

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Power

15 mins rate: 710W/cell to 1.67V/cell

#### Nominal Capacity

20 hour rate	(9.5A to 10.50V)	190Ah
10 hour rate	(18.05A to 10.50V)	180.5Ah
8 hour rate	(22.23A to 10.50V)	177.84Ah
5 hour rate	(32.3A to 10.20V)	161.5Ah

#### Weight

Approx. 60kg(132Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 3.8 mΩ

#### Maximum Discharge Current for

5 seconds: 1140A

#### Short Circuit Current (A) IEC 60896 -21-22

3481A

#### Charging Methods at 25°C(77°F)

Maximum Charging Current :	57A
Boost Charging Voltage	14.1 to 14.4V
Boost Charge Time	8-9Hr
Float Charging Voltage	13.5 to 13.65V
Coefficient -3.0mV/°C/cell	

#### Operating Temperature Range

Charge	-15°C(5°F) to 45°C(113°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%

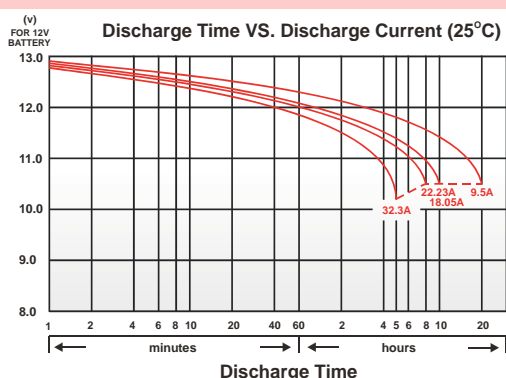
#### Case Material

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

#### Design Life

Expected Trickle Design Life: >12 years at 20°C according to Eurobat.

#### Discharge Time VS. Discharge Current (25°C)



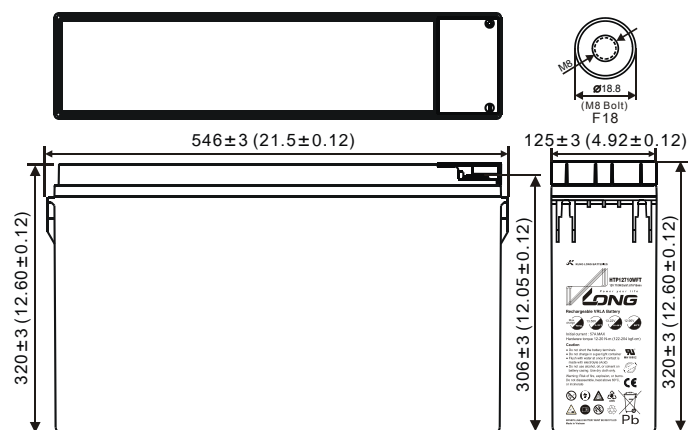
### ⚡ Dimensions

Length (L)	546±3 (21.5±0.12)
Width (W)	125±3 (4.92±0.12)
Height (H)	320±3 (12.60±0.12)
Overall Height (HT)	320±3 (12.60±0.12)
Terminal	F18

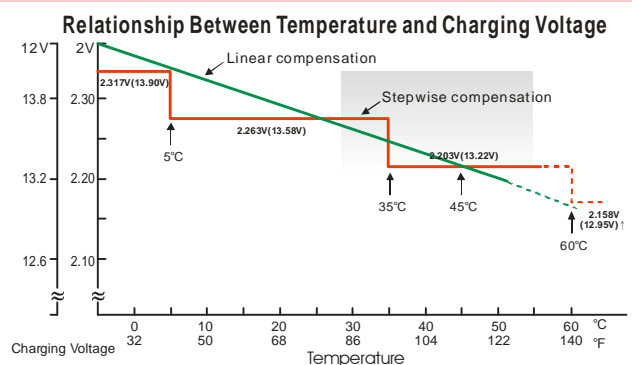
#### Description of torque value of hard ware for the terminals:

