



ENERGY BANK
lightwaveglobal.com

LW 220Ah

12V 220Ah Sealed Maintenance Free DeepCycle GEL Battery


LIGHTWAVE

CAUTION

- Do not incinerate.
- Do not short the battery terminals.
- Do not charge in a gas tight container.
- Flush with water at once if contact is made with electrolyte/Acid.

Warning: Risk of fire, explosion, or burns.
Do not disassemble, heat above 60°C, or incinerate.

HEAVY DUTY GEL BATTERY

SMF-GEL

Nonspillable

C₂₀ 220Ah 2V
Constant Voltage Charge
Voltage regulation
Cycle USE
Standby USE

: 14.6~14.8V(25°C)
: 13.6~13.8V(25°C)


MADE IN CHINA



**DEEP CYCLE GEL
BATTERY**

MODEL : LW 220Ah (12V220AH)

SOLAR DEEP CYCLE GEL BATTERY

MODEL : LW220Ah (12V220AH)



⚡ Dimensions

Length (L)	522±3 (20.55±0.12)
Width (W)	238±3 (9.37±0.12)
Height (H)	219±3 (8.62±0.12)
Overall Height (HT)	224±3 (8.82±0.12)

Description of torque value of hard ware for the terminals :

Recommended torque value :

M8:12 N-m (122kgf-cm)

Maximum allowable torque value:

M8:20 N-m (204kgf-cm)

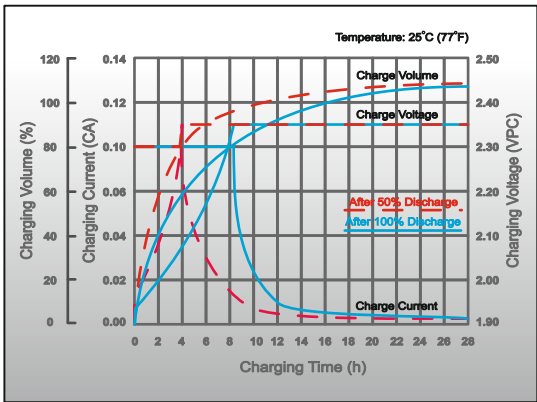
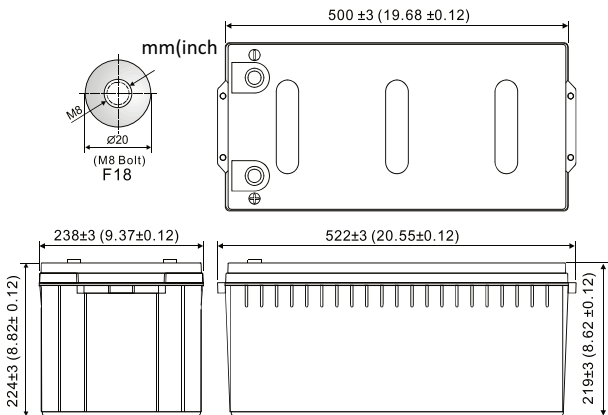


Fig: 1.5 Charge Characteristic Curve for Cycle Use (IU)

⚡ Specifications

Nominal Voltage

12V

Weight

Approx 60 Kgs.

Internal Resistance (at 1KHz)

Approx 4.8 mΩ (Less than 6mΩ)

Maximum Discharge Current for

5 seconds : 1600A

Nominal Capacity

20 hour rate	(11A to 10.80V)	220Ah
5 hour rate	(35A to 10.50V)	175Ah
1 hour rate	(125A to 10.20V)	125Ah

Charging Methods at 25°C (77°F)

Initial Charging Current	Less Than 60A
Cycle Use	14.6-14.8V (25°C)
Standby Use	13.6-13.8V (25°C)
Coefficient	-3.0mV/oC/cell

Operating Temperature Range

Charge	- 15°C(5°F)	to	40°C(104°F)
Discharge	- 15°C(5°F)	to	50°C(122°F)
Storage	- 15°C(5°F)	to	40°C(104°F)

Charging Retention (shelf life) at 20°C (68°F)

