Rosen Solar
To light up the world

Rosen Solar Energy Co., Ltd

6-GFM-33Ah 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℃
Adapt to high or low temperature
Good deep discharge performance
Longer cycle life
UL approval

Performance Characteristics

1. Dimension and Weight

Length	193mm
Width	130mm
Height	155mm
Total Height	168mm
Reference Weight	10.8kg

2. Functional Parameter

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

3. Rated Capacity at 25℃(77℉)

10 hours rate (0.1C, 10.8V)	33Ah
3 hours rate (0.25C, 10.8V)	25.3Ah
1 hours rate (0.55C, 10.5V)	18.23Ah

4. Capacity Affected by Temperature(10 hours rate)

40 ℃ (104℉)	103%
25 ℃ (77 ℉)	100%
0 ℃ (32 ℉)	85%
-15℃ (5 ℉)	65%

5. Charge Method: Constant-Voltage Charging at 25℃(77℉)

Cyclic Use	14.4~14.9V
Maximum Charging Current	8.25A
Temperature Compensation	-30mV/℃
Float Use	13.6~13.8V
Temperature Compensation	-20mV/℃

6. Environment Temperature Requirements

Discharge Temperature	-15~50℃
Charge Temperature	0~40℃
Storage Temperature	-15~40℃

7. Inner Resistance & Max. Discharge Current

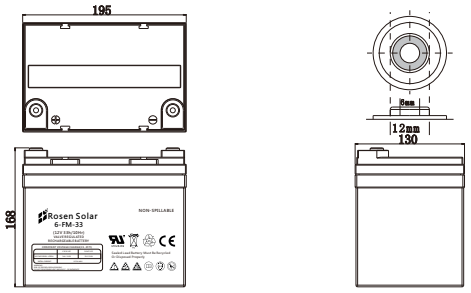
A fully charge battery at 25℃(77℉)	10mΩ
Max. Discharge Current	495A(5S)
Short Circuit Current	1650A

8. Self-discharge

3% of the capacity per month at 25℃(77℉)

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℃)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	3h	5h	10h	20h
1.80V/Cell	75.82	56.76	45.62	37.37	29.62	22.11	17.41	8.42	5.54	3.30	1.72
1.75V/Cell	85.47	62.37	49.83	40.18	30.77	22.94	18.23	8.58	5.68	3.33	1.73
1.70V/Cell	94.13	67.98	53.21	42.24	32.01	23.84	18.81	8.83	5.82	3.37	1.77
1.65V/Cell	103.79	73.34	56.60	44.88	33.74	24.42	19.47	9.24	5.99	3.43	1.79
1.60V/Cell	114.51	79.61	60.47	47.77	35.64	25.49	20.13	9.49	6.19	3.47	1.80

Constant-Power Discharge Parameter Unit: W(25℃)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	3h	5h	10h	20h
1.80V/Cell	137.12	103.54	83.99	69.38	55.61	42.16	33.41	16.34	10.81	6.52	3.39
1.75V/Cell	151.31	111.95	90.59	73.92	57.26	43.31	34.82	16.58	11.06	6.58	3.42
1.70V/Cell	162.03	119.30	95.37	77.06	59.24	44.88	35.81	17.00	11.30	6.64	3.49
1.65V/Cell	176.14	127.55	100.65	81.26	61.96	45.62	36.71	17.66	11.55	6.77	3.53
1.60V/Cell	189.75	135.30	105.85	85.64	65.01	47.27	37.87	18.15	11.96	6.82	3.54

