



6-GFX-50 12V 1 OPzS 50



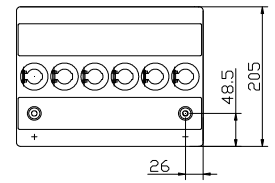
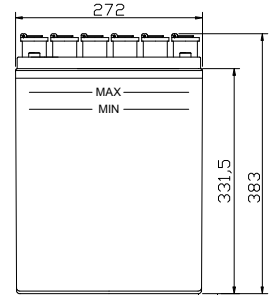
Application:

- Solar and wind power system
- Electric power, nuclear power
- Telecommunication
- UPS
- Situation with high environmental protection and energy-saving

Features of performance application

- ✚ Designed service life of 18 years
- ✚ Water supplement cycle 0.25-1 year (normal) 1-2 year (choose water content recombination valve)
- ✚ High cycle service life
- ✚ Wide operation temperature range
- ✚ Excellent deep cycle performance
- ✚ Superior low current discharge performance
- ✚ Better charge reception capability
- ✚ Better safety performance and reliability
- ✚ Modular and personified installation design
- ✚ Performance/price ratio is high and yearly operating cost is low
- ✚ Environmental friendly, cycle application

| | |
|---|--|
| Rated voltage | 12 V |
| Capacity@ 25°C(77°F) | 50Ah @ 10hr to 10.8V |
| Weight | Without electrolyte: about 25.5 kg (56.1 lb) With electrolyte: about 37.0 kg (81.4 lb) |
| electrolyte density (charged) | 1.240±0.01g/cm ³ (20°C) (68°F) |
| Reference internal resistance (charged) | About 17.3mΩ@ 25°C(77°F) |
| Short-circuit current | About 694A (0.1S reference value) |
| Max discharge current | 150A (5sec) |
| Self-discharge | < 10% 90 days @ 25°C (77°F) |
| Temperature range | Application: -20°C ~ 50°C (-4°F ~ 122°F) Storage: 0°C ~ 20°C (32°F ~ 68°F) Recommendation: 20°C ~ 25°C (68°F ~ 77°F) |
| Max charge current | 7.5A |
| Charge voltage @ 25°C(77°F) | Float charge: 13.38V, average charge: 14.1V Temperature compensation factor: -18 mV/°C |
| Terminal output | M8 copper terminal (HPb59-1) |



Structure features of Shuangdeng 3/6-GFX series acid-proof stationary battery:

- Plate: positive plate adopts tubular type plate which can effectively prevent active substance falling, positive plate frame is made of multi-component alloy, the alloy crystal particle is tiny and dense, the corrosion-resisting performance is good and service life is long. The negative plate adopts pasted plate, grid adopts radiated structure, which enhances utilization ratio of active substance and discharge capability of strong current; moreover, the charge reception capability is strong.
- Battery case: adopt AS transparent case with corrosion prevention, high strength and beautiful appearance, the internal structure and state of battery can be directly observed via transparent case.
- Separator: the combined separator of multi-hole corrugated plastic plate and micro-bore rubber separator has bigger electrolyte storage space, which enhances dispersion speed of electrolyte, greatly reduces internal resistance of battery and prevents dendrite short circuit after deep discharge.
- Terminal sealing: the built-in copper-core lead-based terminal post has strong current carrying capacity and corrosion resistance. The unique terminal post sealing structure can effectively eliminate the stress which is generated due to plate extension, leakage is avoided, sealing reliability of terminal post is ensured and service life of battery is greatly increased.
- Acid resistant bolt: adopt special funnel-shaped acid resistant bolt which can filter acid fume and prevent flame, the density and temperature of electrolyte can be measured directly, use is safe and maintenance is convenient.



Execution standard:

IEC60896-11 DIN40737-3
BS EN 61427-2002
GB/T13337.1
Q/321284KCC 03-2006

Authentication and certificate:

Certificate of Qualification on Perfecting Measurement & Measuring System
GB/T19022-2003

ISO10012:2003、IDT

Quality Management System

Authentication

GB/T19001-2000

NO.03006Q10002R0M-2

Environmental Management System

Authentication

ISO 14001:2004

NO.010607E2024R1M-2

Occupational Health Management

System Authentication

GB/T28001-2001

NO.010607S10147R0M-2

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

(2006)GM(321630488)

Export product quality license

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

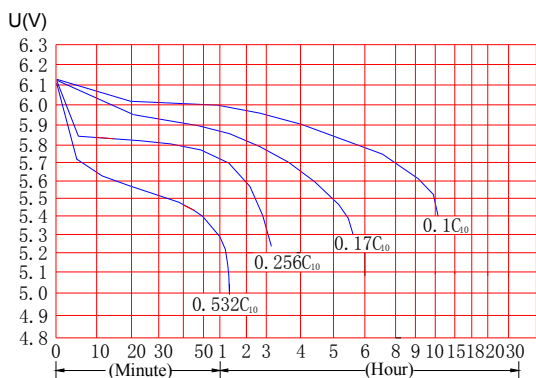
| | 5min | 10min | 15min | 30min | 45min | 1hr | 1.5hr | 2hr | 3hr | 4hr | 5hr | 8hr | 10hr | 20hr | 100hr | 120hr |
|-------|------|-------|-------|-------|-------|------|-------|------|------|------|------|-----|------|------|-------|-------|
| 1.90V | 28.0 | 26.0 | 23.0 | 21.0 | 19.0 | 18.0 | 13.0 | 12.0 | 10.0 | 8.0 | 7.0 | 6.0 | 5.0 | 2.37 | 0.59 | 0.49 |
| 1.85V | 31.0 | 31.0 | 30.0 | 25.0 | 20.0 | 20.0 | 15.0 | 14.0 | 11.0 | 9.0 | 8.0 | 6.0 | 5.0 | 2.60 | 0.62 | 0.52 |
| 1.80V | 41.0 | 40.0 | 40.0 | 32.0 | 25.0 | 24.0 | 17.0 | 16.0 | 12.0 | 10.0 | 9.0 | 8.0 | 6.0 | 2.73 | 0.64 | 0.53 |
| 1.75V | 50.0 | 48.0 | 46.0 | 36.0 | 28.0 | 26.0 | 19.0 | 17.0 | 13.0 | 11.0 | 10.0 | 9.0 | 6.0 | 2.84 | 0.66 | 0.55 |

