

DEEP CYCLE GEL BATTERY

MG7-12



Applications

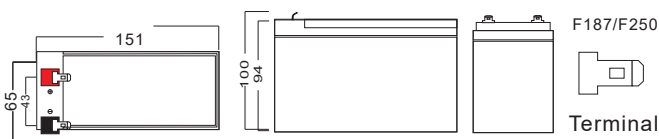
- › UPS/EPS
- › Power systems
- › Telecommunications system
- › Emergency lighting, Auto control system
- › Solar/wind generating storage cyclic
- › Other general purpose

General Features

- › High corrosion resistant performance: Pb-Ca multi-alloy grid
- › High energy density and power density
- › Optimized capability of instant high-current discharging
- › Excellent charge acceptance ability
- › Excellent deep cycle discharge capability
- › Strong high and low temperature performance
- › Precision sealing technology



Dimension: 151(L)×65(W)×94(H)×100(TH) Unit: mm



Specification

Nominal Voltage	12V
Nominal Capacity	7.0Ah
Design life	5 years
Terminal	F187/F250
Approx. Weight	Approx 2.00kg (4.46lbs)
Container Material	ABS
Rated Capacity	7.00Ah → 20Hour Rate (0.35A to 10.5V)
	5.43Ah → 3Hour Rate (1.81A to 10.5V)
	4.62Ah → 1Hour Rate (4.62A to 9.60V)
Internal resistance	Full charged at 25°C: 30.0 mΩ
Max. Discharge Current	105A(5S)
Operating Temperature	Discharge: -20 ~50°C(-4~ 122°F)
	Charge: -20 ~50°C(-4~ 122°F)
	Storage: -20 ~50°C(-4~ 122°F)
Charge Method (25 °C)	Charge current: Max.1.75A ; Recom.0.70A
	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°C)

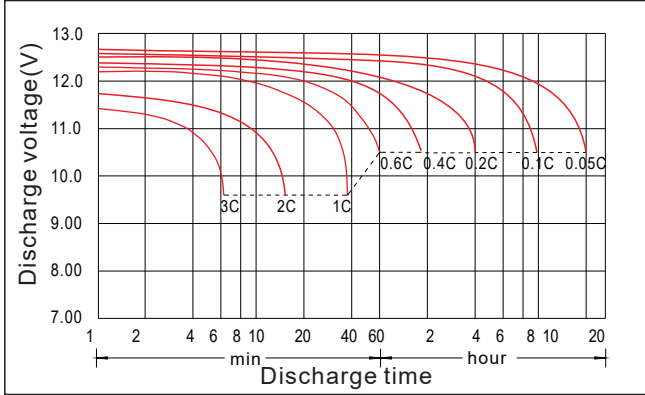
FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	27.7	18.1	13.5	8.86	4.62	2.65	1.93	1.55	1.32	0.868	0.693	0.371
1.65V	27.5	17.4	12.4	8.41	4.34	2.54	1.88	1.50	1.29	0.854	0.686	0.364
1.70V	22.5	16.3	11.6	8.15	4.20	2.49	1.84	1.42	1.27	0.840	0.672	0.357
1.75V	20.9	15.5	10.8	7.96	4.05	2.43	1.81	1.40	1.22	0.819	0.658	0.350
1.80V	19.3	14.6	10.0	7.70	3.91	2.37	1.72	1.37	1.17	0.798	0.644	0.336

