

# PT33-12

12Volt 33Ah

## Specifications

**Nominal Voltage(V)** 12V

### Nominal Capacity

20 hour rate	(1.7A to 10.50V)	<b>33 Ah</b>
10 hour rate	(3.23A to 10.50V)	<b>32.3Ah</b>
5 hour rate	(5.78A to 10.20V)	<b>28.9Ah</b>
1 C	(34A to 9.60V)	<b>21.53Ah</b>
3 C	(102A to 9.60V)	<b>13.6Ah</b>

**Weight** Approx. 10.5kg(23.1Lbs.)

**Internal Resistance (at 1KHz)** Approx. 11 mΩ

### Maximum Discharge Current for

**5 seconds:** 510A

### Charging Methods at 25°C (77°F)

#### Cycle use:

Charging Voltage 14.4 to 15.0V

Coefficient -5.0mV/°C/cell

Maximum Charging Current : 10.2A

#### 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)

**Terminal** F6

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

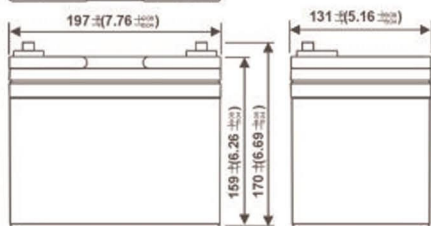
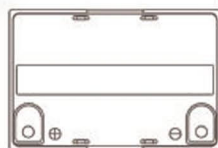
Recommended torque value **M5: 5 N-m (51kgf-cm)**

Maximum allowable torque value **M5: 6 N-m (61kgf-cm)**

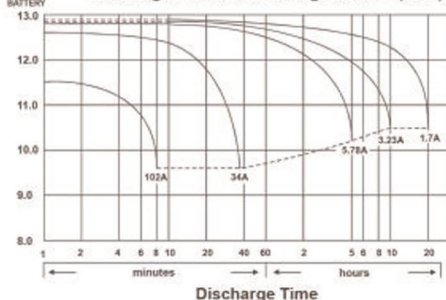


## Dimensions

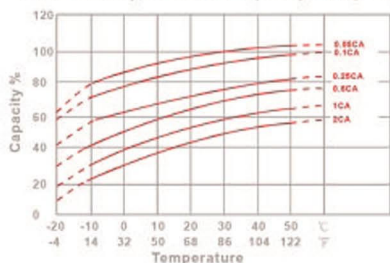
mm(inch)



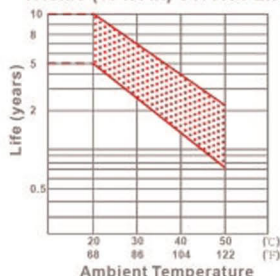
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



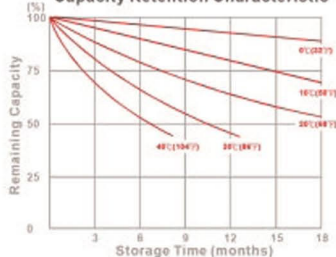
**Effect of Temperature on Capacity 25°C (77°F)**



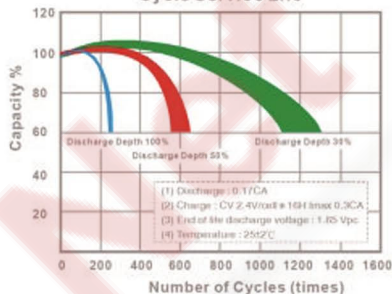
**Trickle (or float) Service Life**



**Capacity Retention Characteristic**



**Cycle 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	123	165	197	217	224	231	240
10	min	86.9	114	134	147	151	156	162
15	min	70.3	91.1	106	116	119	123	127
30	min	38.2	49.5	57.8	63.0	64.7	66.6	69.0
60	min	36.2	38.5	39.9	40.9	41.2	41.6	42.0
120	min	22.6	23.8	24.6	25.1	25.2	25.5	25.7
180	min	15.3	16.3	16.9	17.3	17.5	17.6	17.8
240	min	12.3	13.1	13.8	13.9	14.1	14.2	14.3
300	min	10.5	11.2	11.6	11.9	12.0	12.1	12.2
600	min	6.22	6.61	6.86	7.02	7.08	7.15	7.21
1200	min	3.26	3.47	3.60	3.68	3.72	3.75	3.78

**- 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	88.7	109	123	132	135	139	143
10	min	61.5	71.4	77.5	81.8	83.7	86.2	89.3
15	min	51.2	58.6	63.4	66.1	66.9	67.8	69.2
30	min	29.6	39.5	35.1	36.4	36.8	37.3	37.9
60	min	17.7	19.0	19.9	20.6	20.8	21.1	21.4
120	min	10.6	11.4	11.9	12.3	12.4	12.6	12.6
180	min	7.86	8.37	8.73	8.99	9.06	9.14	9.27
240	min	5.91	6.35	6.73	6.92	6.97	7.04	7.15
300	min	5.38	5.66	5.82	5.95	6.00	6.06	6.14
600	min	3.11	3.23	3.33	3.42	3.45	3.48	3.52
1200	min	1.60	1.69	1.75	1.79	1.80	1.82	1.84

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%)