

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

20 hour rate	(8A	to	10.50V)	160Ah
10 hour rate	(16A	to	10.50V)	160Ah
5 hour rate	(27.2A	to	10.50V)	136Ah
1 hour rate	(96A	to	9.60V)	96Ah

#### Weight

≥ 54kg(118.8Lbs.)

#### Internal Resistance (at 25°C)

≤ 3.2 mΩ

#### Maximum Discharge Current for (at 25°C)

5 seconds: 1500A

#### Maximum Short circuit current (IEC 60896)

1500A

#### Charging Methods at 25°C(77°F)

Maximum Charging Current :	48A
Boost Charging Voltage	14.1 to 14.4V
Boost Charge Time	8-9Hr
Float Charging Voltage	13.38 to 13.8V
Coefficient	-3.0mV/°C/cell

#### Operating Temperature Range

Charge	-10°C(14°F)	to	60°C(140°F)
Discharge	-20°C(-4°F)	to	60°C(140°F)
Storage	-20°C(-4°F)	to	60°C(140°F)

#### Charge Retention (shelf life) at 25°C(77°F)

1 month	98%
3 month	94%
6 month	85%

#### Case Material

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

#### Design Life at 25°C

12 Years

#### Terminal

F18

#### Battery Construction

Positive Plate	Negative plate	Electrolyte	Terminal	Safety valve	Separator	Efficient gas recombination
Lead dioxide	Lead	Sulfuric acid	Copper	Rubber	AGM	99%



### ⚡ Dimensions

#### Length (L)

546±2 (21.5±0.08)

#### Width (W)

125±2 (4.92±0.08)

#### Height (H)

317±2 (12.48±0.08)

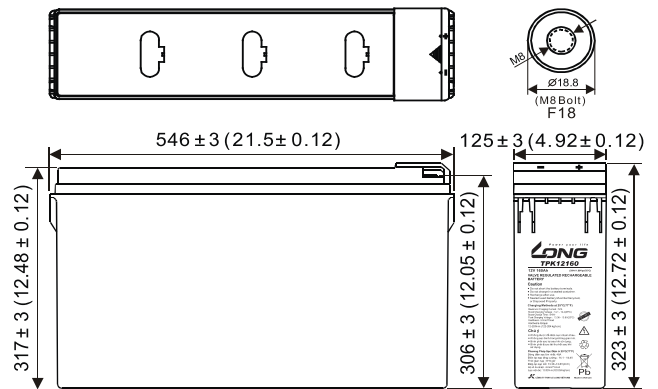
#### Overall Height (HT)

323±2 (12.72±0.08)

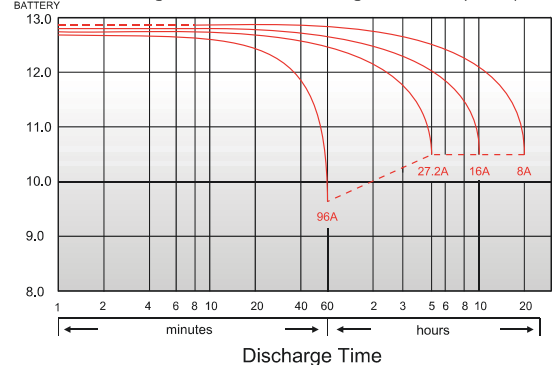
#### Description of torque value of hard ware for the terminals:

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

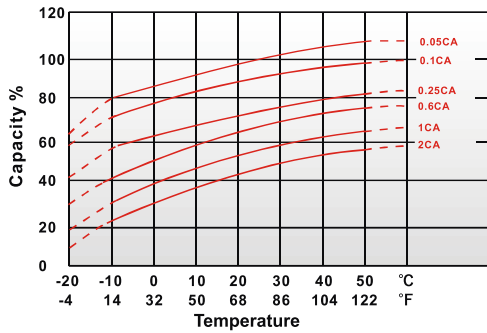
mm(inch)



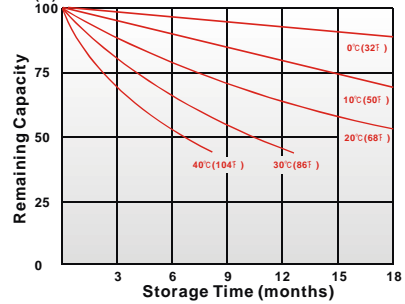
Discharge Time VS. Discharge Current (25°C)



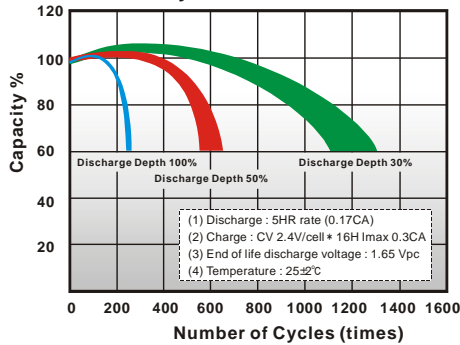
Effect of Temperature on Capacity 25°C (77°F)



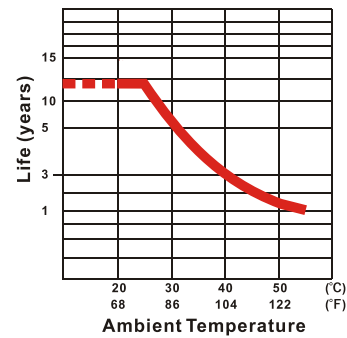
Capacity Retention Characteristic



Cycle Service Life



Trickle (or float) Service Life



## - PERFORMANCE DATA

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

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
Time								
5	min	589	673	749	783	808	833	858
10	min	505	572	619	661	703	736	757
15	min	425	484	534	581	602	614	623
30	min	337	362	383	400	412	425	433
60	min	215	221	227	229	230	231	231
120	min	122	130	135	141	146	149	151
180	min	82.2	91.0	94.0	95.0	97.0	98.0	99.0
240	min	65.6	72.3	76.1	77.2	77.8	78.5	79.2
300	min	56.2	58.6	59.7	60.8	61.8	62.4	63.0
480	min	37.2	38.8	39.6	40.2	40.7	41.2	41.4
600	min	29.3	30.4	31.1	31.3	31.4	31.5	31.6
1200	min	15.3	15.9	16.1	16.2	16.3	16.3	16.4

- 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								
5	min	316	370	421	442	463	480	496
10	min	261	311	349	383	406	417	425
15	min	223	257	290	311	328	341	351
30	min	168	194	210	219	227	234	240
60	min	107	115	122	125	127	129	130
120	min	60.5	63.7	65.6	66.9	67.9	68.9	69.8
180	min	42.6	44.9	46.2	47.2	48.1	48.6	49.1
240	min	32.5	34.2	35.3	35.7	36.1	36.4	36.7
300	min	27.3	28.3	29.0	29.4	29.7	30.0	30.2
480	min	17.9	19.0	19.2	19.2	19.3	19.4	19.5
600	min	15.1	16.2	16.2	16.2	16.2	16.3	16.3
1200	min	8.01	8.60	8.70	8.80	8.90	8.90	9.00

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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