

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

10 hour rate	(20A	to	10.80V)	200Ah
5 hour rate	(34A	to	10.20V)	170Ah
1 hour rate	(120A	to	9.60V)	120Ah

#### Weight

Approx. 61.5kg(135Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 3 mΩ

#### Maximum Discharge Current for

5 seconds: 1600A

#### Charging Methods at 25°C(77°F)

Maximum Charging Current :	60A
Standby use:	
Float Charging Voltage	13.5 to 13.8V
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	94%
6 month	85%

#### Case Material

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

#### Design Life & Standard

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

#### Terminal

F18

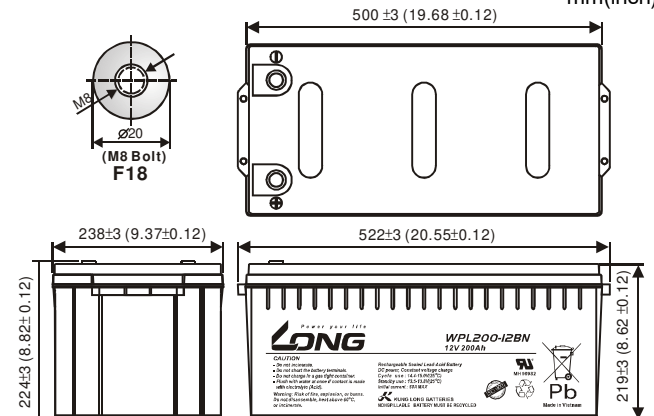


### ⚡ Dimensions

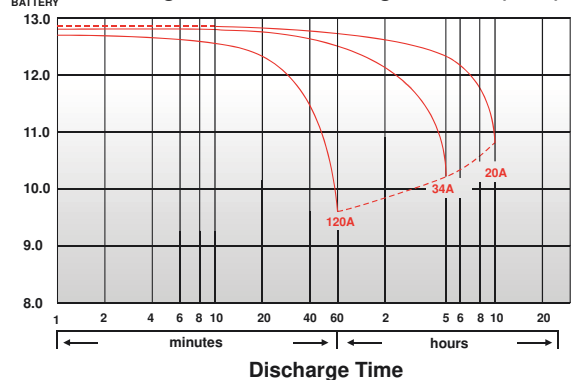
Length (L)	522±3 (20.55±0.12)
Width (W)	238±3 (9.37±0.12)
Height (H)	219±3 (8.62±0.12)
Overall Height (HT)	224±3 (8.82±0.12)

#### Description of torque value of hard ware for the terminals:

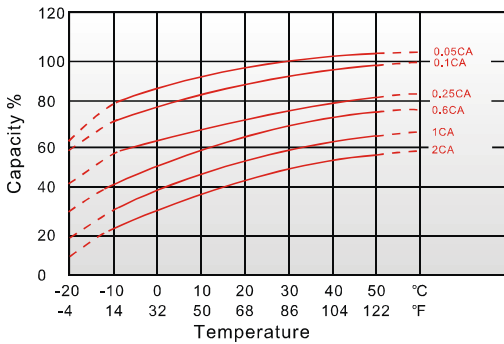
Recommended torque value	M8:12 N-m (122kgf-cm)
Maximum allowable torque value	M8:20 N-m (204kgf-cm)



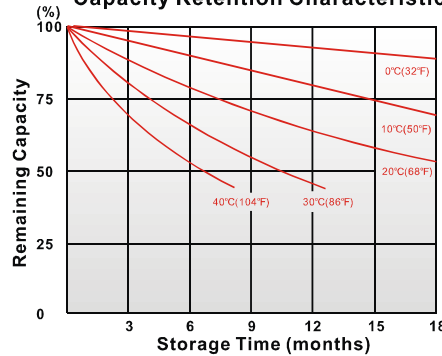
#### (V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



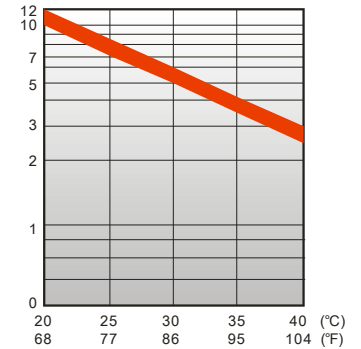
Effect of Temperature on Capacity 25°C(77°F)



Capacity Retention Characteristic



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	1.65V	1.60V
Time						
10	min	604	641	666	693	712
15	min	519	548	568	589	604
30	min	334	347	355	367	374
60	min	215	222	226	232	236
120	min	133	137	139	140	141
180	min	95.0	98.0	98.7	99.3	100
240	min	78.0	80.3	81.0	81.5	82.0
300	min	66.8	69.0	69.5	69.8	70.3
600	min	39.8	40.0	40.3	40.5	40.5
1200	min	21.0	21.2	21.3	21.3	21.3

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

End Voltage		1.80V	1.75V	1.70V	1.65V	1.60V
Time						
10	min	334	354	367	383	393
15	min	284	300	310	322	330
30	min	179	185	190	196	200
60	min	113	117	119	122	124
120	min	69.1	70.9	72.0	72.6	73.1
180	min	48.5	50.0	50.4	50.7	51.0
240	min	39.8	41.0	41.3	41.6	41.8
300	min	34.0	35.0	35.2	35.5	35.7
600	min	20.0	20.1	20.3	20.3	20.4
1200	min	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%)

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