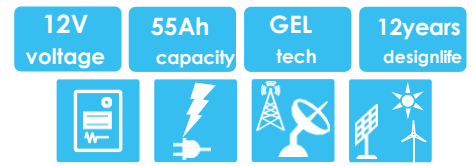


## SOLAR SERIES VRLA BATTERY

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

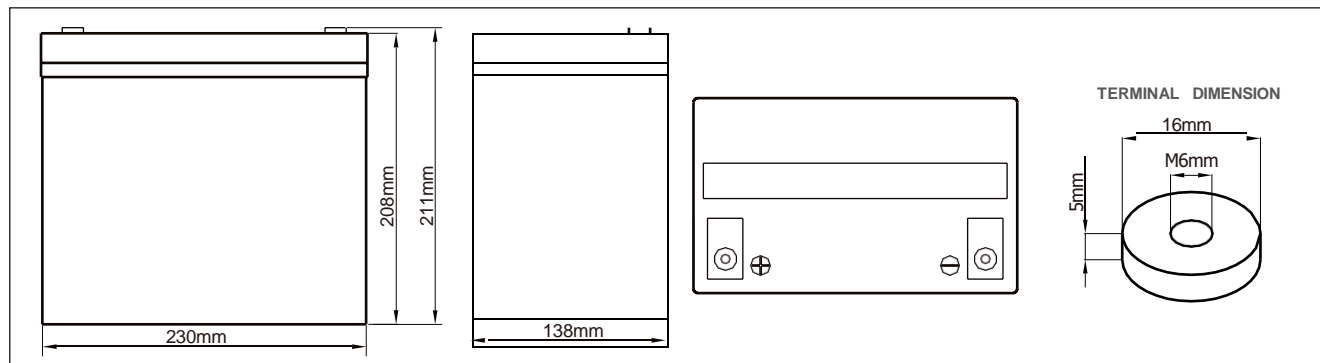
Nominal Voltage (V)	12 (6 cells per unit)
Designed Floating Life (25°C)	12 Years
Nominal Capacity (25°C)	55 Ah @ 10HR-rate (to 1.80Vpc)
Dimension (mm)	L230mm x W138mm x H211mm
Approx. Weight	17.1 kg (37.7 lbs)
Terminal Type	Female Copper Insert M6 (torque:6~7N.m)
Internal Resistance	Approx. 0.0062 Ohm (fully charged @ 20°C)
Max. Charge Current	13.75A
Max. Discharge Current (5S)	550 A
Short Circuit Current	1900 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	14.1V @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	57.0	35.4	20.9	15.2	12.1	10.1	6.89	5.69	3.00
1.75V	55.0	34.6	20.6	15.0	12.0	10.0	6.79	5.61	2.94
1.80V	52.6	33.5	20.1	14.7	11.7	9.76	6.63	5.50	2.89
1.85V	49.6	32.0	19.3	14.2	11.4	9.53	6.49	5.36	2.82

Constant Power Discharge Characteristics: W/cell (25°C)									
F.V/Time	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.70V	107	66.8	39.9	29.1	23.3	19.5	13.4	11.1	5.91
1.75V	104	65.9	39.5	28.9	23.1	19.4	13.3	11.0	5.83
1.80V	100	64.3	39.0	28.6	22.9	19.2	13.1	10.9	5.77
1.85V	95.5	62.2	37.8	27.9	22.5	18.8	12.9	10.7	5.67

## PARAMETERS FOR SOLAR & WIND APPLICATIONS

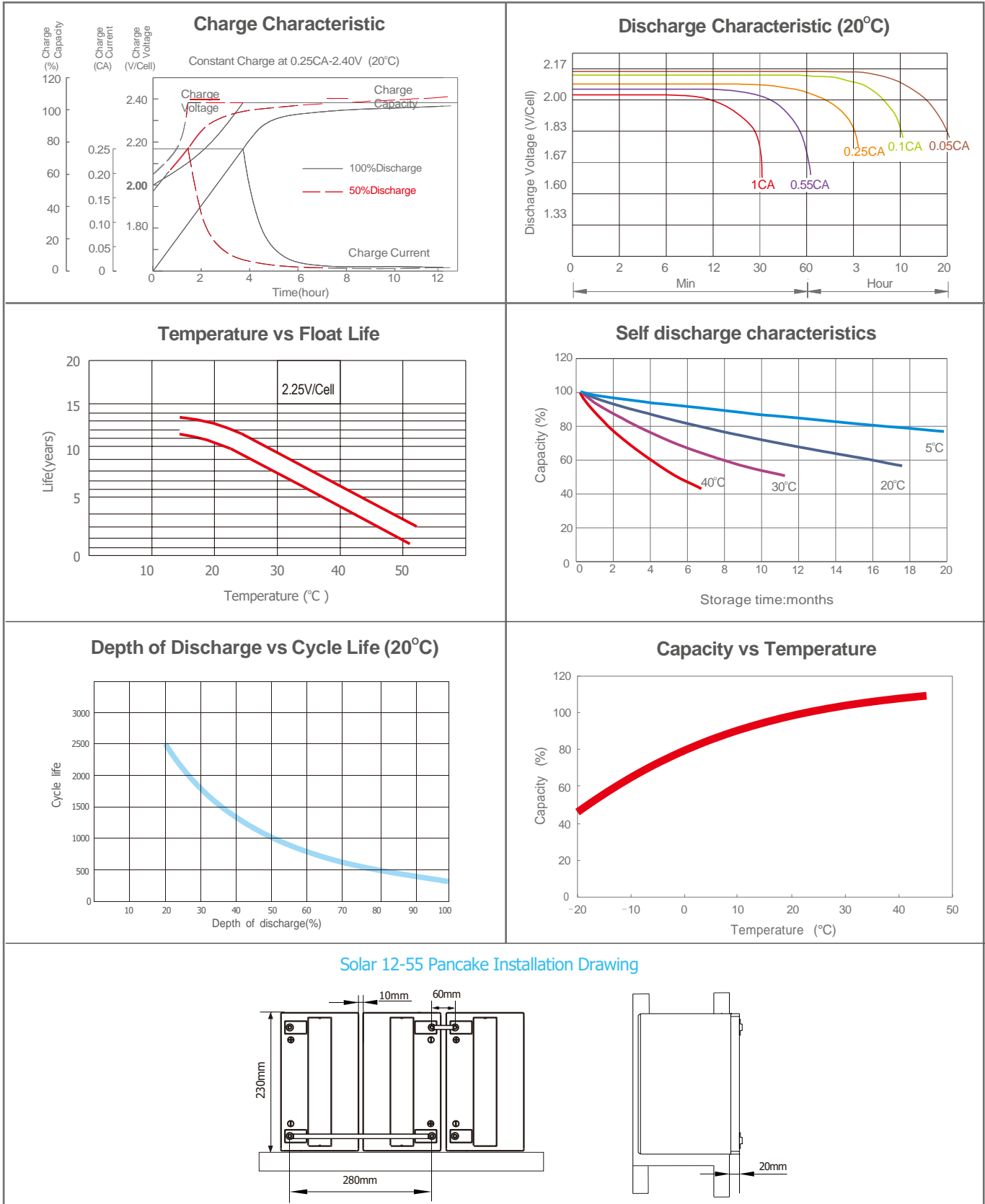
Long time discharge capacity for Solar & Wind applications

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)
Solar12-55	58.9	62.2	63.8	66.6	68.8
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:	-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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