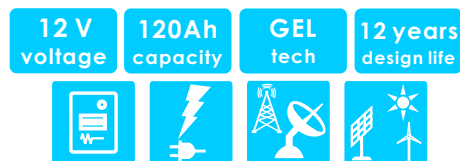


SOLAR SERIES VRLA BATTERY

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

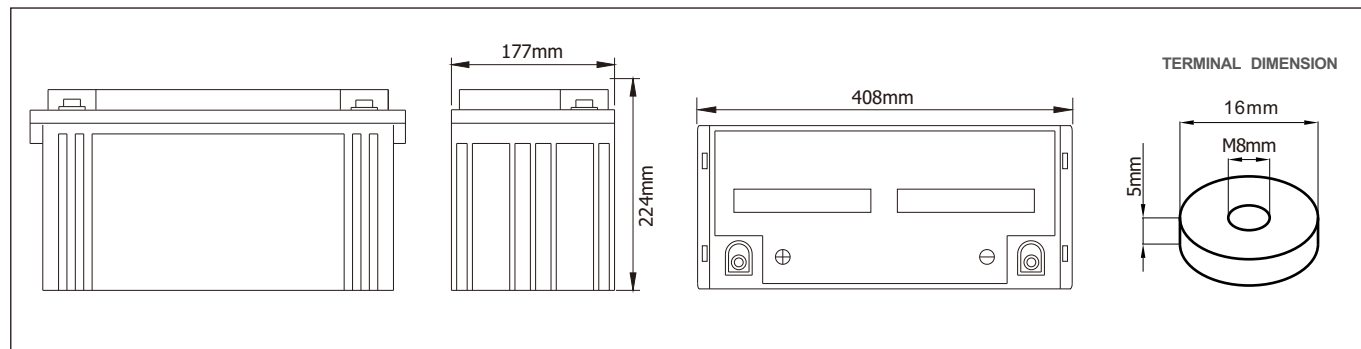
Nominal Voltage (V)	12 (6 cells per unit)
Designed Floating Life (20°C)	12 Years
Nominal Capacity (25°C)	120 Ah @ 10HR-rate (to 1.80Vpc)
Dimension (mm)	L408mm x W177mm x H224mm
Approx. Weight	34 kg
Terminal Type	Female Copper Insert M8 (torque:8~10N.m)
Internal Resistance	Approx. 0.004 Ohm (fully charged @ 25°C)
Max. Charge Current	30A
Max. Discharge Current (5S)	960 A
Short Circuit Current	3000 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	124	77.1	45.7	33.2	26.5	22.1	15.0	12.4	6.54
1.75V	120	75.6	44.9	32.7	26.2	21.8	14.8	12.2	6.42
1.80V	115	73.1	43.9	32.0	25.6	21.3	14.5	12.0	6.30
1.85V	108	69.9	42.2	31.0	24.8	20.8	14.2	11.7	6.15

Constant Power Discharge Characteristics: W/cell (25°C)									
F.V/Time	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.70V	233	146	87.0	63.5	50.9	42.7	29.3	24.3	12.9
1.75V	227	144	86.2	63.1	50.7	42.5	29.1	24.1	12.7
1.80V	219	140	85.1	62.4	50.0	41.8	28.7	23.8	12.6
1.85V	208	136	82.6	60.9	49.0	41.1	28.2	23.4	12.4

PARAMETERS FOR SOLAR & WIND APPLICATIONS

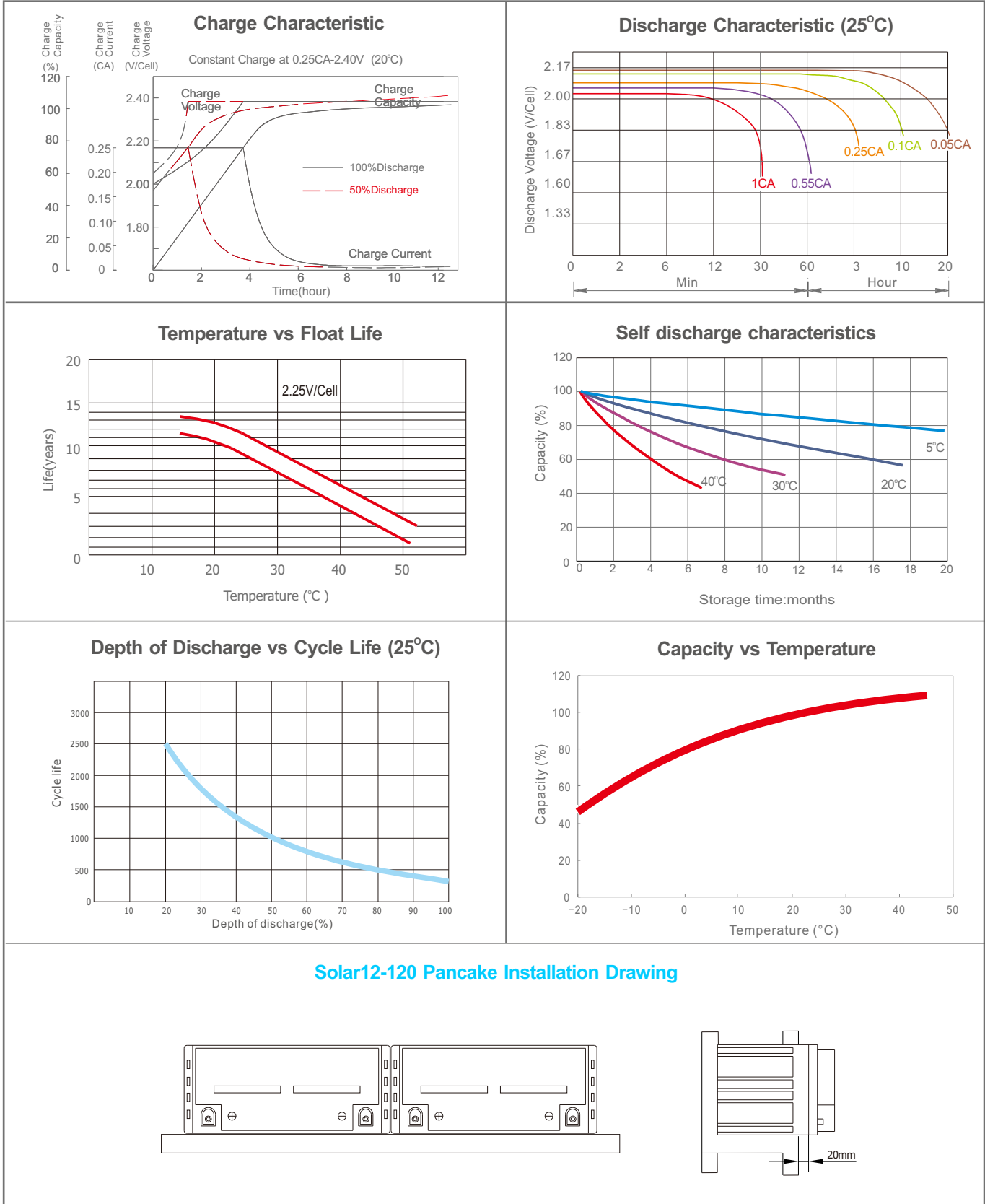
Long time discharge capacity for Solar & Wind applications

Capacity	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)
Solar12-120	128	136	139	145	150
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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