

6-GFM-90Ah Valve-regulated Lead Acid Battery Specification

We are an ISO9001 certified organization. And the products are approved by CE&UL. The nominal voltage of this series is 12V. And the capacity ranges from 33Ah to 250Ah. Their typical applications include: Emergency lighting systems, Electricity power supply systems, Communication systems, UPS systems, Starting systems, Solar systems etc.

Battery Construction

Component	-----	Material
Positive Plate	-----	Lead Dioxide
Negative Plate	-----	Lead
Container	-----	ABS
Cover	-----	ABS
Safety Valve	-----	Rubber
Terminal	-----	Copper
Separator	-----	AGM glass
Electrolyte	-----	Sulfuric Acid

General Features

Maintenance free
 Convenient for installation
 Safety and no leakage
 Excellent recharge and discharge performance
 Low self-discharge rate, charge each standby 6 months, temperature 25°C
 Adapt to high or low temperature
 Good deep discharge performance
 Longer cycle life
 UL approval

Performance Characteristics

1. Dimension and Weight

Length	-----	330mm
Width	-----	173mm
Height	-----	217mm
Total Height	-----	222mm
Reference Weight	-----	27.5kg

2. Functional Parameter

Rated Voltage	-----	12V
Numbers of cells	-----	6 Cells
Designed Life	-----	3~5 Years

3. Rated Capacity at 25°C(77°F)

10 hours rate (0.1C, 10.8V)	-----	90Ah
3 hours rate (0.25C, 10.8V)	-----	69Ah
1 hours rate (0.55C, 10.5V)	-----	49.7Ah

4. Capacity Affected by Temperature(10 hours rate)

40 °C (104°F)	-----	103%
25 °C (77 °F)	-----	100%
0 °C (32 °F)	-----	85%
-15°C (5 °F)	-----	65%

5. Charge Method: Constant-Voltage Charging at 25°C(77°F)

Cyclic Use	-----	14.4~14.9V
Maximum Charging Current	-----	22.5A
Temperature Compensation	-----	-30mV/°C
Float Use	-----	13.6~13.8V
Temperature Compensation	-----	-20mV/°C

6. Environment Temperature Requirements

Discharge Temperature	-----	-15~50°C
Charge Temperature	-----	0~40°C
Storage Temperature	-----	-15~40°C

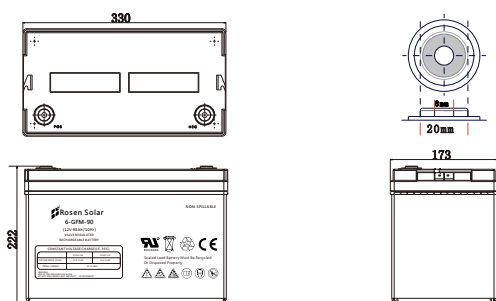
7. Inner Resistance & Max. Discharge Current

A fully charge battery at 25°C(77°F)	-----	5mΩ
Max. Discharge Current	-----	1350A(5S)
Short Circuit Current	-----	4500A

8. Self-discharge

3% of the capacity per month at 25°C(77°F)		
Capacity after 3 month storage	-----	91%
Capacity after 6 month storage	-----	82%
Capacity after 12 month storage	-----	64%

Dimensions(mm)



3D Model Review



Constant-Current Discharge Parameter Unit: A(25°C)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	3h	5h	10h	20h
1.80V/Cell	206.8	154.7	124.4	101.8	80.8	60.3	47.5	23.0	15.1	9.0	4.68
1.75V/Cell	233.1	170.0	135.9	109.5	83.9	62.5	49.7	23.4	15.5	9.1	4.73
1.70V/Cell	256.7	185.3	145.1	115.1	87.3	65.0	51.3	24.1	15.9	9.2	4.82
1.65V/Cell	283.1	200.0	154.3	122.3	92.1	66.7	53.0	25.1	16.3	9.4	4.88
1.60V/Cell	312.2	217.1	165.0	130.3	97.2	69.5	54.9	25.9	16.9	9.5	4.91

Constant-Power Discharge Parameter Unit: W(25°C)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	3h	5h	10h	20h
1.80V/Cell	374.0	282.5	229.1	189.1	151.6	114.9	91.2	44.6	29.5	17.8	9.26
1.75V/Cell	412.7	305.4	247.1	201.5	156.1	118.1	95.0	45.2	30.2	17.9	9.33
1.70V/Cell	441.9	325.3	260.2	210.2	161.6	122.4	97.6	46.4	30.9	18.1	9.51
1.65V/Cell	480.4	347.9	274.5	221.6	169.1	124.3	100.2	48.1	31.6	18.4	9.62
1.60V/Cell	517.6	369.1	288.7	233.5	177.2	128.9	103.2	49.4	32.5	18.6	9.66

