



# GFMJ-2500 20 OPzV 2500



### Application:

- Solar energy, wind energy
- Electric power, nuclear power
- Communication
- Ship, maritime affairs
- UPS, medical facilities and emergency lighting
- Situation with high environmental protection and energy-saving

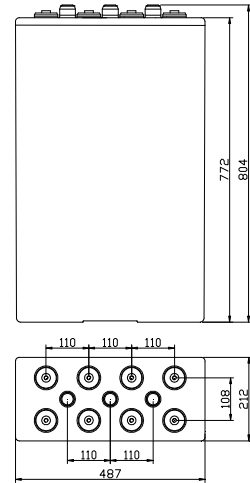
### Features of performance application

- ✚ Designed service life of 20 years
- ✚ High cycle service life
- ✚ Better temperature resistance performance
- ✚ Excellent deep cycle performance
- ✚ Superior low current discharge performance
- ✚ Stronger constant power discharge capability
- ✚ Better charge acceptability
- ✚ Better safety performance and reliability
- ✚ Modular and personified installation design
- ✚ High Performance/price ratio and low yearly operating cost
- ✚ Eco-friendly, cycle application

### Structure features of Shuangdeng GFMJ series VRLA d gel battery:

- Electrolyte: primary material adopts Germany gas silicon dioxide, the material will be the thin collosol state when it's injected initially, and it can fill the whole plate space of battery, and each part of plate can react evenly. The flooded electrolyte design can avoid dry up of battery when it's in high temperature and over charged, the thermal capacity is big and heat-elimination is fine, accordingly, thermal runaway can be avoided. The electrolyte is in the gel state in finished battery without flowing, accordingly, leakage and lamination can be avoided.
- Plate: positive plate adopts tubular type plate which can effectively prevent active substance falling, the positive plate frame is molded with multi-component alloy, the crystal particle of alloy structure is tiny and dense, the corrosion-resisting performance is fine and service life is long. Negative plate adopts pasted plate, the grid adopts radiated structure which enhances utilization ratio of active substance and discharge capability of strong current, and the charge reception capability is strong.
- Battery case: it's made of ABS material, corrosion prevention is fine, strength is high, and appearance is beautiful, it can be sealed with lid reliably which can prevent potential leakage risk.
- Separator: adopt special micro-pore PVC-SiO<sub>2</sub> 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.

Rated voltage	2 V
Capacity@ 25°C (77°F)	2500Ah @ 10hr to 1.80V per cell
Weight	About 194kg (426.8 lb)
Reference internal resistance (charged)	About 0.2mΩ @ 25°C (77°F)
Short-circuit current	About 10250A (0.1S reference value)
Max discharge current	7500A (5sec)
Self-discharge	< 20% 180 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	500A
Charge voltage @ 25°C (77°F)	Float charge: 2.23V, average charge: 2.35V Temperature compensation factor: -3 mV/°C
Terminal output	M10 copper terminal (HPb59-1)
Recharge time	See figure 2



### Execution standard:

- IEC60896-21/22 DIN40742
- BS EN 61427-2002
- YD/T 1360-2005
- 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

#### Environmental Management System Authentication

- ISO 14001:2004

#### Occupational Health Management System Authentication

- GB/T28001-2001

#### Product authentication:

- YD/T1360-2005
- NO.030074640567R1M

#### 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	1758	1584	1048	1000	975	870	775	650	512	414	352	257	212	113.8	29.73	25.18
1.85V	1911	1666	1254	1200	1034	990	850	720	566	457	388	272	226	125.1	31.30	26.51
1.80V	2101	2017	1663	1540	1271	1230	1075	844	625	523	438	300	260	131.4	32.39	27.43
1.75V	2185	2160	1980	1760	1500	1375	1183	900	630	544	454	309	264	136.6	33.20	28.12

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	8hr	10hr	20hr	100hr	120hr
1.90V	3510	2970	1415	1336	1299	1262	1177	1091	907	775	675	490	423	227.6	59.46	50.36
1.85V	3731	3093	1944	1700	1593	1485	1363	1240	1020	861	744	533	459	247.7	61.97	52.49
1.80V	3863	3708	2620	2419	2237	2054	1797	1539	1237	1019	865	610	512	257.5	63.48	53.76
1.75V	3995	3949	3066	2755	2525	2294	2002	1709	1338	1076	894	610	512	263.6	64.08	54.27



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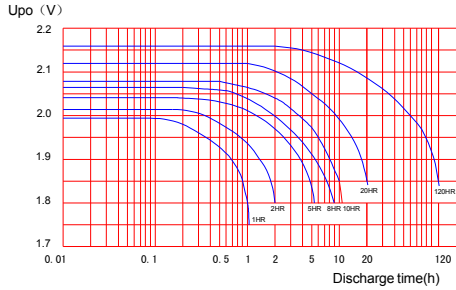


Figure 1 Discharge characteristic curve (20°C)

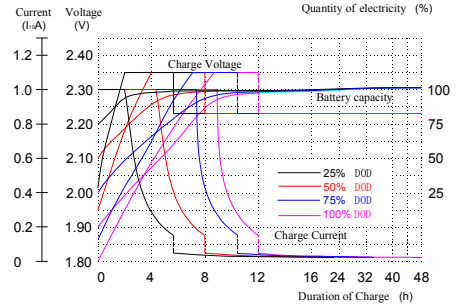


Figure 2 Constant voltage charge characteristic curve

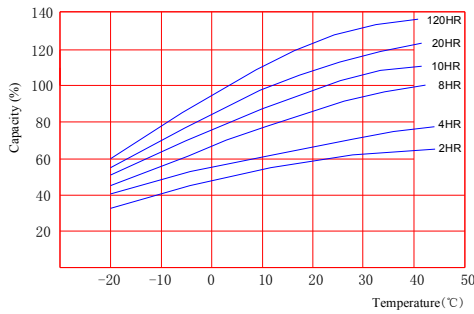


Figure 3 Relation curves between capacity and temperature

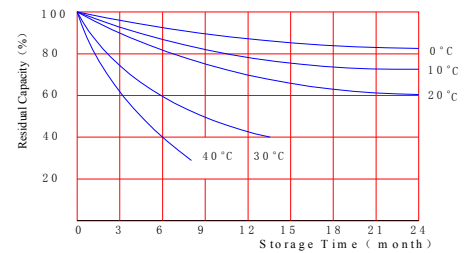


Figure 4 Self-discharge characteristic curve

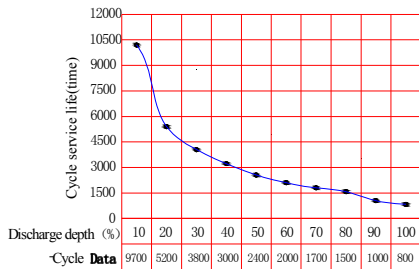


Figure 5 Relation curve between discharge depth and cycle service life

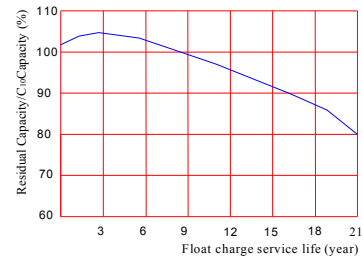


Figure 6 Relation curve between float charge service life and residual capacity

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

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

The above data are 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.