Power your life

Valve Regulated Lead Acid Battery

WP40-12N

Specifications

Nominal Voltage(V)

12V

Nominal Capacity

20 hour rate	(2A	to	10.50V)	40Ah
10 hour rate	(3.8A	to	10.50V)	38Ah
5 hour rate	(6.8A	to	10.20V)	34Ah
1 C	(40A	to	9.60V)	22.67Ah
3 C	(120A	to	9.60V)	16Ah

Weight

Approx. 13.4kg(29.5Lbs.)

Internal Resistance (at 1KHz)

Approx. 7.5 mΩ

Maximum Discharge Current for

5 seconds: 480A

Charging Methods at 25℃(77℉)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient -5.0mV/℃/cell	
Maximum Charging Current：	12A
Standby use:	
Float Charging Voltage	13.5 to 13.8V
Coefficient -3.0mV/℃/cell	

Operating Temperature Range

Charge	-15℃(5℉)	to	40℃(104℉)
Discharge	-15℃(5℉)	to	50℃(122℉)
Storage	-15℃(5℉)	to	40℃(104℉)

Charge Retention (shelf life) at 20℃(68℉)

1 month	92%
3 month	90%
6 month	80%

Case Material

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

Design Life

6-9 Years.

Terminal

F8

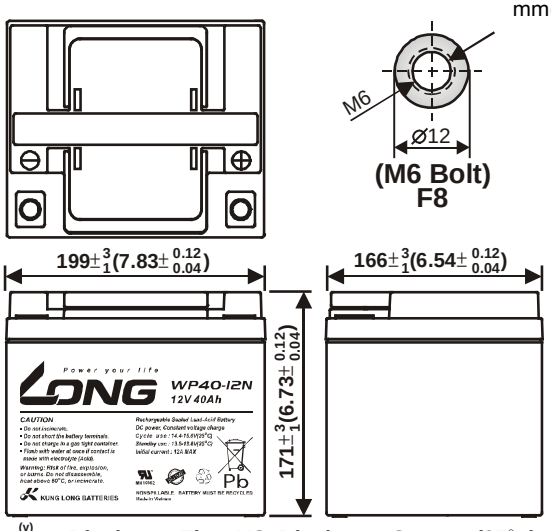
Dimensions

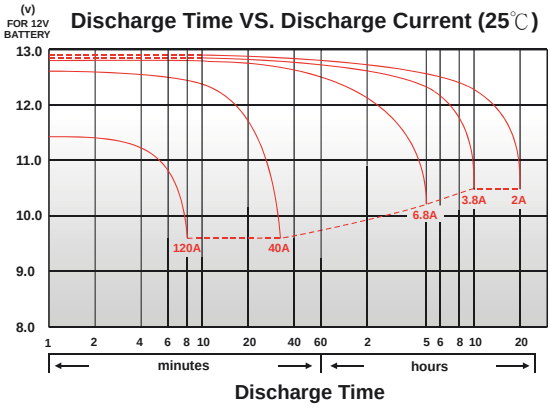
Length (L)	199+3-1 (7.83+0.12-0.04)
Width (W)	166+3-1 (6.54+0.12-0.04)
Height (H)	171+3-1 (6.73+0.12-0.04)
Overall Height (HT)	171+3-1 (6.73+0.12-0.04)

Description of torque value of hard ware for the terminals:

Recommended torque value	M6: 7 N-m (71kgf-cm)
Maximum allowable torque value	M6: 9 N-m (92kgf-cm)

mm(inch)





