



# 6-GFMJ-120

## 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)	120Ah @ 10hr to 10.8V
Weight	About 53.5kg (117.7 lb)
Reference internal resistance (charged)	About 2.98mΩ@ 25°C (77°F)
Short-circuit current	About 4027A (0.1S reference value)
Max discharge current	360A (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	18A
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

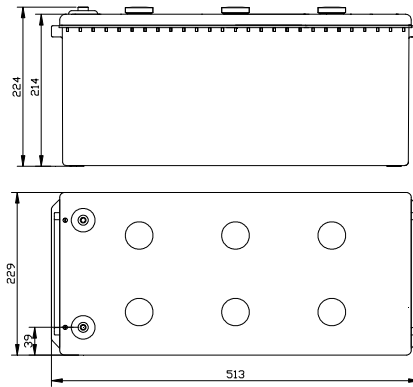
**Occupational Health Management System Authentication**  
GB/T28001 NO.010607S10147R0M-2

**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	225.7	132.7	143.6	87.6	72.8	57.1	42.1	34.9	24.6	19.5	16.7	11.4	10.3	5.45	1.42	1.23
11.1	250.8	147.4	159.6	97.4	80.9	63.5	46.7	38.8	27.4	21.7	18.5	12.6	11.4	5.99	1.50	1.30
10.8	264.0	155.2	168.0	102.5	85.2	66.8	49.2	40.8	28.8	22.8	19.5	13.3	12.0	6.29	1.55	1.34
10.5	277.2	163.0	176.4	107.6	89.5	70.1	51.7	42.8	30.2	23.9	20.5	14.0	12.6	6.54	1.59	1.37

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	1632	1287	878	819	702	572	538	447	315	250	213	146	131	65.40	17.04	14.76
11.1	2083	1643	1121	1046	896	730	589	488	345	273	233	159	144	71.16	17.82	15.44
10.8	2510	1980	1350	1260	1080	880	610	506	357	283	242	165	149	73.97	18.23	15.76
10.5	2852	2134	1373	1294	1097	912	641	531	375	297	254	173	156	75.73	18.41	15.86



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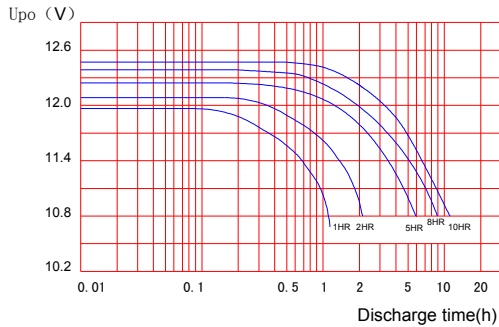


Figure 1 Discharge characteristic curve (20°C)

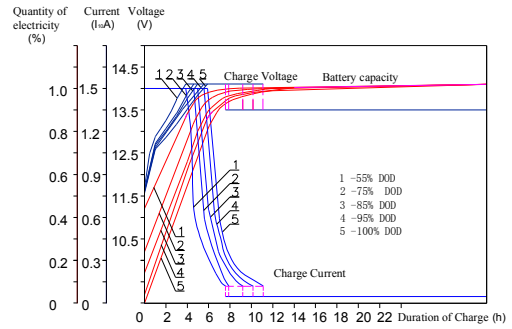


Figure 2 Constant voltage charge characteristic curve

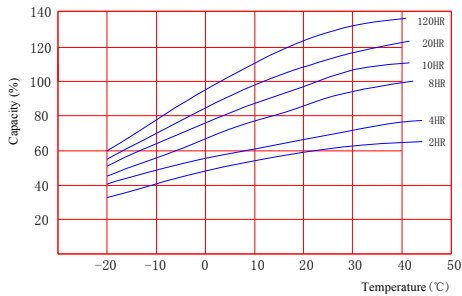


Figure 3 Relation curves between capacity and temperature

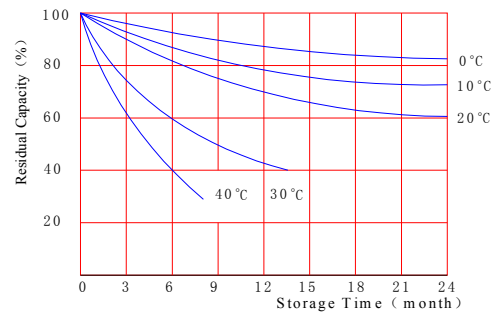


Figure 4 Self-discharge characteristic curve

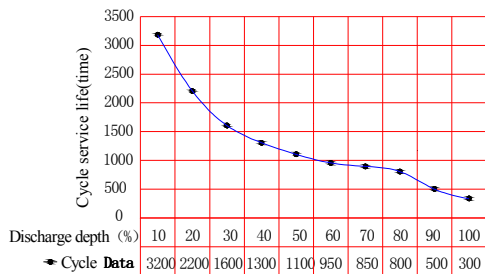


Figure 5 Relation curve between discharge depth and cycle service life

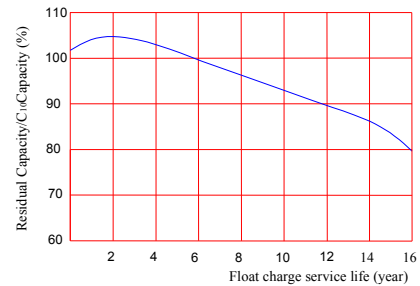


Figure 6 Relation curve between Float charge service life and residual capacity

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>

Free Service Line: +86-4008-899-886  
 Fax: +86-25-83176850  
 Tel: +86-25-83176860  
 E-mail: [gjpt@chinashoto.com](mailto:gjpt@chinashoto.com)  
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 Web: <http://www.chinashoto.cn/>

Shuangdeng Group promises to provide excellent engineering service for customers, including product solution, installation design and on-site maintenance.

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.