

# DEEP CYCLE GEL BATTERY

## MG7.5-12

### Applications

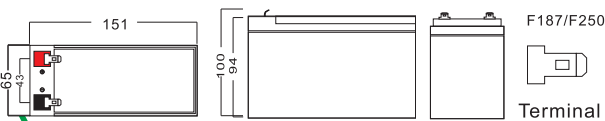
- > UPS/EPS
- > Power systems
- > Telecommunications system
- > Emergency lighting、 Auto control system
- > Solar/wind generating storage cyclic
- > Other general purpose

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



### Specification

Nominal Voltage	12V
Nominal Capacity	7.5Ah
Design life	5 years
Terminal	F187/F250
Approx. Weight	Approx 2.14kg (4.72lbs)
Container Material	ABS
Rated Capacity	7.50Ah 20Hour Rate (0.375A to 10.5V)
	7.00Ah 10Hour Rate (0.70A to 10.5V)
	4.95Ah 1Hour Rate (4.95A to 9.60V)
Internal resistance	Full charged at 25°C: 23.0 mΩ
Max. Discharge Current	113A(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.1.88A ; Recom.0.75A
	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

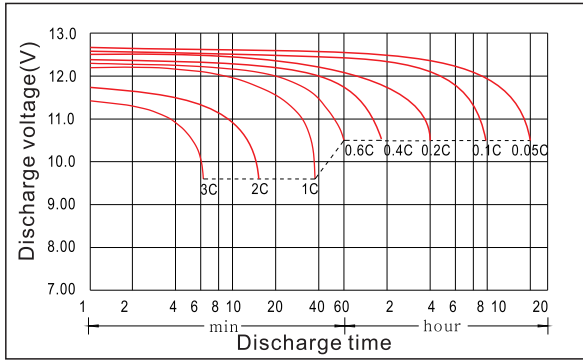
### Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	29.7	19.4	14.5	9.49	4.95	2.84	2.07	1.66	1.41	0.930	0.743	0.398
1.65V	29.5	18.6	13.3	9.01	4.65	2.72	2.01	1.61	1.38	0.915	0.735	0.390
1.70V	24.2	17.5	12.4	8.73	4.50	2.67	1.97	1.52	1.37	0.900	0.720	0.383
1.75V	22.4	16.7	11.6	8.53	4.34	2.60	1.94	1.50	1.31	0.878	0.705	0.375
1.80V	20.6	15.7	10.7	8.25	4.19	2.54	1.84	1.47	1.25	0.855	0.690	0.360

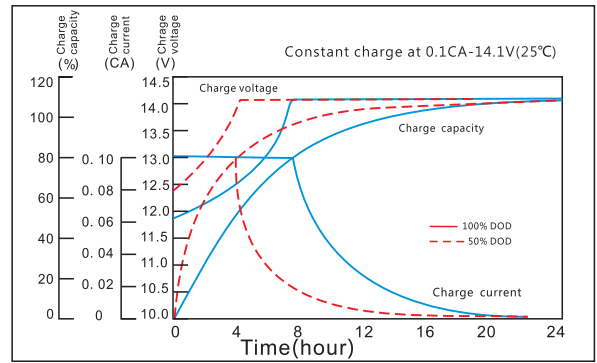
### Constant Power Discharge Characteristics Unit: W/cell(25°C, 77°F)

FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	55.8	35.0	26.5	16.0	9.08	5.31	3.91	3.14	2.66	1.76	1.44	0.788
1.65V	51.4	33.1	24.9	15.9	8.54	5.11	3.80	3.04	2.61	1.73	1.41	0.766
1.70V	47.0	32.1	23.8	15.9	8.28	5.01	3.74	2.89	2.54	1.71	1.40	0.760
1.75V	42.6	31.1	22.9	15.7	8.04	4.90	3.69	2.85	2.49	1.64	1.37	0.744
1.80V	38.3	30.1	21.9	15.6	7.93	4.86	3.59	2.83	2.43	1.59	1.34	0.739

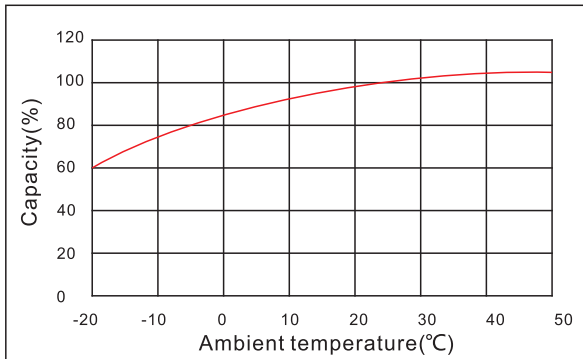
### Discharge characteristic



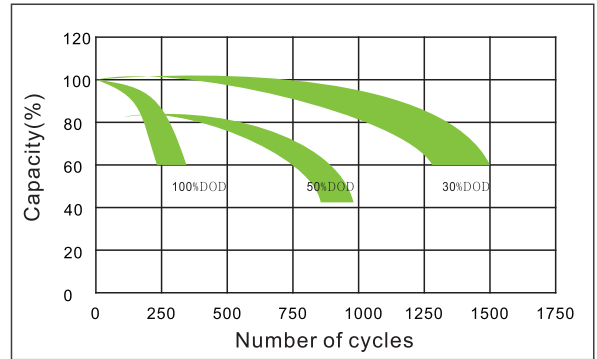
### Charging characteristic



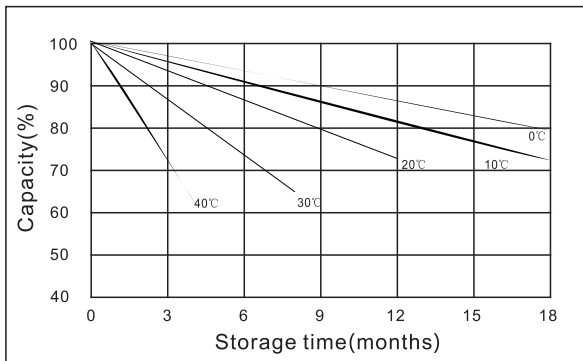
### The effect of temperature on capacity



### The effect of discharge depth on cycle life



### Curves of self-discharge



### The effect of temperature on float life

