEL BATTERY

MG40-12

Applications

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

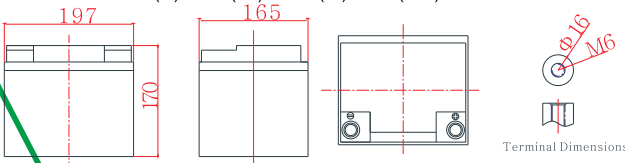


General Features

- › 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: 197(L)×165(W)×170(H)×170(TH) Unit: mm



Specification

Nominal Voltage	12V
Nominal Capacity	40Ah
Design life	10 years
Terminal	M6
Approx. Weight	Approx 13.2kg (29.1lbs)
Container Material	ABS
Rated Capacity	40.0Ah 10Hour Rate (4.00A to 10.8V)
	32.4Ah 3Hour Rate (10.8A to 10.5V)
	26.2Ah 1Hour Rate (26.2A to 10.5V)
Internal resistance	Full charged at 25°C: 12.5 mΩ
Max. Discharge Current	480A(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. 10A ; Recom.4.0A
Charge Method (25 °C)	Float Charge:13.5-13.8V,recom.13.5V(-18mV/ °C)
	Equalize charge:13.8-14.1V,recom.14.1V(-24mV/ °C)
	Cycle charge:14.4-15.0V,recom.14.4V(-30mV/ °C)
Self discharge	3% of capacity declined per month at 25°C

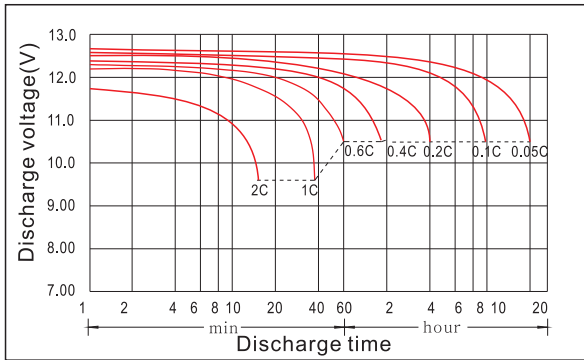
Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

FV/Time	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	75.7	46.1	26.9	15.4	11.2	7.53	4.94	4.16	2.18
1.65V	73.4	45.3	26.8	15.4	11.1	7.45	4.90	4.12	2.17
1.70V	71.9	44.5	26.6	15.2	10.9	7.37	4.86	4.08	2.16
1.75V	69.5	44.1	26.2	15.0	10.8	7.29	4.82	4.04	2.15
1.80V	64.8	42.2	25.5	14.7	10.7	7.10	4.78	4.00	2.14
1.85V	57.8	38.5	23.6	14.0	10.11	6.74	4.58	3.88	2.10

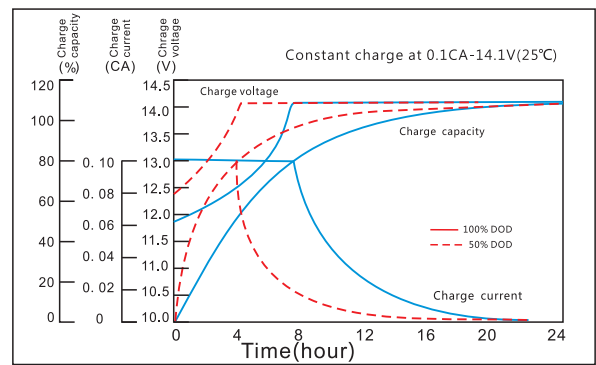
Constant Power Discharge Characteristics Unit: W/cell (25°C, 77°F)

FV/Time	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	133	83.3	50.9	29.2	21.3	14.3	9.60	8.00	4.32
1.65V	131	82.6	50.5	29.1	21.1	14.2	9.52	7.92	4.30
1.70V	129	82.6	50.1	29.0	20.9	14.1	9.48	7.84	4.28
1.75V	129	82.2	49.7	28.9	20.8	14.0	9.41	7.76	4.26
1.80V	122	80.2	49.4	28.8	20.7	13.8	9.33	7.68	4.24
1.85V	109	73.5	45.8	27.5	19.7	13.2	9.01	7.56	4.20

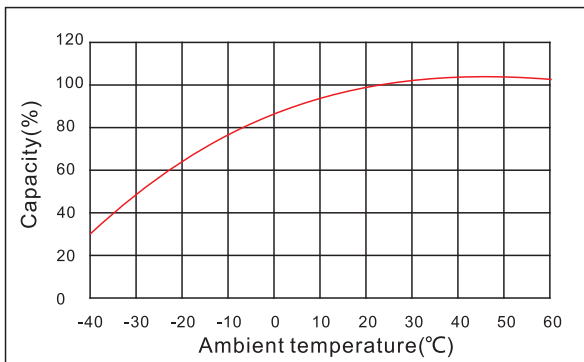
Discharge characteristic



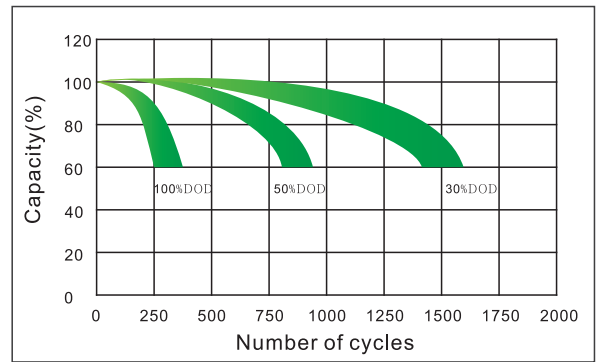
Charging characteristic



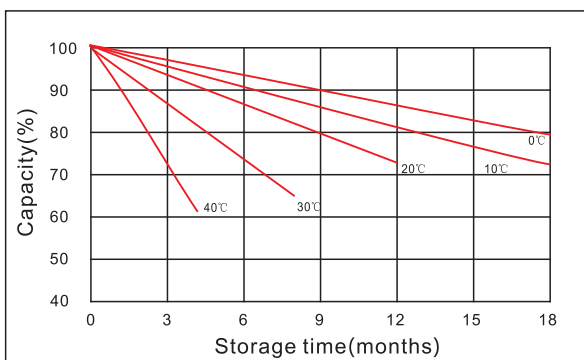
The effect of temperature on capacity



The effect of discharge depth on cycle life



Curves of self-discharge



Curves of open circuit voltage vs. capacity

