



**GEL TECHNOLOGY  
SG (Solar-GEL) SERIES**

**2SG2000(2V2000AH/120 HR)**

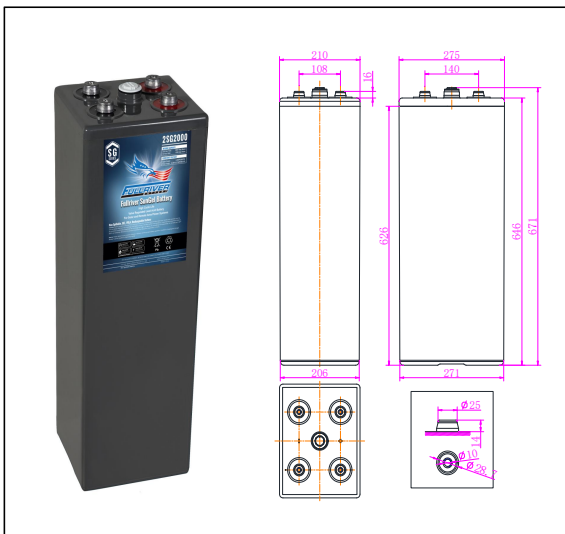


SG series batteries using revolutionary Solar-GEL long life plate technology has been designed specifically for solar applications. Solar applications are often remotely located and installed in the most extreme environmental conditions. To deliver a reliable service with a long operating life requires a unique blend of physical, structural and chemical characteristics. For this reason SG series batteries is possibly the world's best solar battery.

**General Features**

- (1) Superior low current discharge performance.
- (2) Excellent Recovery from deep discharge and good deep discharge cycle capability.
- (3) The battery has a low self-discharge,keep over 60% of the rated capacity after 2years stored under 25°C.
- (4) Compliance with IEC61427 (1999) , AS 4086.1 (1993).

**Outer Dimensions**



**Dimensions and Weight**

Total Height..... 671 ±2mm (26.4 inches)  
 Height..... 646 ±2mm (25.4 inches)  
 Length..... 210 ±2mm (8.3 inches)  
 Width..... 275 ±2mm (10.8 inches)  
 Weight.....Approx. 100.0 Kg (220.5 lbs)

**Performance Characteristics**

Nominal Voltage..... 2V  
 Nominal of cell..... 1  
 Design life..... 20 years  
 Nominal Capacity 77°F(25°C)  
 120 hour rate to 1.80V..... 2097 AH  
 100 hour rate to 1.80V..... 1969 AH  
 20 hour rate to 1.80V..... 1437 AH  
 10 hour rate to 1.80V..... 1332 AH  
 Safety vent..... Self resealing 150 mbar  
 Self-Discharge  
 .....2.5% of capacity declined per month at 25°C (77°F)  
 Operating Temperature Range  
 Discharge ..... -40°C to 55°C (-40°F-131°F)  
 Charge ..... -10°C to 50°C (14°F-122°F)  
 Storage ..... -20°C to 40°C (-4°F-104°F)  
 Nominal Operating Temperature Range.....25±3°C  
 Max.Discharge Current 77°F(25°C)..... 1800 A(5S)  
 Short Circuit Current..... 7000 A  
 Internal Resistance .....0.31mΩ  
 Container Material .....  
 .....ABS, Flame retardant to UL94-HB,UL94-V0 on request  
 Terminal.....Threaded insert terminal M10

**Charging Methods**

Application	Charging method	Charging voltage at 25 °C	Temperature compensation coefficient of charging voltage	Max. charging current	Max. Charging time 25°C (h)	
					100% discharge	50% discharge
For standby power source	Constant voltage & Constant current charging (with current restriction)	2.25~2.275V	-3mV/°C	0.125C10	36	24
For Cycle service		2.40~2.45V	-4mV/°C	0.125C10	24	16

\*Temperature compensation of charging voltage is not needed when using the batteries within 5°C to 35°C range.



## Gel Battery For Solar and Remote **SG Series: 2SG2000** Area Power Systems

**2V2000Ah/120Hr**

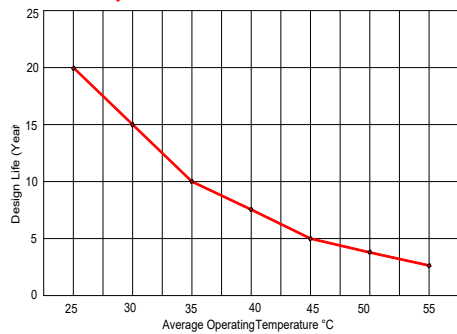
### Constant Current Discharge Characteristics: A(25°C)

