



# 6-GFMJ-100 12V gel battery



### Application

- Telecom
- Switching power supply
- CATV
- Oil and gas
- UPS, medical facilities
- Solar energy
- Street lamp
- Other situation with normal application

### Features of performance application

- ✚ Designed service life of 15 years
- ✚ High cycle service life
- ✚ Wider temperature range
- ✚ Excellent deep cycle performance
- ✚ Excellent high rate discharge performance
- ✚ Stronger constant power discharge capability
- ✚ Better charge acceptability
- ✚ Better safety performance and reliability
- ✚ High Performance/price ratio and low yearly operating cost
- ✚ Environment protection and energy saving

Rated voltage	12 V
Capacity@ 25°C(77°F)	100Ah @ 10hr to 10.8V
Weight	About 45kg (99 lb)
Reference internal resistance (charged)	About 3.26mΩ@ 25°C (77°F)
Short-circuit current	About 3681A (0.1S reference value)
Max discharge current	300A (5sec)
Self-discharge	< 20% 180 days @ 25°C (77°F)
Temperature range	Application: -20°C ~ 50°C (-4°F ~ 122°F) Storage: 5°C ~ 40°C (41°F ~ 104°F) Recommendation: 20°C ~ 30°C (68°F ~ 86°F)
Max charge current	15A
Charge voltage @ 25°C(77°F)	Float charge: 13.5V, average charge: 14.1V Temperature compensation factor: -18 mV/°C
Terminal output	M8 copper terminal (HPb59-1)
Recharge time	See figure 2

### Execution standard:

IEC60896-21/22 BS EN 61427-2002  
Q/321284KCC 03-2006 YD/T 1360

### Authentication and certificate:

**Certificate of Qualification on Perfecting Measurement & Measuring System**  
GB/T19022 ISO10012:2003、IDT  
**Quality Management System Authentication**  
GB/T19001 NO.03006Q10002R0M-2

**Environmental Management System Authentication**  
ISO 14001 NO.010607E2024R1M-2

**Occupational Health Management System Authentication**  
GB/T28001 NO.010607S10147R0M-2

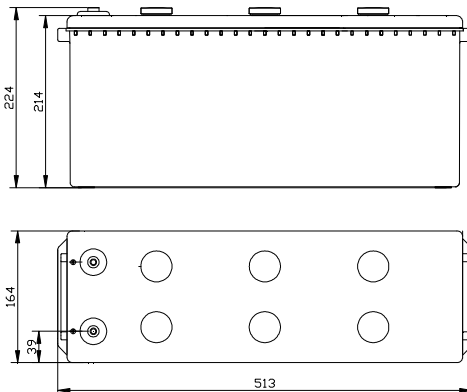
**Product authentication:**  
YD/T1360 NO.030074640566R1M

**CE authentication**  
EN 61000-6-3:2001+A11:2004  
EN 61000-6-1:2001

### National Industrial Product Production License

XK06-044-00012

### Product Quality Test Free Certificate



### Structure feature of Shuangdeng 12V gel battery

- Electrolyte: primary material adopts Germany gas silicon dioxide, and special technology is adopted; the material will be the thin collosol state when it's injected initially, and the material will be gel state in finished battery, accordingly, leakage and lamination are avoided.
- Plate: both positive plate and negative plate adopt pasted plate, the distance is shorter, the strong current discharging capability is strong; the grid is composed of multi-component alloy whose hydrogen evolution potential is higher, the corrosion resistance is fine and service life is long; the utilization rate of active substance is high and charge receptivity is strong.
- Battery case lid: made of ABS material, corrosion is prevented, strength is high and appearance is beautiful. The case lid is sealed by hot-melting, reliability is high and potential leakage risk can be prevented.
- Separator: adopt special micro-pore PVC-SiO2 separator from Europe AMER-SIL Company, the porosity of separator is big and resistance is low. It has bigger electrolyte storage space.
- Terminal sealing: the built-in copper core lead-base terminal post has stronger current carrying capacity and corrosion resistance. The unique double sealing structure of terminal post can effectively avoid leakage, to guarantee reliability of terminal post sealing.
- Safety valve: adopt Germany technology, constant opening and closing valve, high reliability, the accumulator case expansion, damage and electrolyte dry up can be avoided.

