

# DEEP CYCLE GEL BATTERY

## MG80-12



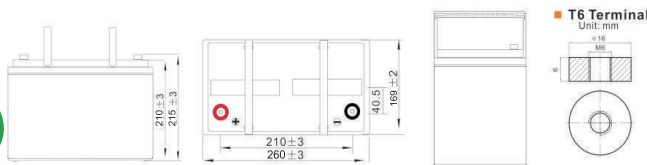
### Application

- General purpose
- Uninterruptable Power Supply
- Electric Power System (EPS) Emergency
- Backup power supply
- Auto control system
- Emergency light
- Railway signal
- Aircraft signal
- Alarm and security system Electronic
- Medical equipments



### Specification

Nominal Voltage	12V
Nominal Capacity	80Ah
Design life	10 years
Terminal	T12
Approx. Weight	Approx 22.8kg(50.26lbs)
Container Material	ABS
Rated Capacity	83.2Ah → 20Hour Rate (4.16A to 10.8V)
	75.0Ah → 10Hour Rate (7.5A to 10.8V)
	62.4Ah → 3Hour Rate (20.8A to 10.5V)
Internal resistance	Full charged at 25°C: 6 Ohm
Max. Discharge Current	960A(5S)
Operating Temperature	Discharge: -15 ~50°C (5~ 122 °F)
	Charge : 0~40°C (32~104 °F)
	Storage: -15~40°C (5~104 °F)
Charge Method (25 °C)	Max. charge Current: 32
	Cycle use: 14.4-15.0V(-30mV/ °C)
	Float use : 13.5-13.8V(-20mV/ °C)
Self discharge	3% of capacity declined per month at 20°C
Unit: mm Dimension: 260(L)×169(W) ×210(H)×215(TH)	



### Constant Current Discharge (Amperes) at 25 °C (77°F )

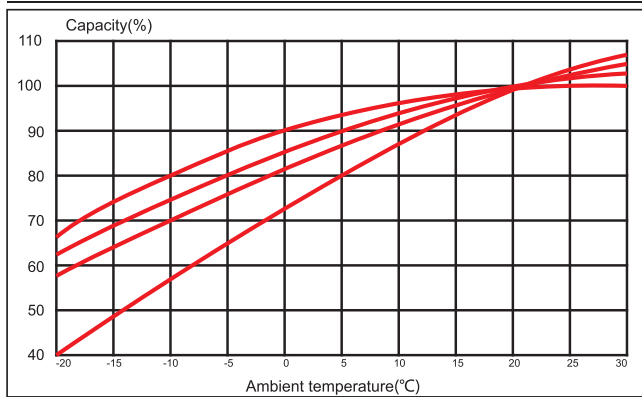
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	136.9	107.6	91.5	76.6	60.9	46.1	37.7	24.0	19.0	15.5	12.5	10.9	8.84	7.45	4.12
1.80V/cell	183.8	137.5	110.6	90.5	71.8	53.6	42.2	26.2	20.4	16.6	13.4	11.7	9.38	7.50	4.16
1.75V/cell	207.2	151.1	120.8	97.4	74.6	55.6	44.2	27.2	20.8	16.9	13.8	12.0	9.54	7.65	4.20
1.70V/cell	228.2	164.7	129.0	102.3	77.6	57.8	45.6	28.3	21.4	17.4	14.1	12.2	9.67	7.75	4.28
1.65V/cell	251.6	177.8	137.2	108.7	81.9	59.3	47.1	29.1	22.3	18.0	14.5	12.5	9.82	7.86	4.34
1.60V/cell	277.5	193.0	146.7	115.8	86.4	61.8	48.8	30.0	23.0	18.5	15.0	12.8	9.92	7.96	4.36

### Constant Power Discharge (W/cell) at 25 °C (77°F )

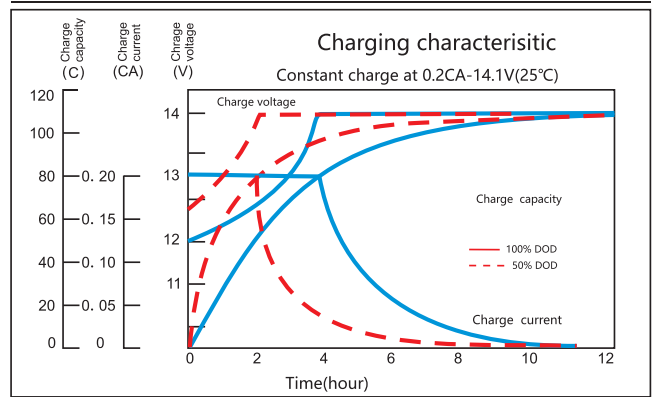
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	250.3	198.8	170.8	144.3	116.0	88.5	72.7	46.7	37.0	30.3	24.5	21.4	17.4	14.9	8.16
1.80V/cell	332.5	251.1	203.6	168.1	134.8	102.2	81.1	50.6	39.6	32.2	26.2	22.9	18.5	15.8	8.23
1.75V/cell	366.9	271.5	219.7	179.1	138.8	105.0	84.4	52.3	40.2	32.8	26.8	23.4	18.7	15.9	8.30
1.70V/cell	392.8	289.2	231.3	186.8	143.6	108.8	86.8	54.2	41.2	33.6	27.4	23.9	19.0	16.1	8.45
1.65V/cell	427.0	309.2	244.0	197.0	150.3	110.5	89.1	55.4	42.8	34.7	28.1	24.3	19.2	16.4	8.55
1.60V/cell	460.1	328.1	256.7	207.5	157.5	114.6	91.7	57.0	43.9	35.6	28.9	24.8	19.4	16.5	8.58