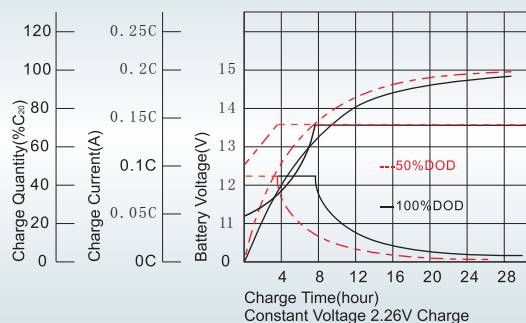


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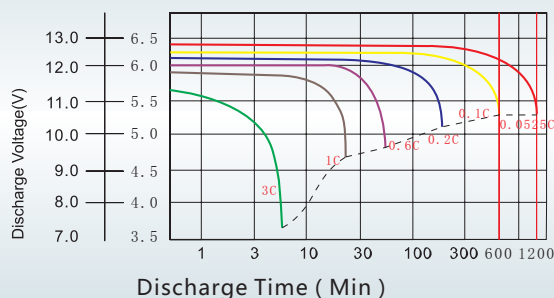
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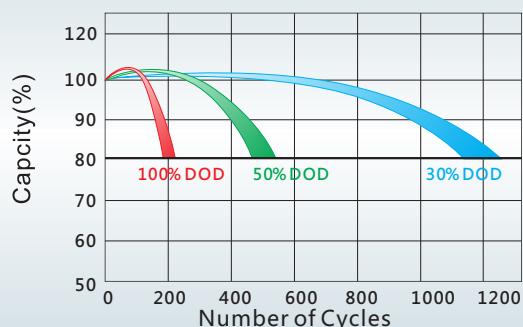
Charge Characteristics for Float Use @25°C/77°F



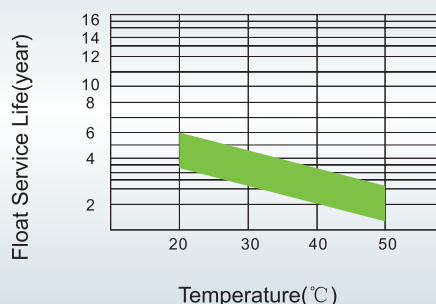
Discharge Characteristics at Various Rates @25°C/77°F



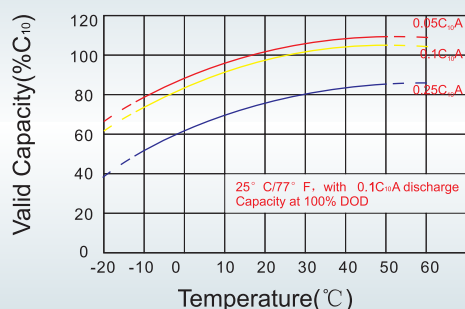
Cycle Life in Relation to Depth of Discharge



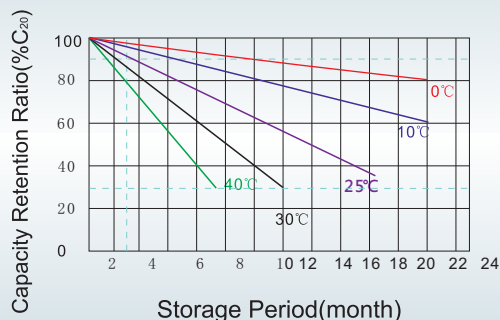
Float Service Life



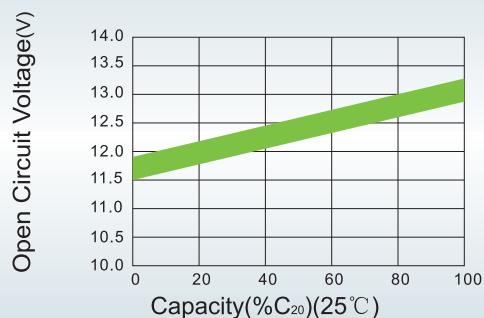
Temperature and Valid Capacity



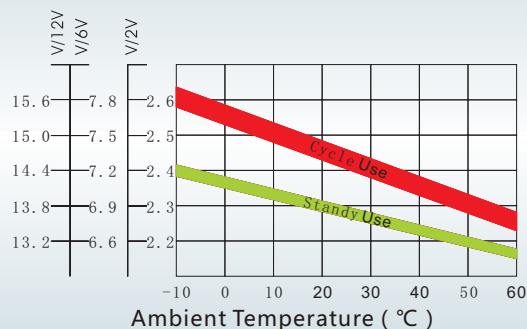
Self Discharge Characteristics



Capacity and Open Circuit Voltage



Relationship between Charging Voltage and Temperature



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