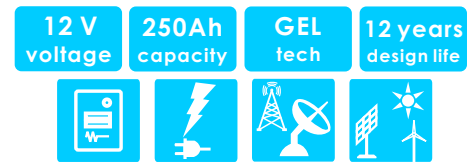


## SOLAR SERIES VRLA BATTERY

The Solar series is designed for frequent cyclic charge and discharge applications under extreme environments. By combining the newly developed Nano Gel electrolyte with high density paste, the Solar series offers high recharge efficiency at very low charge current. The acid stratification is highly reduced by adding Nano Gel.

This series is suit for energy storage for renewable energies such as PV, wind turbine power systems and CATV.



### TECHNICAL SPECIFICATIONS

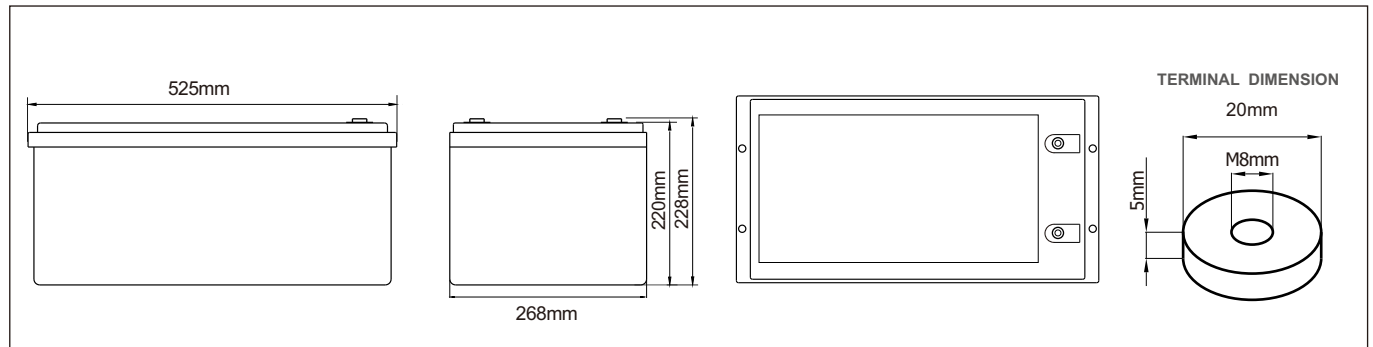
Nominal Voltage (V)	12 (6 cells per unit)
Designed Floating Life (20°C)	12 Years
Nominal Capacity (25°C)	250 Ah @ 10HR-rate (to 1.80Vpc)
Dimension (mm)	L525mm x W268mm x H228mm
Approx. Weight	67 kg
Terminal Type	Female Copper Insert M8 (torque:8~10N.m)
Internal Resistance	Approx. 0.0026 Ohm (fully charged @ 25°C)
Max. Charge Current	62.5A
Max. Discharge Current (5S)	1800 A
Short Circuit Current	4600 A
Self Discharge	Approx. 2.5% per month @ 20°C
Ambient Temperature	Discharge: -25~65°C Charge: -25~60°C Storage: -25~45°C
Float Charge Voltage	13.5V @25°C (-3mV/ cell/ °C)
Equalize and cycle Use Charge Voltage	14.1-14.4V @25°C
Container Material	ABS (UL94-V0 optional)



### Complied standards

- IEC 60896-21/22
- GB/T 19638
- IEC61427
- JIS C8704
- BS6290 part 4
- UL1989

### BATTERY DIMENSIONS



### BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (25°C)										
F.V/Time	30min	1h	2h	3h	4h	5h	8h	10h	20h	
1.70V	254	159	95.2	69.2	55.2	46.0	31.3	25.9	13.6	
1.75V	245	156	93.5	68.1	54.6	45.4	30.9	25.5	13.4	
1.80V	234	151	91.5	66.8	53.3	44.4	30.2	25.0	13.1	
1.85V	221	144	88.0	64.6	51.8	43.3	29.5	24.4	12.8	

Constant Power Discharge Characteristics: W/cell (25°C)										
F.V/Time	30min	1h	2h	3h	4h	5h	8h	10h	20h	
1.70V	475	300	181	132	105	88.9	61.0	50.6	26.9	
1.75V	463	297	180	131	104	88.5	60.6	50.3	26.5	
1.80V	446	289	177	130	102	87.1	59.7	49.7	26.2	
1.85V	425	280	172	127	100	85.7	58.8	48.7	25.8	

