

### ⚡ 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
1 C	(200A	to	9.60V)	126.7Ah

#### Weight

Approx. 73.2kg(161Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 2.5 mΩ

#### Maximum Discharge Current for

5 seconds: 1600A

#### Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient -5.0mV/°C/cell	
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	60°C(140°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

12 Years.



### ⚡ Dimensions

**Length (L)** 522±3 (20.55±0.12)

**Width (W)** 238±3 (9.37±0.12)

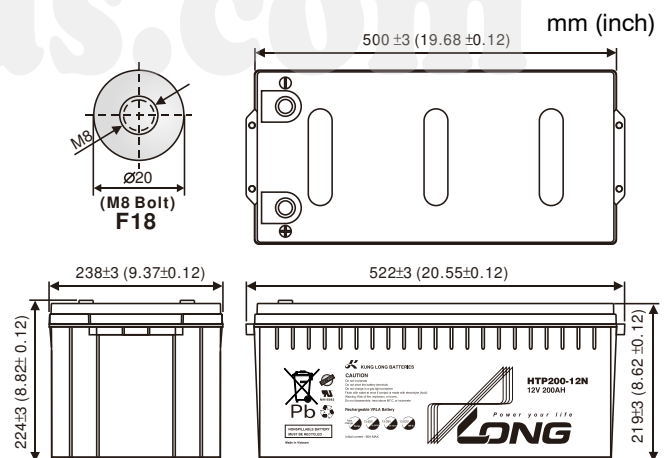
**Height (H)** 219±3 (8.62±0.12)

**Overall Height (HT)** 224±3 (8.82±0.12)

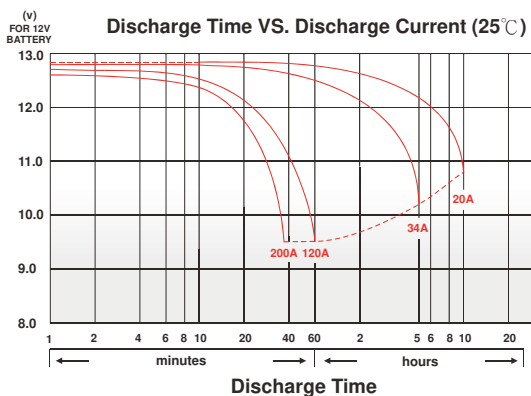
**Terminal** F18

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

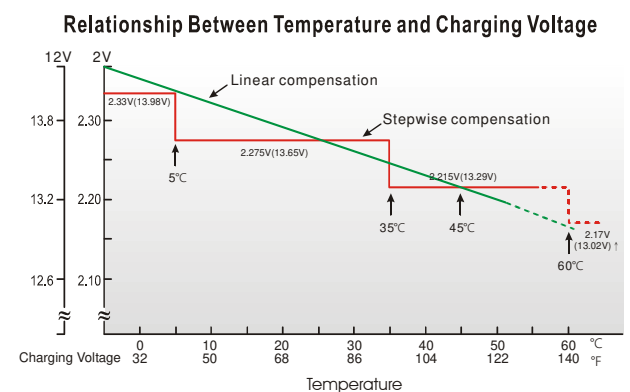
Recommended torque value	M8: 12 N-m (122 kgf-cm)
Maximum allowable torque value	M8: 20 N-m (204 kgf-cm)



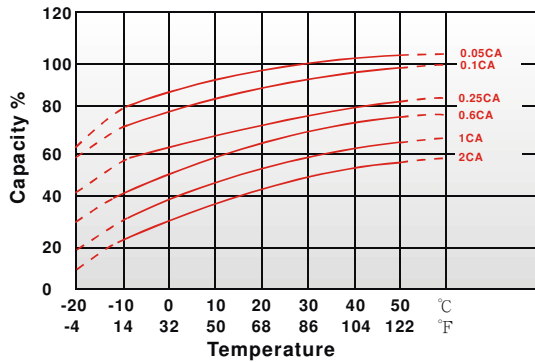
### Discharge Time VS. Discharge Current (25°C)



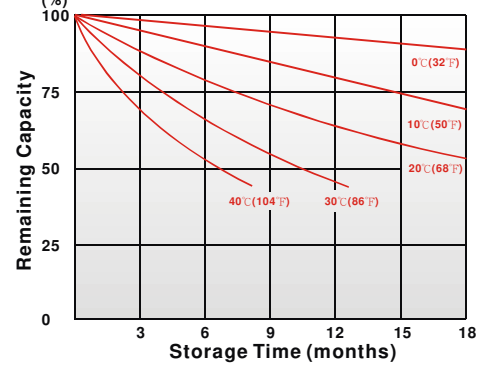
### Relationship Between Temperature and Charging Voltage



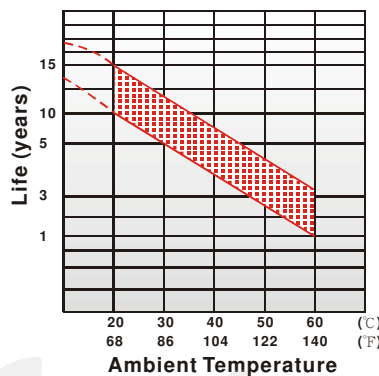
**Effect of Temperature on Capacity 25°C (77°F)**



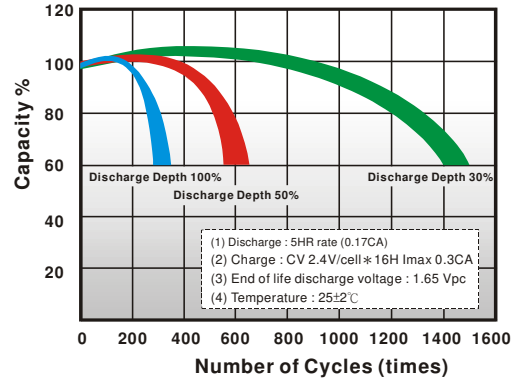
**Capacity Retention Characteristic**



**Trickle (or float) Service Life**



**Cycle Service 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	1.67V	1.65V	1.60V
Time								
10	min	630	700	740	780	790	810	835
15	min	585	622	660	685	700	715	720
30	min	366	389	410	429	437	448	464
60	min	220	232	242	251	254	258	264
90	min	153	164	172	179	182	185	189
120	min	115	125	132	138	140	143	147
180	min	92.0	98.5	104	108	109	111	112
240	min	80.5	85.2	88.7	91.0	91.8	92.8	94.2
300	min	70.5	74.3	76.3	77.5	78.0	78.7	79.5
600	min	37.7	39.5	40.7	41.3	41.7	42.0	42.5
1200	min	20.3	21.3	21.8	22.2	22.3	22.5	22.7

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

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
Time								
10	min	339	387	422	445	450	462	476
15	min	292	334	361	374	382	391	393
30	min	210	225	238	249	254	260	269
60	min	128	134	143	150	153	157	162
90	min	85.5	92.0	97.2	102	103	105	108
120	min	66.7	72.0	75.9	79.1	80.2	81.6	83.5
180	min	48.7	52.3	54.7	57.0	57.8	58.7	60.4
240	min	37.9	41.1	43.2	44.9	45.5	46.2	47.6
300	min	31.7	34.1	35.9	37.1	37.6	38.2	39.2
600	min	19.8	20.2	20.4	20.6	20.7	20.8	20.9
1200	min	10.2	10.5	10.7	10.8	10.9	11.0	11.1

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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