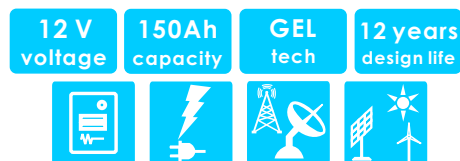


Solar12-150

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

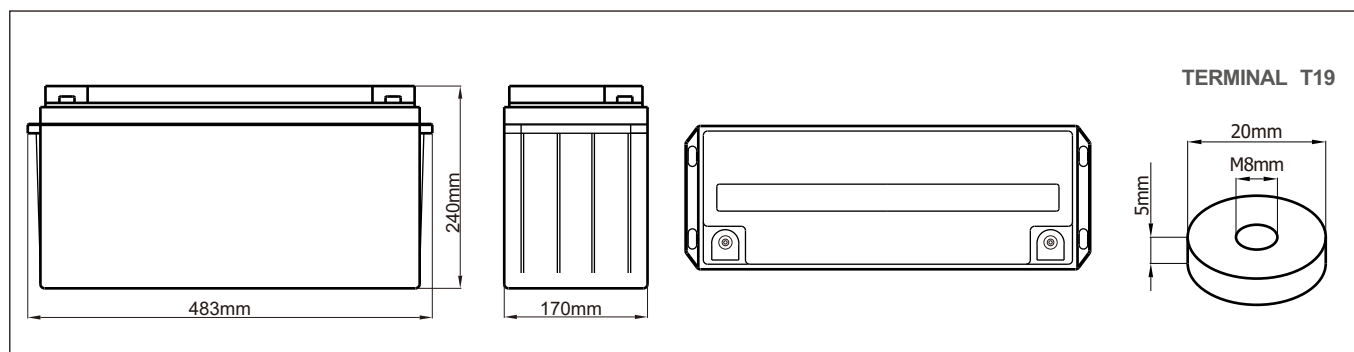
Nominal Voltage (V)	12 (6 cells per unit)
Designed Floating Life (20°C)	12 Years
Nominal Capacity (25°C)	150 Ah @ 10HR-rate (to 1.80Vpc)
Dimension (mm)	L483mm x W170mm x H240mm
Approx. Weight	45.5 kg (100 lbs)
Terminal Type	Female Copper Insert M8 (torque:8~10N.m)
Internal Resistance	Approx. 0.0035 Ohm (fully charged @ 25°C)
Max. Charge Current	37.5A
Max. Discharge Current (5S)	1200 A
Short Circuit Current	3400 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	155	96.4	57.1	41.5	33.1	27.6	18.8	15.5	8.18
1.75V	150	94.5	56.1	40.9	32.7	27.3	18.5	15.3	8.03
1.80V	143	91.4	54.9	40.1	32.0	26.6	18.1	15.0	7.87
1.85V	135	87.4	52.8	38.8	31.1	26.0	17.7	14.6	7.69

Constant Power Discharge Characteristics: W/cell (25°C)									
F.V/Time	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.70V	291	182	109	79.4	63.6	53.3	36.6	30.4	16.1
1.75V	283	180	108	78.8	63.4	53.1	36.4	30.2	15.9
1.80V	273	175	106	78.0	62.5	52.2	35.8	29.8	15.7
1.85V	260	170	103	76.1	61.2	51.4	35.3	29.2	15.5

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

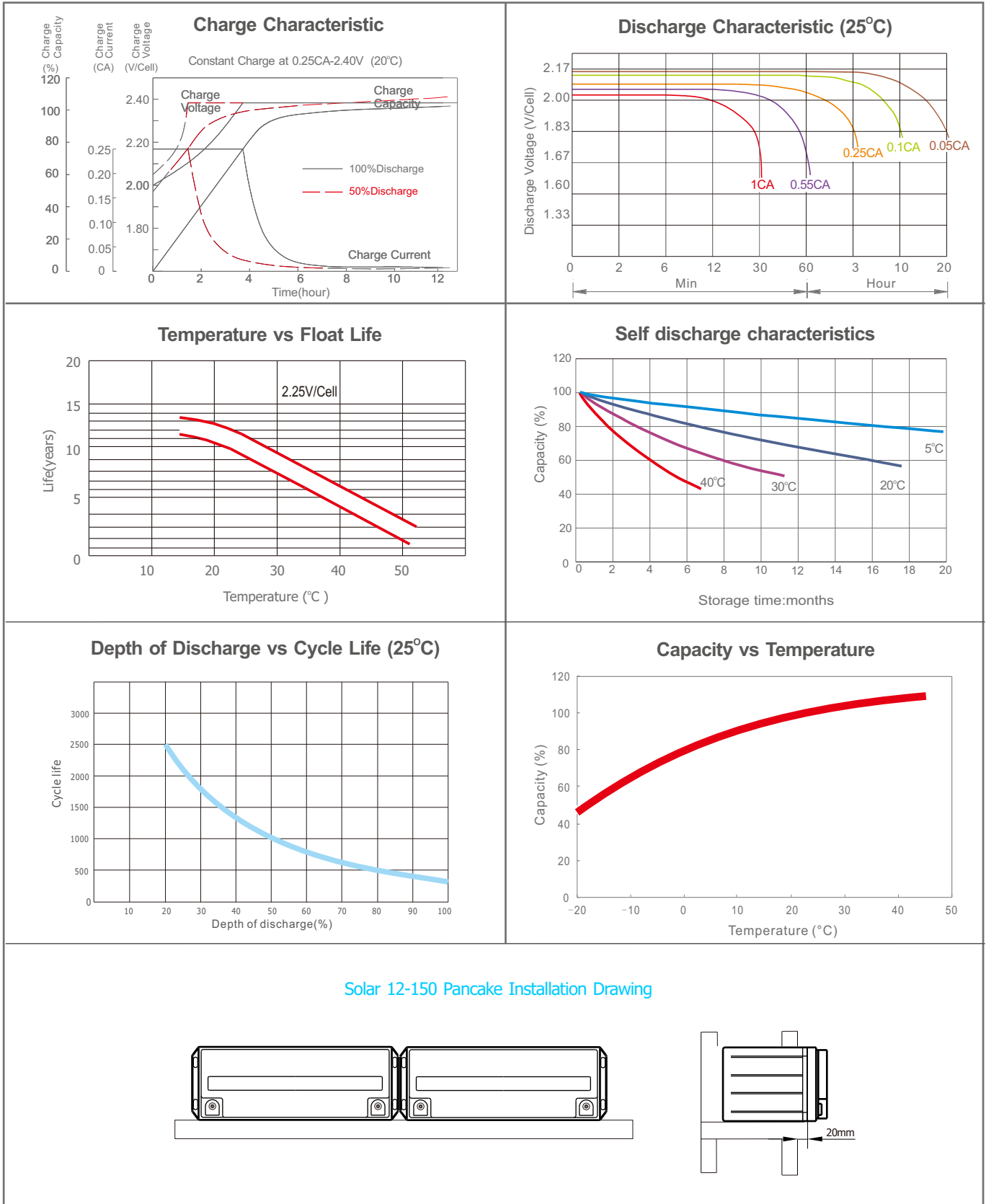
Capacity	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)
Solar12-150	161	170	174	182	188
Final Voltage	1.85V				

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

Solar12-150

CHARACTERISTICS



FINAL VOLTAGE SETTINGS RECOMMENDED ACCORDING TO THE DISCHARGE CURRENT

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