

⚡ Specifications

Nominal Voltage(V)

12V

Nominal Power

15 mins rate: 154W/cell to 1.67V/cell

Nominal Capacity

20 hour rate	(2.25A	to	10.50V)	45Ah
8 hour rate	(4.75A	to	10.50V)	38Ah
5 hour rate	(7.65A	to	10.20V)	38.25Ah

Weight

Approx. 13.5kg(29.7Lbs.)

Internal Resistance (at 1KHz)

Approx. 7.5 mΩ

Maximum Discharge Current for

5 seconds: 540A

Short Circuit Current (A)

2400 A

Charging Methods at 25°C(77°F)

Maximum Charging Current :	13.5A
Boost Charging Voltage	14.4 to 15.0V
Boost Charge Time	8-9Hr
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	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	Fiberglass	Sulfuric acid



⚡ Dimensions

Length (L)

199+3-1 (7.83+0.12-0.04)

Width (W)

166+3-1 (6.54+0.12-0.04)

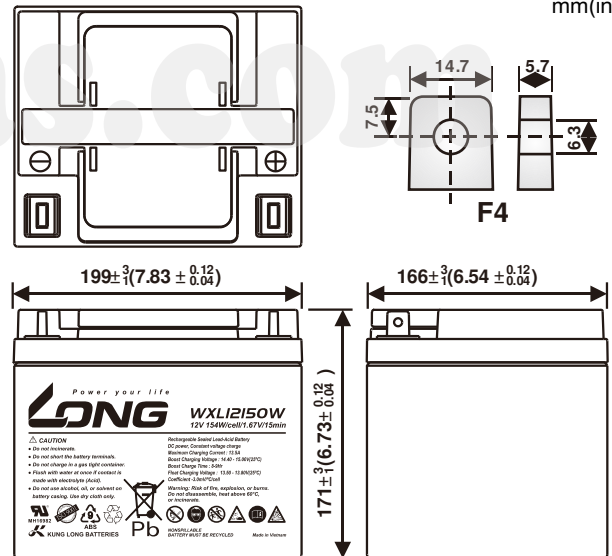
Height (H)

171+3-1 (6.73+0.12-0.04)

Overall Height (HT)

171+3-1 (6.73+0.12-0.04)

mm(inch)



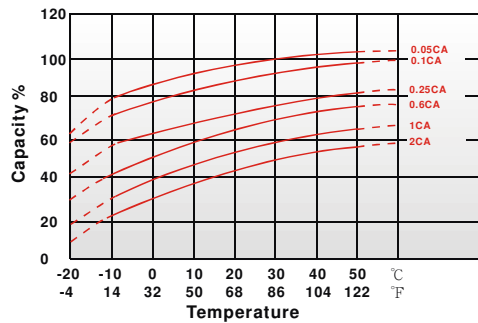
Terminal

F4

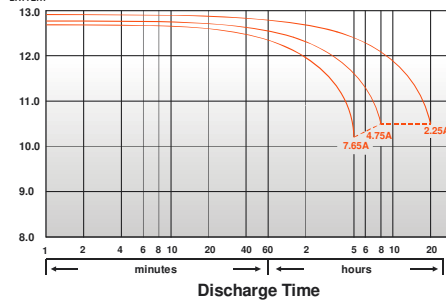
Design Life

Expected Trickle Design Life: 6-9 years at 20°C according to Eurobat.

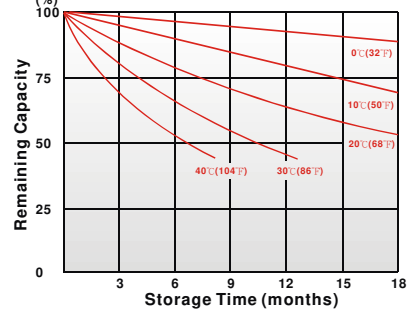
Effect of Temperature on Capacity 25°C(77°F)



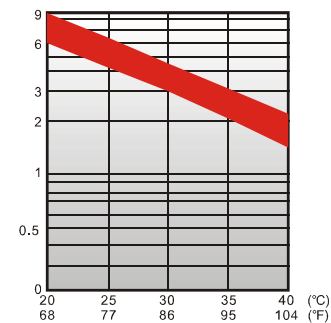
Discharge Time VS. Discharge Current (25°C)



Capacity Retention Characteristic



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
5	min	204	215	227	230	232	235	237
10	min	166	178	196	198	200	203	205
15	min	141	147	154	157	160	161	162
20	min	111	116	122	123	123	124	125
30	min	83.9	87.0	90.8	92	93.1	93.8	94.5
45	min	65.0	69.9	73.1	75.9	77.5	78.1	78.5
60	min	54.8	55.7	56.8	58.0	59.3	60.0	60.8
90	min	41.4	41.7	42.4	43.3	44.5	44.6	44.9
120	min	32.5	32.8	33.6	33.8	34.0	34.1	34.3
180	min	22.8	23.0	23.4	23.6	23.8	23.9	24.1
240	min	17.3	17.6	17.9	18.3	18.4	18.6	19.0
300	min	14.4	15.0	15.2	15.3	15.4	15.4	15.5
480	min	9.46	9.67	9.89	9.94	10.0	10.0	10.1
1200	min	3.51	3.70	3.89	4.01	4.11	4.19	4.30

- 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
5	min	113	121	126	127	129	130	133
10	min	95.0	101	104	106	107	107	108
15	min	69.0	73.5	79.1	80.0	81.0	82.0	82.9
20	min	57.8	59.7	62.1	62.4	62.9	63.4	63.9
30	min	42.9	44.7	46.6	47.0	47.4	47.9	48.5
45	min	33.4	36.2	37.8	38.9	39.6	39.9	40.2
60	min	29.7	30.2	30.9	31.3	31.8	32.2	32.8
90	min	20.7	21.0	21.4	21.6	21.8	22.0	22.3
120	min	16.8	16.9	17.0	17.1	17.2	17.3	17.4
180	min	11.3	11.4	11.6	11.7	11.8	11.9	12.1
240	min	8.75	8.84	9.03	9.13	9.22	9.32	9.37
300	min	7.33	7.50	7.61	7.65	7.67	7.69	7.75
480	min	4.74	4.79	4.88	4.90	4.91	4.92	4.95
1200	min	2.12	2.14	2.25	2.26	2.27	2.28	2.28

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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