



6-GFM-50Ah 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	-----	230mm
Width	-----	137mm
Height	-----	210mm
Total Height	-----	215mm
Reference Weight	-----	16.3kg

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)	-----	50Ah
3 hours rate (0.25C, 10.8V)	-----	46Ah
1 hours rate (0.55C, 10.5V)	-----	33.1Ah

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	-----	12.5A
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

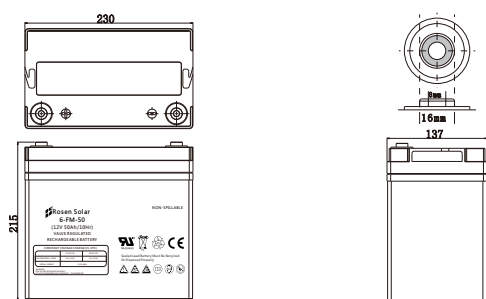
7. Inner Resistance & Max. Discharge Current

A fully charge battery at 25°C(77°F)	-----	7mΩ
Max. Discharge Current	-----	750A(5S)
Short Circuit Current	-----	2500A

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)

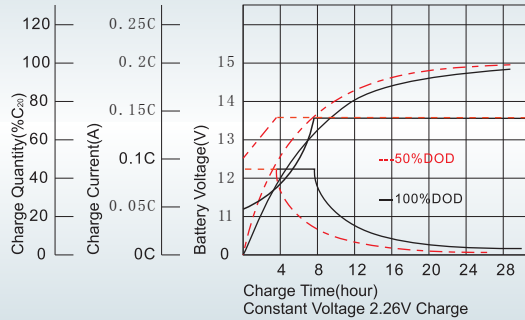
F.V/Time	10min	15min	20min	30min	45min	1h	3h	5h	8h	10h	20h
1.80V/Cell	112.25	89.35	76.36	54.87	42.98	33.60	15.60	12.55	8.93	6.00	3.22
1.75V/Cell	123.38	97.53	82.15	56.95	44.51	35.13	15.93	12.87	9.19	6.07	3.25
1.70V/Cell	134.40	104.18	86.29	59.24	46.36	36.22	16.36	13.20	9.37	6.12	3.31
1.65V/Cell	145.09	110.73	91.75	62.51	47.45	37.42	17.02	13.64	9.58	6.25	3.35
1.60V/Cell	157.53	118.47	97.64	66.00	49.53	38.73	17.56	14.07	9.79	6.32	3.37

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

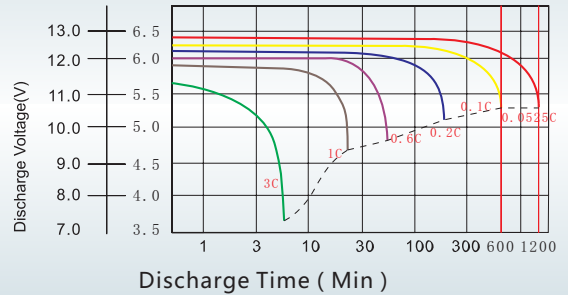
F.V/Time	20min	30min	45min	1h	2h	3h	5h	6h	8h	10h	20h
1.80V/Cell	206.62	165.82	143.35	104.07	82.36	64.80	30.33	24.44	17.56	11.89	6.43
1.75V/Cell	224.29	179.45	152.84	107.56	85.09	67.53	30.87	24.98	18.00	12.00	6.48
1.70V/Cell	240.98	190.15	159.71	111.49	88.25	69.49	31.64	25.53	18.44	12.11	6.59
1.65V/Cell	258.22	200.95	168.87	117.05	90.11	71.56	32.84	26.40	18.76	12.33	6.67
1.60V/Cell	275.56	212.29	178.04	122.40	93.05	73.53	33.71	27.05	19.09	12.44	6.70

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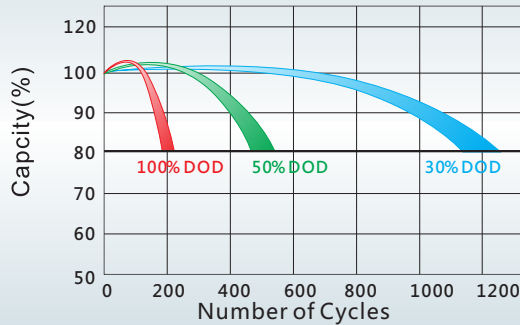
Charge Characteristics for Float Use @25°C/77°F



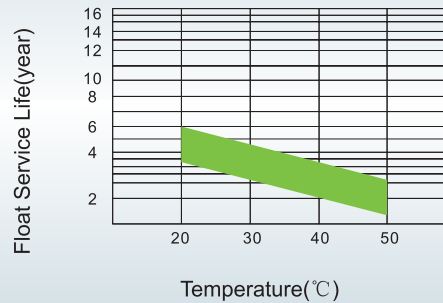
Discharge Characteristics at Various Rates @25°C/77°F



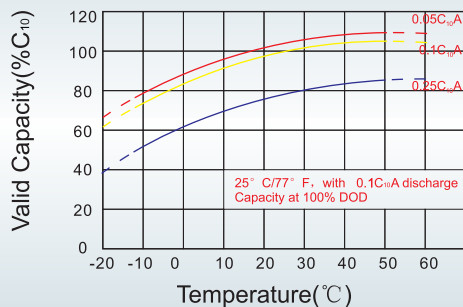
Cycle Life in Relation to Depth of Discharge



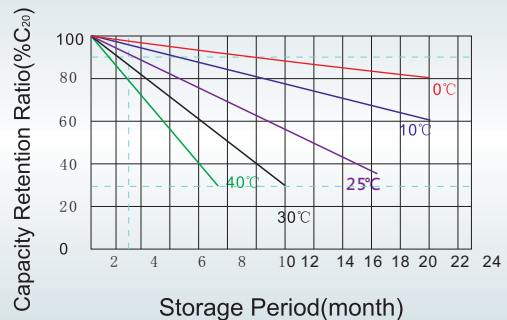
Float Service Life



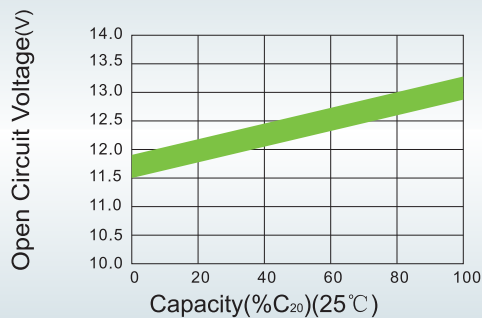
Temperature and Valid Capacity



Self Discharge Characteristics



Capacity and Open Circuit Voltage



Relationship between Charging Voltage and Temperature

