

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

20 hour rate	(1.5A	to	10.50V)	30Ah
10 hour rate	(2.85A	to	10.50V)	28.5Ah
5 hour rate	(5.1A	to	10.20V)	25.5Ah
1 C	(30A	to	9.60V)	17Ah
3 C	(90A	to	9.60V)	12Ah

#### Weight

Approx. 9.7kg(21.3Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 9.5 mΩ

#### Maximum Discharge Current for

5 seconds: 450A

#### Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient -5.0mV/°C/cell	
Maximum Charging Current :	9A
Standby use:	
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	92%
3 month	90%
6 month	80%

#### Case Material

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

#### Design Life

3-5 Years.

#### Terminal

F8



### ⚡ Dimensions

Length (L)  $166 \pm 0.08$  (6.54 $\pm$ 0.08)

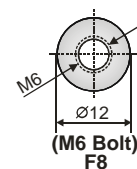
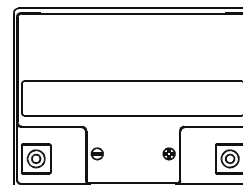
Width (W)  $125.5 \pm 0.08$  (4.94 $\pm$ 0.08)

Height (H)  $176 \pm 0.08$  (6.93 $\pm$ 0.08)

Overall Height (HT)  $176 \pm 0.08$  (6.93 $\pm$ 0.08)

Recommended torque value M6:7 N-m(71 kgf-cm)

Maximum allowable torque value M6:10 N-m(102 kgf-cm)

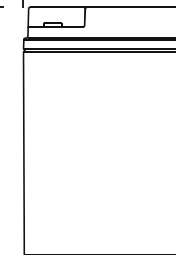


$166 \pm 0.08$  (6.54 $\pm$ 0.08)

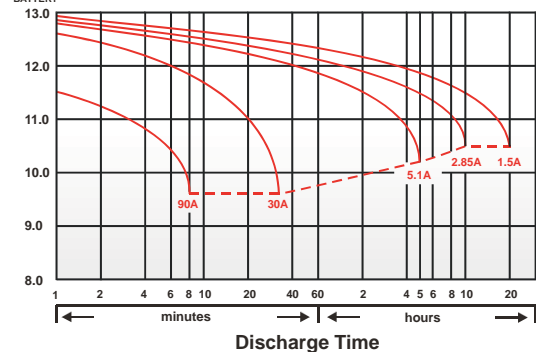
$125.5 \pm 0.08$  (4.94 $\pm$ 0.08)

$166 \pm 0.08$  (6.54 $\pm$ 0.08)

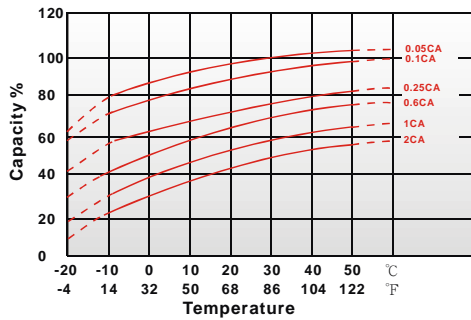
$176 \pm 0.08$  (6.93 $\pm$ 0.08)



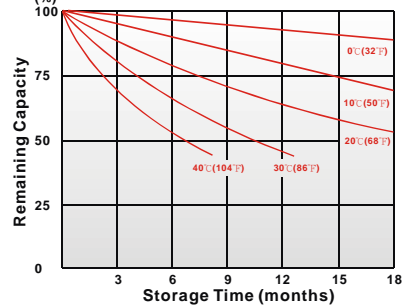
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



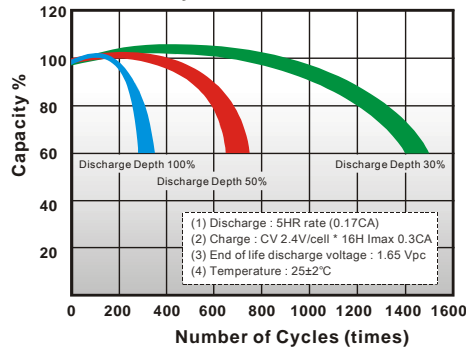
Effect of Temperature on Capacity 25°C (77°F)



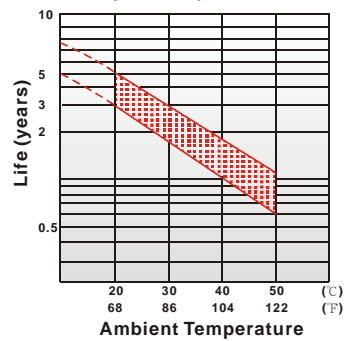
Capacity Retention Characteristic



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	145	167	183	191	198	204	210
10	min	111	120	128	132	136	139	144
15	min	90.0	96.7	105	107	109	111	113
30	min	56.7	59.9	61.8	62.7	63.3	64.0	64.5
60	min	36.5	37.3	38.0	38.3	38.7	39.0	39.3
120	min	21.8	22.3	23.0	23.2	23.3	23.5	23.7
180	min	16.2	16.5	16.7	16.8	17.0	17.2	17.3
240	min	12.4	12.8	13.1	13.3	13.4	13.5	13.6
300	min	10.4	10.6	10.7	10.8	11.0	11.0	11.1
600	min	5.92	6.08	6.22	6.23	6.25	6.27	6.28
1200	min	3.18	3.22	3.28	3.30	3.32	3.33	3.35

### - 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	74.5	89.8	105	110	114	118	121
10	min	59.5	64.4	68.3	71.0	73.7	76.4	79.2
15	min	46.5	50.0	54.3	55.8	57.2	58.5	59.8
30	min	29.0	30.5	31.9	32.6	33.1	33.6	34.0
60	min	17.0	17.8	18.6	19.0	19.4	19.6	19.8
120	min	11.0	11.5	11.9	12.0	12.1	12.2	12.3
180	min	7.70	7.90	8.10	8.21	8.30	8.38	8.46
240	min	6.15	6.25	6.36	6.42	6.48	6.53	6.58
300	min	5.10	5.18	5.30	5.38	5.42	5.46	5.51
600	min	2.91	2.97	3.06	3.07	3.08	3.09	3.10
1200	min	1.53	1.56	1.60	1.61	1.62	1.63	1.63

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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