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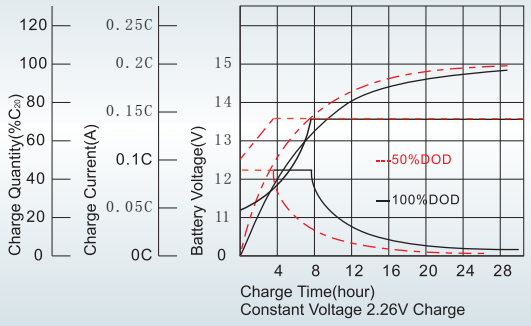
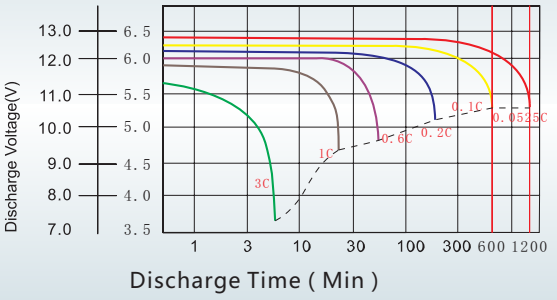
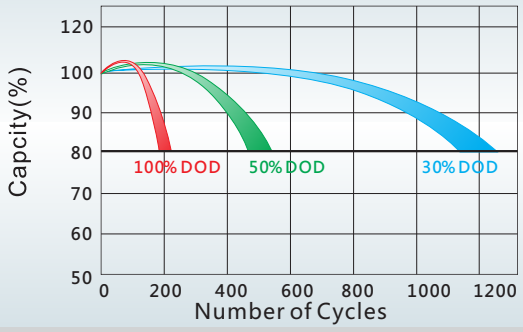
Charge Characteristics for Float Use @25℃/77℉



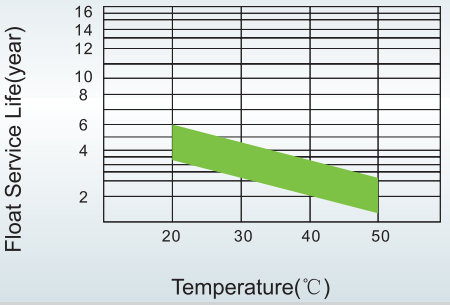
Discharge Characteristics at Various Rates @25℃/77℉



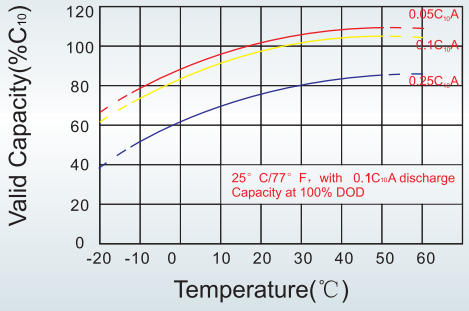
Cycle Life in Relation to Depth of Discharge



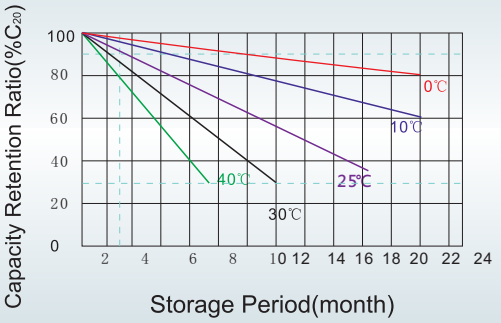
Float Service Life



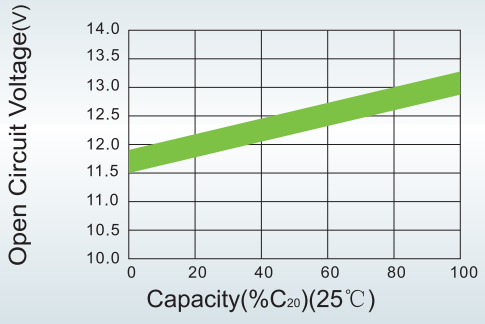
Temperature and Valid Capacity



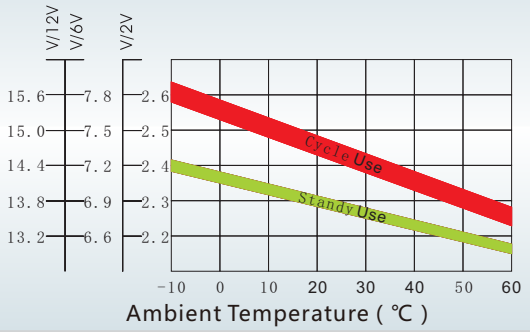
Self Discharge Characteristics



Capacity and Open Circuit Voltage



Relationship between Charging Voltage and Temperature



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