

⚡ Specifications

Nominal Voltage(V)

12V

Nominal Power

15 mins rate: 820W/cell to 1.67V/cell

Nominal Capacity

20 hour rate	(11.5A to 10.50V)	230Ah
10 hour rate	(22.0A to 10.50V)	220Ah
8 hour rate	(24.2A to 10.50V)	193.6Ah
5 hour rate	(37.4A to 10.20V)	187Ah

Weight

Approx. 66.4kg(146Lbs.)

Internal Resistance (at 1KHz)

Approx. 2.2 mΩ

Maximum Discharge Current for

5 seconds: 1840A

Short Circuit Current (A) IEC 60896-21-22

4040 A

Charging Methods at 25°C(77°F)

Maximum Charging Current :	69A
Boost Charging Voltage	14.1 to 14.4V
Boost Charge Time	8-9Hr
Float Charging Voltage	13.5 to 13.65V
Coefficient	-3.0mV/°C/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)

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

1 month	98%
3 month	96%
6 month	94%

Case Material

ABS UL94 HB
Option: Flammability resistance of (UL94 V-0)

Battery Construction

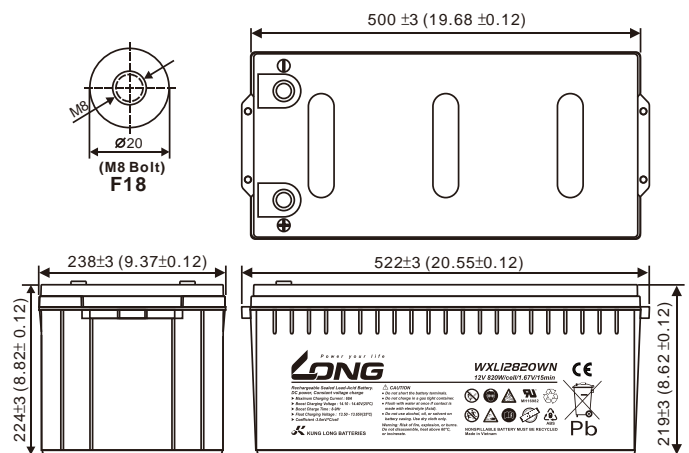
Component	Positive Plate	Negative plate	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	Rubber	Lead	AGM	Sulfuric acid



⚡ 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)

mm(inch)



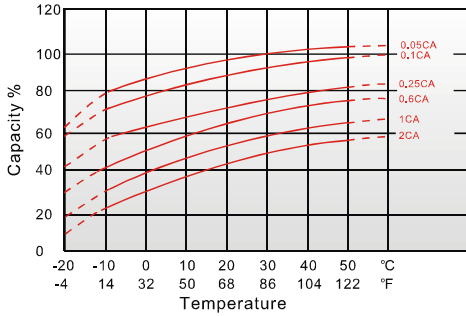
Terminal

F18	
Recommended torque value	M8: 12 N-m (122kgf-cm)
Maximum allowable torque value	M8: 20 N-m (204kgf-cm)

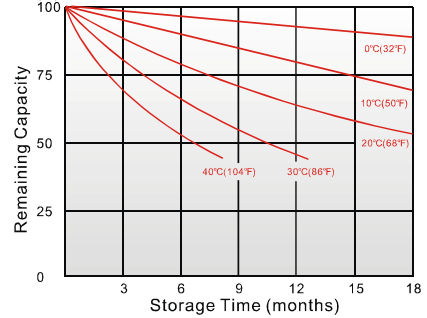
Design Life

Expected Trickle Design Life: 10-12 years at 20°C according to Eurobat.

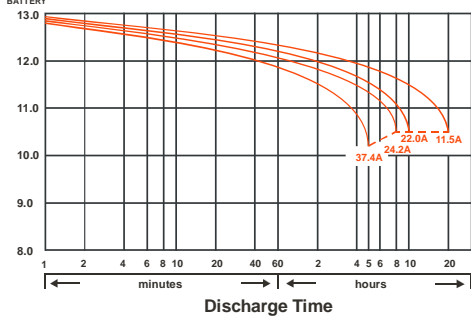
Effect of Temperature on Capacity 25°C(77°F)



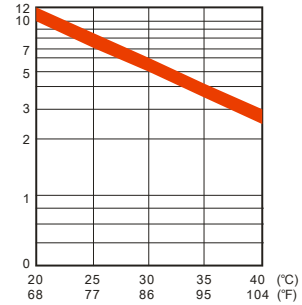
Capacity Retention Characteristic



Discharge Time VS. Discharge Current (25°C)



Trickle (or float) Service Life



- PERFORMANCE DATA

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

End Voltage		1.80V	1.75V	1.70V	1.67V	1.60V
Time						
5	min	1024	1083	1142	1200	1259
10	min	829	874	919	964	1009
15	min	678	750	778	818	825
20	min	549	574	599	624	649
25	min	482	504	526	548	570
30	min	449	464	479	493	508
45	min	334	344	354	364	374
60	min	261	269	276	284	291

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

End Voltage		1.80V	1.75V	1.70V	1.67V	1.60V
Time						
5	min	573	607	642	676	711
10	min	462	487	513	538	564
15	min	379	388	407	426	445
20	min	304	320	337	353	369
25	min	266	280	295	310	323
30	min	241	253	265	276	288
45	min	175	184	193	201	210
60	min	139	145	152	158	164

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%)

050923-1A