F.V/Time	1h	2h	3h	5h	8h	10h	12h	24h	48h	72h	100h	120h
1.9	411	330	258	185.2	131.4	113.3	98.9	59.9	33.91	24.48	18.06	15.54
1.87	434	346	277	192.9	134.4	115.6	101.5	61.4	34.79	25.12	18.65	16.16
1.85	489	387	317	215.2	147.1	126.3	105.4	63.8	36.13	26.08	19.39	16.82
1.83	535	397	318	216.5	147.9	127.1	115.7	64.6	36.57	26.40	19.48	17.13
1.8	603	423	332	226.7	154.6	133.2	116.5	64.9	37.41	26.76	19.69	17.47
1.75	697	447	338	227.5	155.4	133.9	---	---	---	---	---	---
1.7	724	467	344	229.0	156.1	133.9	---	---	---	---	---	---
1.65	750	479	354	229.8	156.1	133.9	---	---	---	---	---	---

### Constant Power Discharge Characteristics: W/cell(25°C)

F.V/Time	1h	2h	3h	5h	8h	10h	12h	24h	48h	72h	100h	120h
1.9	806	651	510	366.6	262.0	227.2	204.8	114.7	65.65	46.46	34.86	30.31
1.87	884	705	569	397.8	278.2	241.1	207.7	116.3	66.57	47.29	36.00	31.51
1.85	945	745	617	421.1	288.9	250.2	217.1	121.6	69.58	48.96	37.43	32.80
1.83	1024	763	617	426.4	293.3	252.1	222.2	124.4	71.23	49.92	38.00	33.40
1.8	1145	813	642	431.8	297.8	254.0	225.5	125.5	72.54	51.86	38.24	34.25
1.75	1317	852	646	437.1	300.8	260.1	---	---	---	---	---	---
1.7	1346	878	654	442.7	303.3	262.4	---	---	---	---	---	---
1.65	1389	891	661	444.2	304.0	263.2	---	---	---	---	---	---

### Design Life and Temperature



Design life is a measure of rated capacity based on corrosion rate of the positive plate at a specific strength of electrolyte and alloy dimension. This does not relate directly to the expected service life as applications and operating environment can have a bearing on actual service life.  
Figure 1: Design Life Vs. Temperature

### Capacity and Temperature

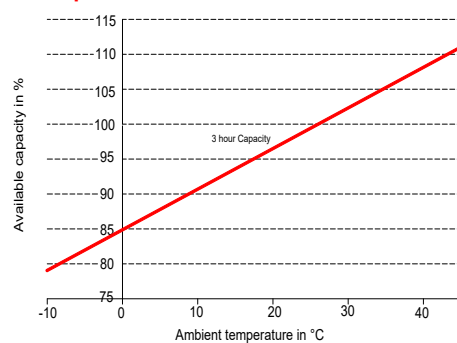


Figure 2: Capacity Vs Ambient temperature

### Capacity Retention Characteristic

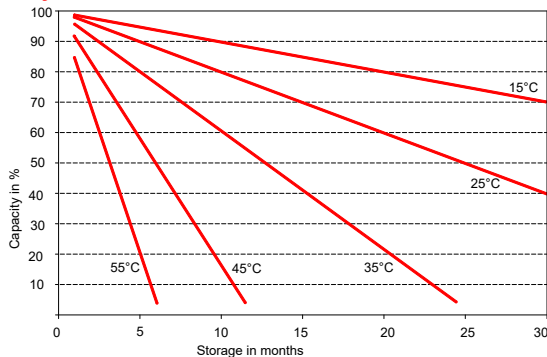


Figure 3: Self-discharge in relation to the storage temperature.

### Cycle Service Life

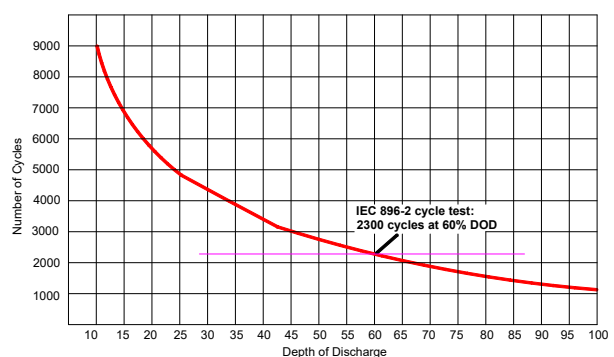


Figure 4: FSG Series, Number of Cycles vs. Depth of Discharge (DOD)

### Contact Information

#### Fullriver Battery

Add: Taishi industrial Area, Yuwotou Town, Panyu Zone,  
Guangzhou, China  
Tel.: +86 20 8491 6671  
Fax: +86 20 8491 6672  
www.fullriver.com E-mail: info@fullriver.com

### Other Fullriver battery ranges:

- DC Series* : AGM Battery For Deep Cycle service
- HC Series* : AGM Battery For High Cranking service
- HGXL Series* : 2V AGM Stationary batteries
- HGHL Series* : AGM Batteries for High Rate Service
- FAT Series* : Front Access Terminal Batteries for Telecom/IT Applications
- DCG Series* : Gel Battery For Deep Cycle service
- HGL Series* : AGM Battery For General Purpose service