1 month	98%
3 month	94%
6 month	85%

Case Material

ABS UL94HB

Design Life

Expected Trickle Design Life: 7-8 years at 20°C

Terminal

F18

SOLAR DEEP CYCLE GEL BATTERY



MODEL : LW220Ah (12V220AH)

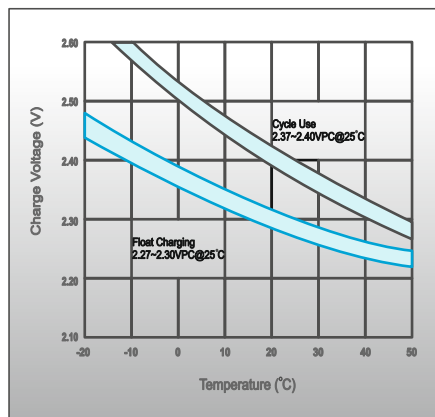


Fig: 1.2 Relationship between charging Voltage and Temperature

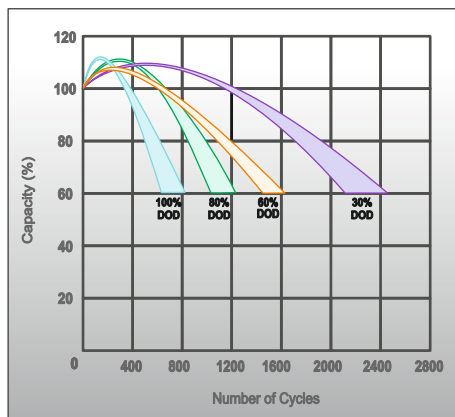


Fig: 1.3 Cycle Life Relation to Depth of Discharge

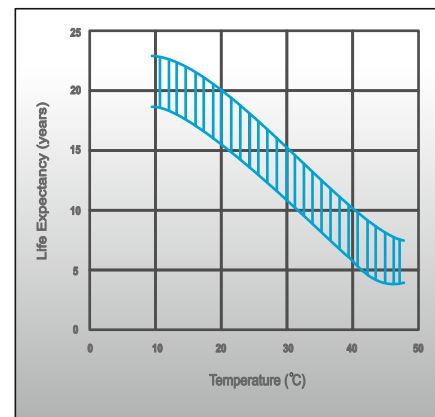


Fig: 1.4 Effect of Temperature on Long Term Life

- PERFORMANCE DATA

- Discharge Rates in Watts to Various End Voltages at 25°C (77°F)

End Voltage		1.85V	1.80V	1.75V	1.70V	1.65V	1.60V
Time							
10	min	604	618	641	663	686	712
15	min	519	529	548	567	586	604
30	min	334	341	347	355	364	374
60	min	215	219	222	226	230	236
120	min	133	135	137	139	140	141
180	min	95.0	96.5	98.0	98.7	99.3	100
240	min	78.0	79.2	80.3	81.0	81.5	82.0
300	min	66.8	67.9	69.0	69.5	69.8	70.3
600	min	39.8	39.9	40.0	40.2	40.4	40.5
1200	min	21.0	21.0	21.1	21.2	21.2	21.3

- Discharge Rates in Amperes to Various End Voltages at 25°C (77°F)

End Voltage		1.85V	1.80V	1.75V	1.70V	1.65V	1.60V
Time							
10	min	334	344	354	367	380	393
15	min	284	292	300	310	320	330
30	min	179	182	185	190	195	200
60	min	113	115	117	119	121	124
120	min	69.1	70.0	70.9	71.7	72.4	73.1
180	min	48.5	50.0	50.4	50.6	50.8	51.0
240	min	39.8	40.4	41.0	41.3	41.6	41.8
300	min	34.0	34.5	35.0	35.2	35.5	35.7
600	min	20.0	20.1	20.1	20.2	20.3	20.4
1200	min	10.5	10.5	10.6	10.6	10.7	10.7

All data on the spec. sheet is an average value:

The tolerance range : $X < 6\text{min}$ (+15%~-15%), $6\text{min} \leq X < 10\text{min}$ (+12%~-12%), $10\text{min} \leq X < 60\text{min}$ (+8%~-8%), $X \geq 60\text{min}$ (+5%~-5%)