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

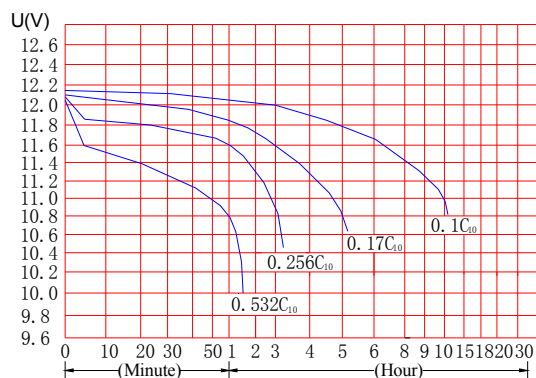
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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| 1.90V | 330.4 | 306.8 | 271.4 | 247.8 | 224.2 | 212.4 | 153.4 | 141.6 | 118.0 | 94.4 | 82.6 | 70.8 | 60.0 | 28.68 | 7.14 | 5.93 |
| 1.85V | 365.8 | 365.8 | 354.0 | 295.0 | 236.0 | 236.0 | 177.0 | 165.2 | 129.8 | 106.2 | 94.4 | 70.8 | 60.0 | 31.46 | 7.50 | 6.29 |
| 1.80V | 483.8 | 472.0 | 472.0 | 377.6 | 295.0 | 283.2 | 200.6 | 188.8 | 141.6 | 118.0 | 106.2 | 94.4 | 72.0 | 33.03 | 7.74 | 6.41 |
| 1.75V | 590.0 | 566.4 | 542.8 | 424.8 | 330.4 | 306.8 | 224.2 | 200.6 | 153.4 | 129.8 | 118.0 | 106.2 | 72.0 | 34.36 | 7.99 | 6.66 |



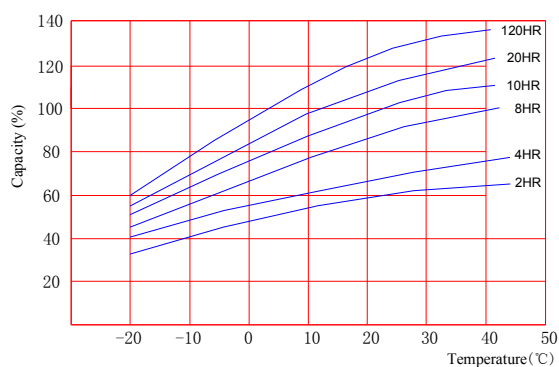
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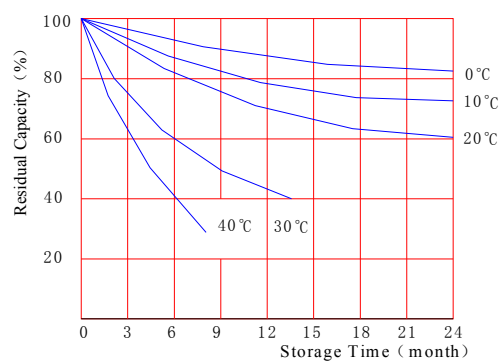
Discharge Characteristic Curve(20°C)



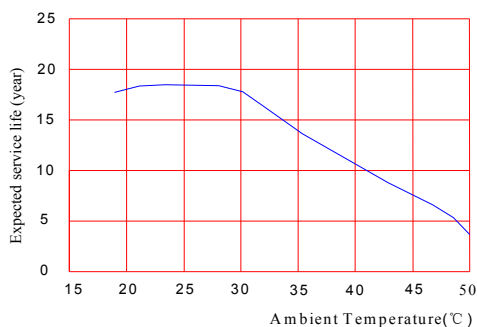
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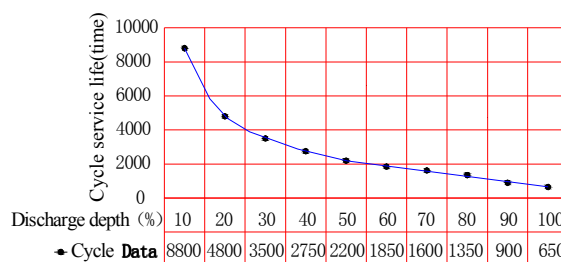
Relation curves between capacity and temperature



Self-discharge characteristic curve



Relation curves between temperature and service Life



Relation curve between discharge depth and cycle service life

Remark: a) test circumstances: 20-30°C, relative humidity is 50-80percent;
 b) charge mode: electricity of charge is equal to 105-115percent of discharge
 c) residual capacity is 80 percent C₁₀

Free Service Line: +86-4008-899-886
 FAX: +86-25-83176850
 Tel: +86-25-83176860
 E-mail: gjpt@chinashoto.com
 E-mail: joyce.zhong@chinashoto.com
 Web: <http://www.chinashoto.cn/>

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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.