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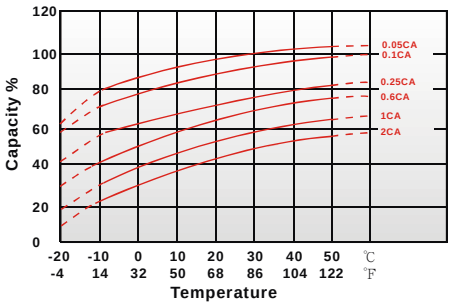
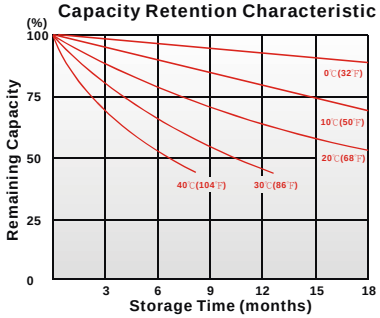
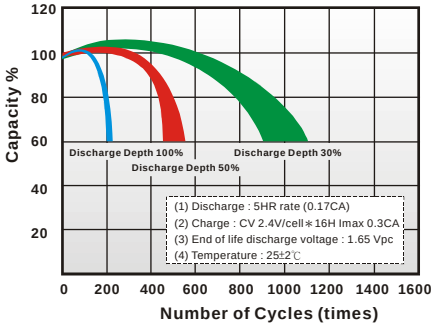
Effect of Temperature on Capacity 25℃(77℉)



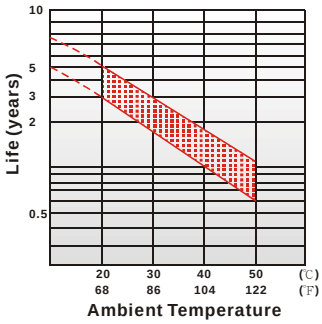
Capacity Retention Characteristic



Cycle Service Life



Trickle (or float) Service Life



- PERFORMANCE DATA

Discharge Rates in Watts to Various End Voltages at 25℃(77℉)

Time \ End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
6	min	249	266	281	290	293	295	299
8	min	205	218	231	237	239	241	244
10	min	178	189	198	204	205	207	209
15	min	135	142	149	152	153	154	156
20	min	112	118	123	125	126	127	128
30	min	84.8	88.6	91.8	93.5	94.2	94.6	95.5
60	min	62.9	65.3	66.6	67.1	67.3	67.6	67.9
90	min	43.5	45.2	46.0	46.3	46.5	46.7	46.9
120	min	33.5	34.8	35.4	35.6	35.8	35.9	36.1
180	min	23.3	24.1	24.5	24.7	24.7	24.8	24.9
240	min	18.0	18.6	18.9	19.0	19.1	19.1	19.2
300	min	14.6	15.2	15.4	15.5	15.5	15.6	15.7
480	min	9.56	9.88	10.0	10.1	10.1	10.1	10.2
600	min	6.93	7.15	7.35	7.55	7.63	7.73	7.87
1200	min	3.55	3.75	3.93	4.08	4.15	4.23	4.35

- Discharge Rates in Amperes to Various End Voltages at 25℃(77℉)

Time \ End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
6	min	141	150	159	164	166	167	169
8	min	114	121	128	132	133	134	135
10	min	97.0	103	108	111	112	113	114
15	min	72.1	76.1	79.6	81.4	82.2	82.6	83.5
20	min	58.5	61.4	64.0	65.4	65.9	66.2	66.9
30	min	43.5	45.5	47.1	48.0	48.3	48.5	49.0
60	min	31.7	32.9	33.6	33.8	33.9	34.1	34.2
90	min	21.9	22.7	23.1	23.3	23.4	23.5	23.6
120	min	16.8	17.5	17.8	17.9	18.0	18.0	18.1
180	min	11.6	12.0	12.2	12.3	12.4	12.4	12.5
240	min	8.94	9.25	9.40	9.47	9.50	9.53	9.57
300	min	7.29	7.54	7.66	7.72	7.74	7.77	7.80
480	min	4.75	4.91	4.98	5.01	5.03	5.04	5.06
600	min	3.92	4.04	4.10	4.13	4.14	4.15	4.17
1200	min	2.08	2.14	2.17	2.19	2.19	2.20	2.20

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

The tolerance range : X<6min(+15%~-15%), 6min≦X<10min(+12%~-12%),10min ≦X < 60min(+8% ~-8%), X≧60min(+5%~-5%)

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