Discharge current at different final voltages and different discharge rates unit: A (25°C, 77°F)

	5min	10min	15min	30min	45min	1hr	1.5hr	2hr	3hr	4hr	5hr	8 hr	10 hr	20hr	100 hr	120hr
11.4	188.1	128.7	119.7	69.6	60.7	48.3	35.1	29.1	20.7	16.2	13.7	9.8	8.6	4.54	1.19	1.02
11.1	209.0	143.0	133.0	77.3	67.5	53.7	39.0	32.3	23.0	18.1	15.2	10.9	9.6	4.99	1.26	1.08
10.8	220.0	150.5	140.0	81.4	71.0	56.5	41.0	34.0	24.2	19.0	16.0	11.5	10.1	5.23	1.30	1.11
10.5	231.0	158.0	147.0	85.5	74.6	59.3	43.1	35.7	25.4	20.0	16.8	12.1	10.6	5.43	1.33	1.14

Discharge power at different final voltages and different discharge rates unit: W (25°C, 77°F)

	5min	10min	15min	30min	45min	1hr	1.5hr	2hr	3hr	4hr	5hr	8 hr	10 hr	20hr	100 hr	120hr
11.4	1431	1104	716	686	524	427	449	372	265	208	175	126	111	54.48	14.28	12.24
11.1	1828	1410	914	876	669	545	491	407	290	227	192	138	121	59.28	14.97	12.83
10.8	2202	1699	1101	1056	806	657	508	422	300	236	198	143	125	61.50	15.29	13.05
10.5	2678	1819	1210	1089	816	674	534	443	315	247	208	150	132	62.88	15.40	13.20



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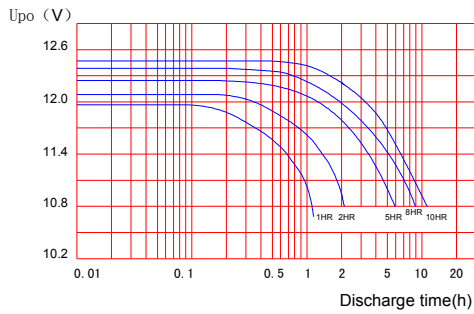


Figure 1 Discharge characteristic curve (20°C)

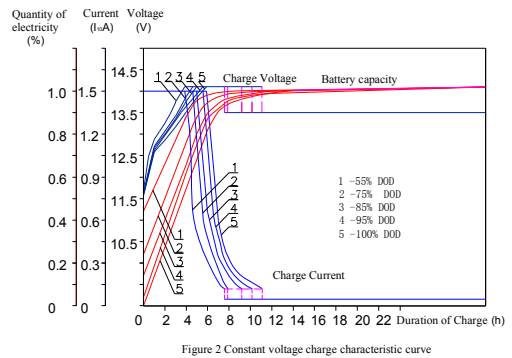


Figure 2 Constant voltage charge characteristic curve

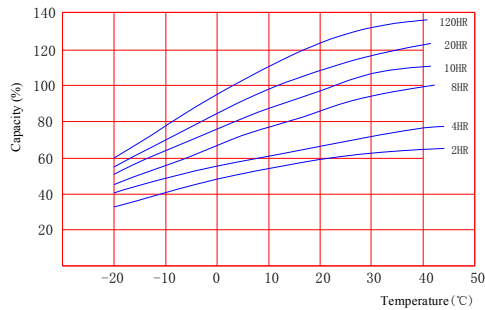


Figure 3 Relation curves between capacity and temperature

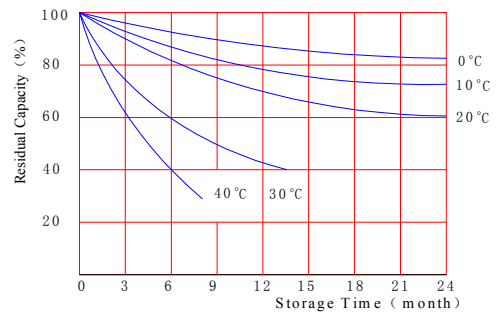


Figure 4 Self-discharge characteristic curve

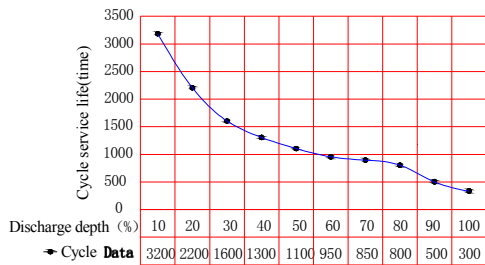


Figure 5 Relation curve between discharge depth and cycle service life

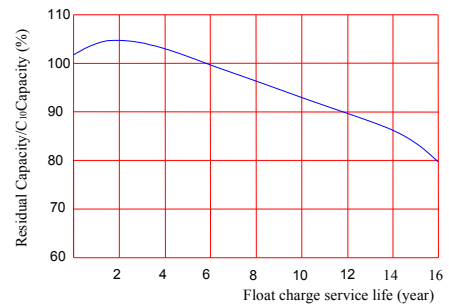


Figure 6 Relation curve between Float charge service life and residual capacity

- Remark: a) Test circumstances: 20-30°C, relative humidity is 50~80 percent;  
 b) Charge mode: electricity of charge is equal to 105~115 percent of discharge  
 c) Residual capacity is 80 percent C<sub>10</sub>

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The above data is only taken as reference instead of inspection standard. Additional notification won't be available for parameter change due to improvement and regulation of product. Inspection shall be performed in accordance with standards.

We must make a statement, when the battery service life and safe operating performance is confirmed, the test condition will be stricter; accordingly, the battery shall not be used in these conditions, because it's difficult for battery to reach expected service life.