

⚡ Specifications

Nominal Voltage(V)

12V

Nominal Capacity

10 hour rate	(13A	to	10.80V)	130Ah
5 hour rate	(22.1A	to	10.20V)	110.5Ah
1 hour rate	(78A	to	9.60V)	78Ah
1C	(130A	to	9.60V)	82.33Ah

Weight

Approx. 43.0kg(94.6Lbs.)

Internal Resistance (at 1KHz)

Approx. 5 mΩ

Maximum Discharge Current for

5 seconds:1300A

Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient	-5.0mV/°C/cell
Maximum Charging Current :	39A
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

12 Years.

Terminal

F8



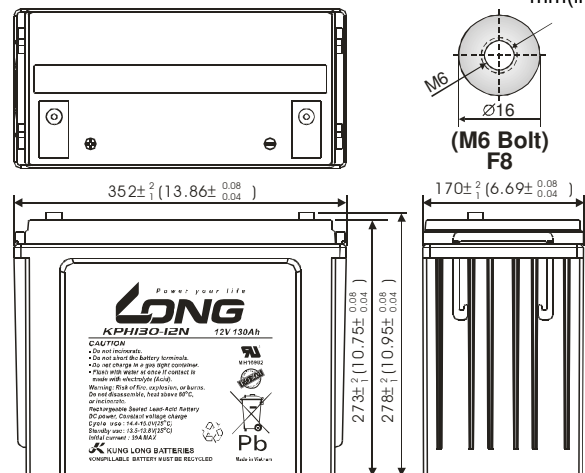
⚡ Dimensions

Length (L)	352+2-1 (13.86+0.08-0.04)
Width (W)	170+2-1 (6.69+0.08-0.04)
Height (H)	273+2-1 (10.75+0.08-0.04)
Overall Height (HT)	278+2-1 (10.95+0.08-0.04)

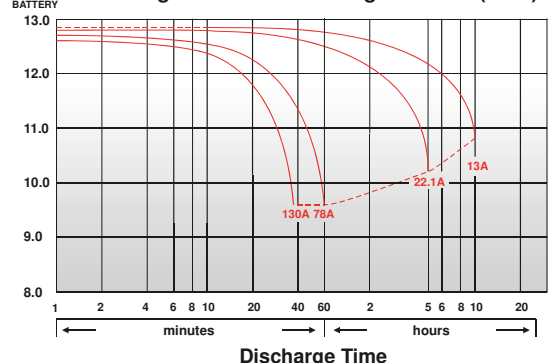
Description of torque value of hard ware for the terminals:

Recommended torque value	M6: 7 N-m (71kgf-cm)
Maximum allowable torque value	M6: 10 N-m (102kgf-cm)

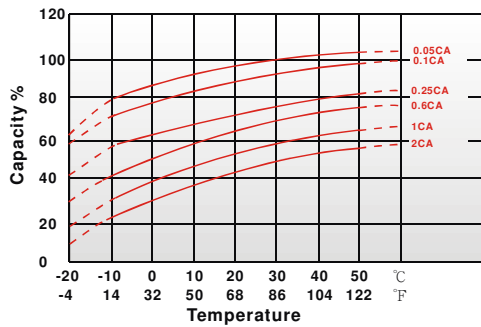
mm(inch)



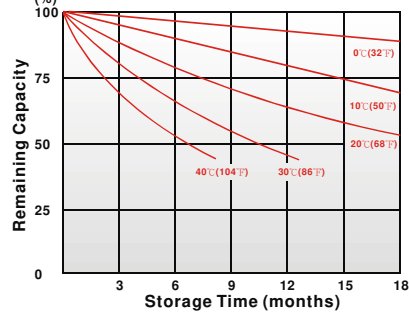
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



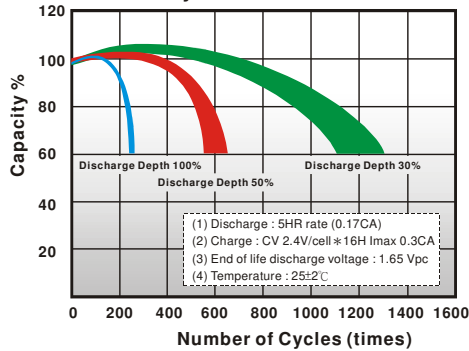
Effect of Temperature on Capacity 25°C(77°F)



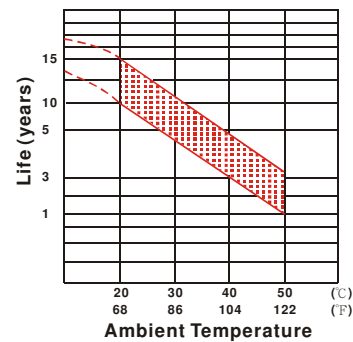
Capacity Retention Characteristic



Cycle Service Life



Trickle (or float) Service Life



- PERFORMANCE DATA

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

Time	End Voltage	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
10	min	409	470	495	518	528	539	559
15	min	345	364	389	408	415	423	435
30	min	223	257	261	271	275	278	283
60	min	143	149	155	159	160	161	163
120	min	82.0	85.2	88.2	90.7	91.7	92.8	94.5
180	min	62.7	65.0	67.3	69.2	70.0	71.0	72.3
240	min	48.7	51.7	53.5	55.0	55.5	56.2	57.2
300	min	42.3	44.7	46.2	47.3	47.7	48.2	48.8
600	min	24.3	25.3	26.0	26.7	26.8	27.2	27.5
1200	min	12.0	12.5	12.9	13.2	13.3	13.5	13.5

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

Time	End Voltage	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
10	min	229	260	292	308	316	324	340
15	min	182	211	232	247	250	256	262
30	min	113	128	136	143	145	147	152
60	min	57.8	66.4	73.5	78.9	80.1	81.4	83.6
120	min	37.4	42.4	44.7	45.8	46.5	47.3	48.6
180	min	28.4	31.3	34.4	35.0	35.5	36.2	37.2
240	min	22.4	24.6	27.1	27.7	28.0	28.4	28.9
300	min	20.7	22.0	22.9	23.5	23.7	23.9	24.2
600	min	12.0	13.0	13.1	13.1	13.2	13.2	13.3
1200	min	6.00	6.50	6.57	6.63	6.70	6.74	6.78

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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