# Model Performance Diagrams

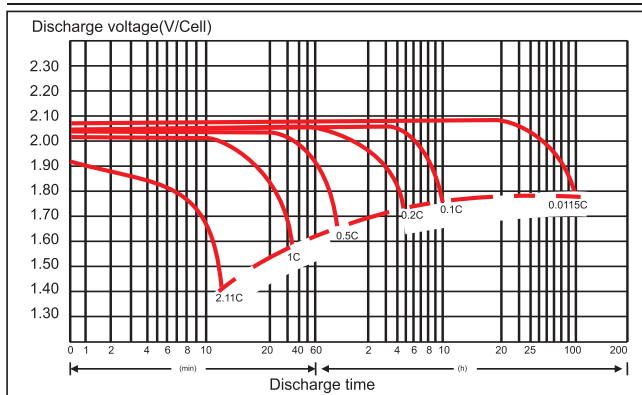
Curves of discharge capacity and ambient temperature



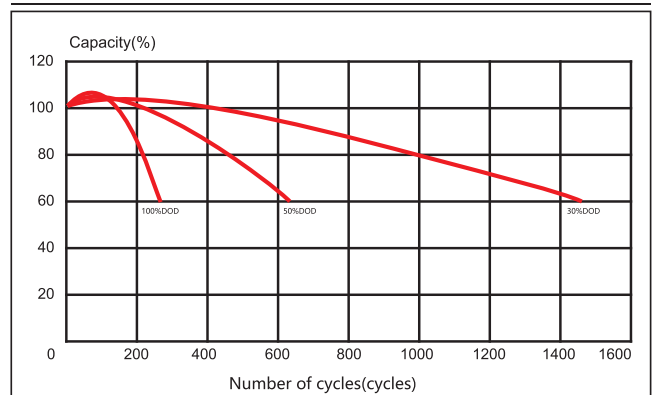
Curves of charging characteristics



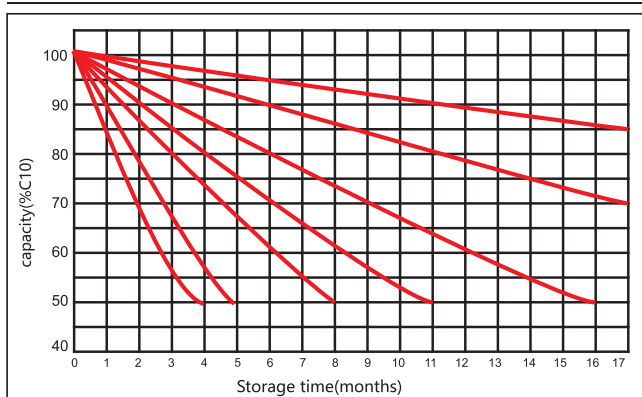
Discharge characteristics at different discharge rate(20°C)



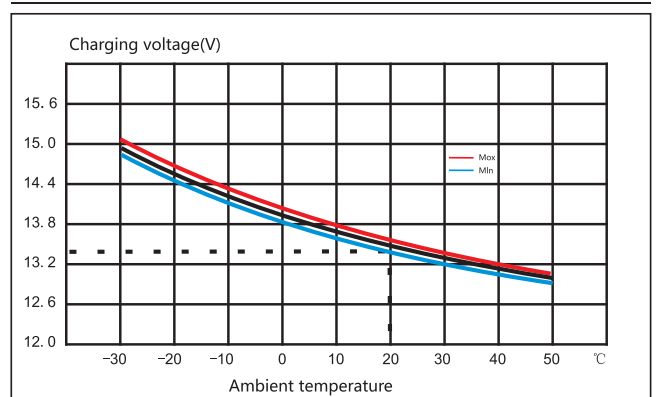
Curves of cycle life



Curves of self-discharge and storage time



Curves of float voltage and ambient temperature



## Charging procedures

Application type	Charge Voltage(V)			Max charge current (A)
	Temp (°C)	Set point	Temperature compensation	
Cycle use	25	14.4	-5mV/°C/cell	0.3C
Float use	25	13.65	-3mV/°C/cell	

## The relationship between discharge current and voltage

Discharge rate	3C	1C	10hr	20hr
End voltage (V)	9.6	9.6	10.5	10.5
Discharge current (A)	3C	1C	0.093C	0.05C