

### Specifications

#### Nominal Voltage(V)

12V

#### Nominal Power

15 mins rate: 85W/cell to 1.67V/cell

#### Nominal Capacity

20 hour rate	(1A	to	10.50V)	20Ah
8 hour rate	(2.25A	to	10.50V)	18Ah
5 hour rate	(3.4A	to	10.20V)	17Ah

#### Weight

Approx. 6.5kg(14.3Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 8mΩ

#### Maximum Discharge Current for

5 seconds: 300A

#### Short Circuit Current (A)

1000 A

#### Charging Methods at 25°C(77°F)

Maximum Charging Current :	6A
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)

181±2-1 (7.13±0.08-0.04)

#### Width (W)

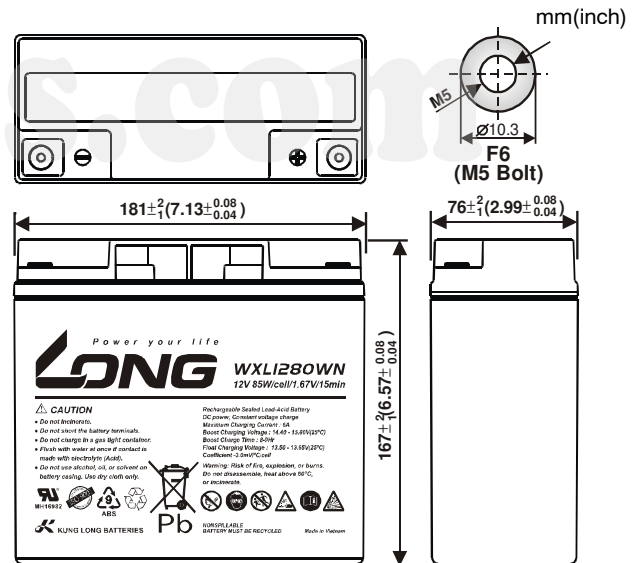
76±2-1 (2.99±0.08-0.04)

#### Height (H)

167±2-1 (6.57±0.08-0.04)

#### Overall Height (HT)

167±2-1 (6.57±0.08-0.04)



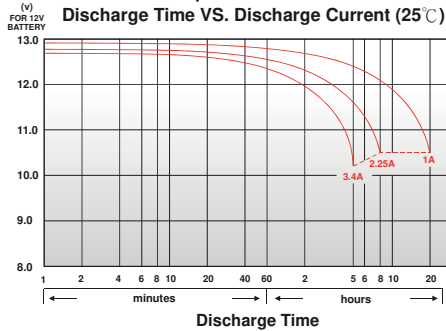
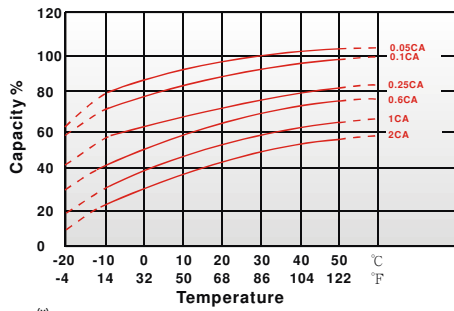
#### Terminal

F6  
Recommended torque value M5: 4 N-m (41kgf-cm)  
Maximum allowable torque value M5: 6 N-m (61kgf-cm)

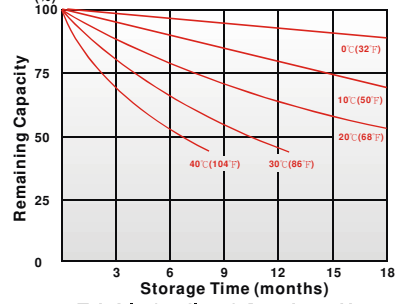
#### Design Life

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

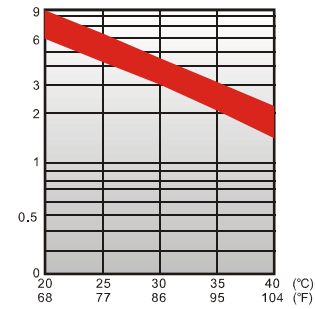
Effect of Temperature on Capacity 25°C(77°F)



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		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
2	min	199	228	250	259	267	271	274
4	min	162	180	191	198	200	202	204
5	min	148	161	169	175	178	181	184
6	min	144	151	156	161	165	168	170
8	min	115	123	127	131	134	136	138
10	min	93.4	101	108	110	112	114	116
15	min	68.5	75.8	82.3	83.2	85.6	86.2	86.7
20	min	60.8	64.2	66.9	67.3	67.7	68.1	68.5
30	min	39.5	43.2	46.2	47.0	47.6	48.2	48.6
45	min	34.9	35.8	36.6	37.1	37.6	37.9	38.2
60	min	22.7	23.8	24.6	25.4	26.2	26.6	26.8
90	min	18.5	19.3	19.8	20.1	20.3	20.5	20.6
120	min	12.2	12.7	13.0	13.5	13.6	13.7	13.8
180	min	9.53	9.88	10.1	10.3	10.4	10.5	10.6
240	min	7.63	7.93	8.12	8.22	8.32	8.40	8.46
300	min	6.65	6.88	7.00	7.10	7.13	7.16	7.18
480	min	4.59	4.75	4.83	4.88	4.91	4.93	4.95
1200	min	1.92	1.98	2.02	2.06	2.09	2.12	2.15

### - 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
2	min	112	128	135	142	148	154	159
4	min	78.5	97.2	104	109	113	116	118
5	min	73.4	81.4	88.5	93.2	96.5	99.0	101
6	min	67.9	75.9	83.2	85.0	86.5	87.5	88.2
8	min	61.5	65.7	69.5	71.2	72.4	73.3	73.9
10	min	51.2	55.0	57.2	58.8	60.0	61.2	62.2
15	min	40.0	41.6	43.0	43.7	44.5	45.1	45.5
20	min	32.5	34.0	34.9	35.2	35.5	35.8	36.0
30	min	22.7	23.9	24.3	24.5	24.7	24.9	25.1
45	min	16.5	17.4	18.1	18.6	18.8	19.2	19.5
60	min	11.6	12.2	12.7	13.1	13.5	13.7	13.9
90	min	9.27	10.1	10.8	11.1	11.3	11.5	11.6
120	min	6.16	6.56	6.90	7.16	7.43	7.56	7.70
180	min	4.73	4.90	5.00	5.08	5.11	5.17	5.21
240	min	3.88	3.97	4.04	4.09	4.12	4.15	4.17
300	min	3.30	3.37	3.42	3.46	3.48	3.50	3.51
480	min	2.14	2.23	2.30	2.32	2.33	2.34	2.35
1200	min	0.96	0.99	1.01	1.03	1.04	1.05	1.05

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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