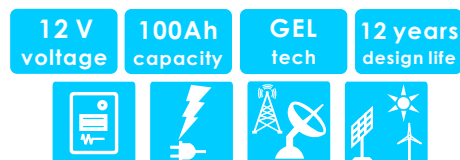


Solar12-100D

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 suited for energy storage for renewable energies such as PV, wind turbine power systems and CATV.



TECHNICAL SPECIFICATIONS

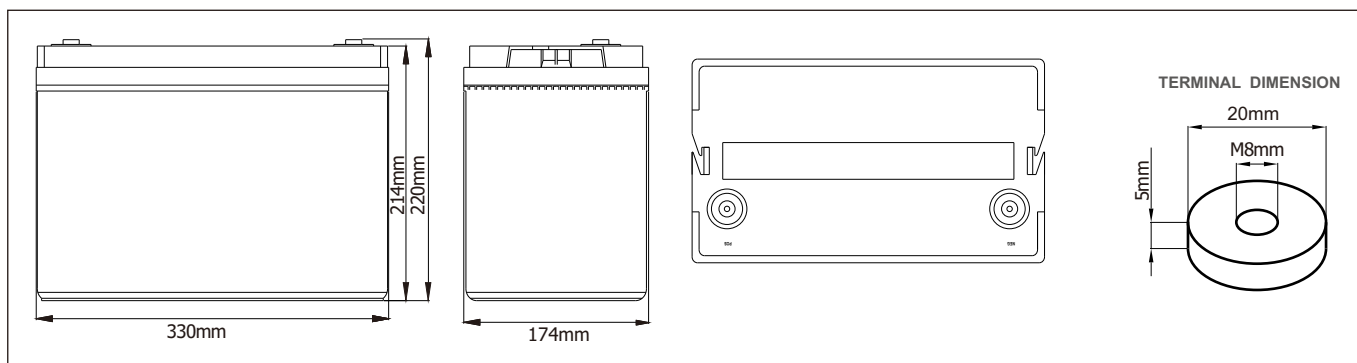
Nominal Voltage (V)	12 (6 cells per unit)
Designed Floating Life (20°C)	12 Years
Nominal Capacity (25°C)	100 Ah @ 10HR-rate (to 1.80Vpc)
Dimension (mm)	L330mm x W174mm x H220mm
Approx. Weight	30.4 kg (67.0 lbs)
Terminal Type	Female Copper Insert M8 (torque:8~10N.m)
Internal Resistance	Approx. 0.0041 Ohm (fully charged @ 25°C)
Max. Charge Current	25A
Max. Discharge Current (5S)	800 A
Short Circuit Current	2600 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/T19638
- 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	104	64.3	38.1	27.7	22.1	18.4	12.5	10.3	5.45
1.75V	100	63.0	37.4	27.2	21.8	18.2	12.4	10.2	5.35
1.80V	95.6	60.9	36.6	26.7	21.3	17.7	12.1	10.0	5.25
1.85V	90.2	58.3	35.2	25.8	20.7	17.3	11.8	9.74	5.13

Constant Power Discharge Characteristics: W/cell (25°C)									
F.V/Time	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.70V	194	121	72.5	52.9	42.4	35.5	24.4	20.2	10.7
1.75V	189	120	71.8	52.6	42.3	35.4	24.3	20.1	10.6
1.80V	182	117	70.9	52.0	41.7	34.8	23.9	19.9	10.5
1.85V	174	113	68.8	50.7	40.8	34.3	23.5	19.5	10.3

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

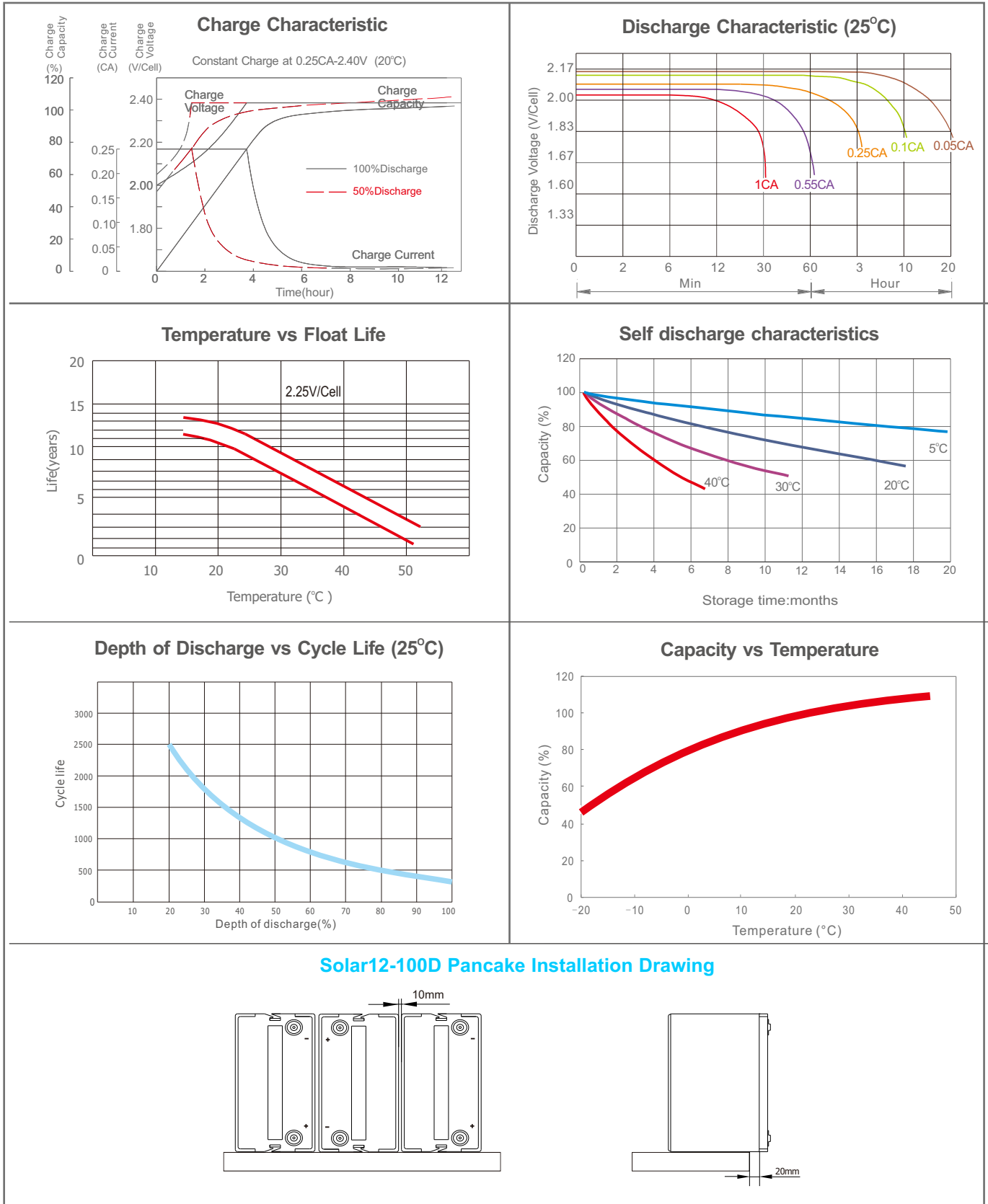
Capacity	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)
Solar12-100D	107	113	116	121	125
Final Voltage	1.85V				

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

Solar12-100D

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	$\geq 1.85V/pc$	$\geq 1.80V/pc$	$\geq 1.75V/pc$	$\geq 1.70V/pc$	$\geq 1.60V/pc$