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

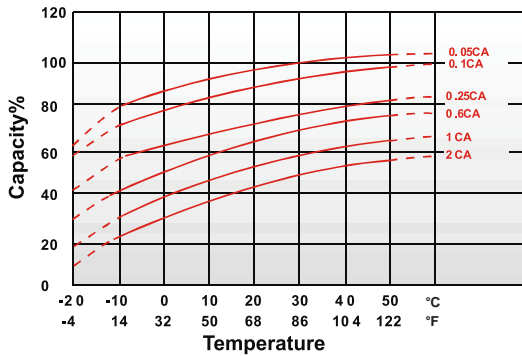
mm(inch)



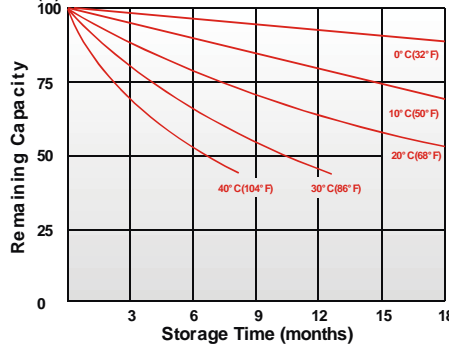
#### Relationship Between Temperature and Charging Voltage



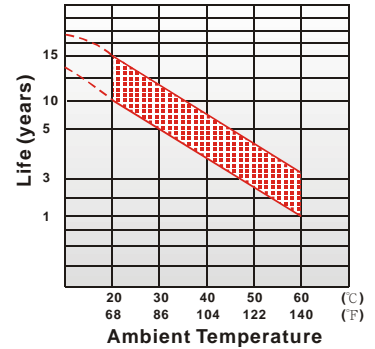
Effect of Temperature on Capacity 25°C (77°F)



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	790	900	980	1055	1100	1130	1145
4	min	730	845	910	955	1000	1045	1070
5	min	700	800	890	930	960	990	1020
6	min	685	785	870	912	947	980	1000
8	min	640	725	805	860	900	910	920
10	min	600	680	735	785	835	875	900
15	min	505	575	635	690	715	730	740
20	min	490	530	560	590	610	620	630
30	min	400	430	455	475	490	505	515
40	min	345	390	403	413	421	427	430
45	min	320	350	370	380	390	395	400
60	min	255	263	270	272	273	274	275
90	min	184	193	200	206	211	216	220
120	min	145	154	161	168	173	177	180
180	min	97.7	108	112	113	115	116	117
240	min	77.9	85.9	90.4	91.7	92.5	93.3	94.1
300	min	66.8	69.6	71.0	72.2	73.4	74.2	74.9
480	min	44.3	46.1	47.0	47.8	48.4	48.9	49.2
600	min	34.8	36.1	36.9	37.1	37.3	37.4	37.5
1200	min	18.2	18.9	19.2	19.3	19.3	19.3	19.4

#### 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
2	min	415	495	560	620	660	690	710
4	min	380	455	515	555	595	625	655
5	min	375	440	500	525	550	570	590
6	min	370	435	485	520	555	585	610
8	min	325	385	445	475	505	530	555
10	min	310	370	415	455	482	495	505
15	min	265	305	345	370	390	405	417
20	min	240	280	310	320	330	340	345
30	min	200	230	250	260	270	278	285
40	min	180	199	210	219	225	229	232
45	min	165	185	200	206	210	213	215
60	min	127	137	145	148	151	153	155
90	min	92.2	97.0	100	102	104	105	106
120	min	71.9	75.7	78.0	79.5	80.7	81.9	83.0
180	min	50.6	53.3	54.9	56.1	57.2	57.8	58.4
240	min	38.6	40.6	41.9	42.4	42.9	43.3	43.6
300	min	32.4	33.7	34.5	35.0	38.4	38.7	39.0
480	min	20.2	21.3	22.5	22.8	24.2	24.4	24.6
600	min	17.8	18.6	19.4	19.6	19.8	19.9	20.0
1200	min	9.07	9.75	9.95	10.0	10.7	10.7	10.8

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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