### PARAMETERS FOR SOLAR & WIND APPLICATIONS

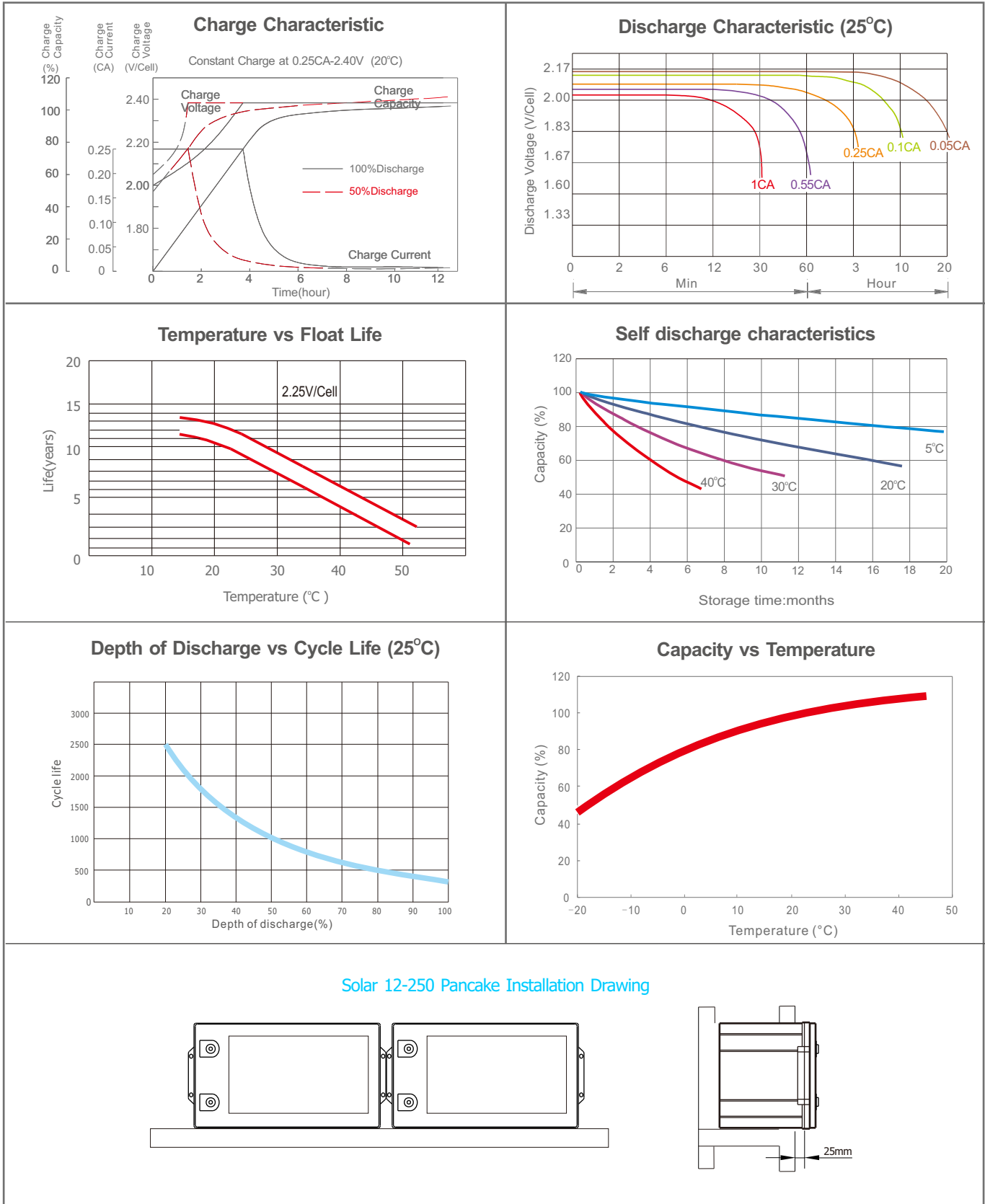
Long time discharge capacity for Solar & Wind applications

Capacity	C <sub>24</sub> (Ah)	C <sub>48</sub> (Ah)	C <sub>72</sub> (Ah)	C <sub>100</sub> (Ah)	C <sub>120</sub> (Ah)
Solar12-250	268	283	290	303	313
Final Voltage	1.85V				

### Solar & Wind applications parameters settings

Over voltage disconnect:	2.45±0.01V/cell @ 25°C
Regulation/equalize voltage:	2.40±0.01V/cell @ 25°C
Array reconnection voltage:	2.25±0.005V/cell @ 25°C
Float voltage setting:	2.27±0.005V/cell @ 25°C
Low voltage alarm voltage:	1.95±0.005V/cell @ 25°C
Low voltage disconnect:	1.90±0.005V/cell @ 25°C
Load reconnect voltage:	2.09±0.01V/cell @ 25°C
Temp. compensate coefficient:	-3~-5mV/cell/°C

## CHARACTERISTICS



### FINAL VOLTAGE SETTINGS RECOMMENDED ACCORDING TO THE DISCHARGE CURRENT

Discharge Current I (A)	$I \leq 0.08C$	$0.08C \leq I < 0.2C$	$0.2C \leq I < 0.6C$	$0.6C \leq I < 1.0C$	$I \geq 1.0C$
Final of Voltage	$\geq 1.85V_{pc}$	$\geq 1.80V_{pc}$	$\geq 1.75V_{pc}$	$\geq 1.70V_{pc}$	$\geq 1.60V_{pc}$

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