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

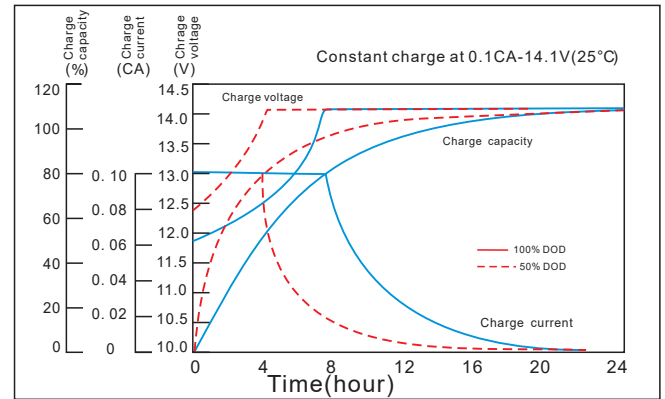
FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	52.0	32.7	24.7	15.0	8.47	4.96	3.65	2.93	2.49	1.64	1.34	0.735
1.65V	48.0	30.9	23.2	14.9	7.97	4.77	3.55	2.84	2.44	1.61	1.32	0.715
1.70V	43.9	30.0	22.2	14.8	7.72	4.68	3.49	2.70	2.37	1.60	1.31	0.709
1.75V	39.8	29.1	21.4	14.7	7.50	4.57	3.44	2.66	2.32	1.53	1.28	0.694
1.80V	35.7	28.1	20.4	14.5	7.40	4.54	3.35	2.64	2.26	1.48	1.25	0.690

Model Performance Diagrams

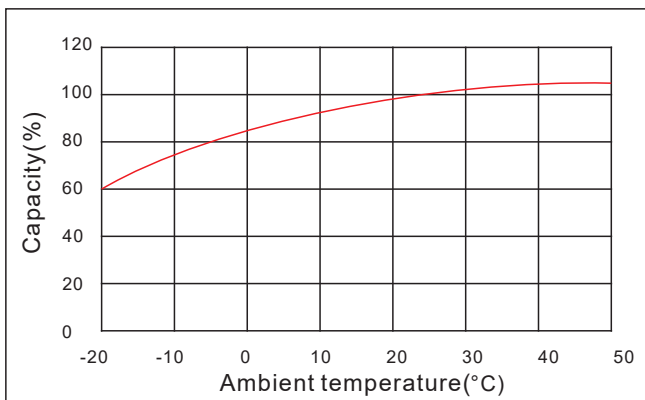
Discharge characteristic



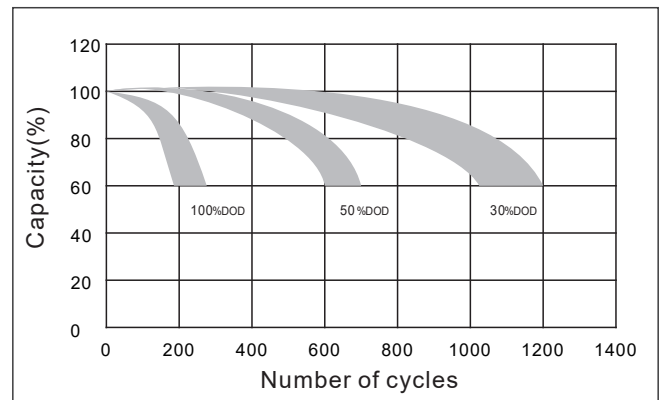
Charging characteristic



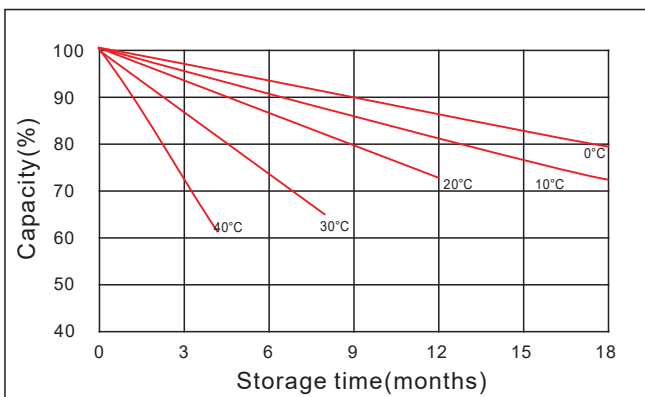
The effect of temperature on capacity



The effect of discharge depth on cycle life



Curves of self-discharge



The effect of temperature on float life

