

# ST SERIES-Standard

## ST12007.2 (12V7.2AH)

### Specification

Nominal Voltage	12V
Nominal Capacity(20HR)	7.2AH
Dimension	Length 152±2mm (5.98 inches)
	Width 65.5±1mm (2.58 inches)
	Container Height 94.5±1mm (3.72 inches)
	Total Height (with Terminal) 100±1mm (3.94 inches)
Approx Weight	Approx 2.35 kg (5.51lbs)
Terminal	T1 / T2
Container Material	ABS
Rated Capacity	7.20 AH/0.36A (20hr, 1.80V/cell, 25°C/77°F)
	6.70 AH/0.67A (10hr, 1.80V/cell, 25°C/77°F)
	6.12 AH/1.22A (5hr, 1.75V/cell, 25°C/77°F)
	5.37 AH/1.79A (3hr, 1.75V/cell, 25°C/77°F)
	4.49 AH/4.49A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	108A (5s)
Internal Resistance	Approx 18mΩ
Operating Temp. Range	Discharge : -15~50°C (5~122°F)
	Charge : 0~40°C (32~104°F)
	Storage : -15~40°C (5~104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)
Cycle Use	Initial Charging Current less than 2.16A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C
	No limit on Initial Charging Current Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C
Standby Use	
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	ST series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.



### Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system

### Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	13.7	9.12	7.52	6.61	5.41	4.22	3.50	2.15	1.62	1.33	1.13	0.98	0.777	0.649	0.356
1.80V/cell	16.4	10.9	8.8	7.56	6.05	4.64	3.79	2.30	1.73	1.41	1.19	1.02	0.806	0.670	0.360
1.75V/cell	19.7	12.5	9.8	8.36	6.48	4.96	4.00	2.40	1.79	1.45	1.22	1.05	0.828	0.686	0.364
1.70V/cell	22.9	14.0	10.8	9.05	6.91	5.20	4.18	2.48	1.83	1.48	1.25	1.07	0.841	0.697	0.370
1.65V/cell	25.2	15.2	11.6	9.70	7.27	5.43	4.32	2.56	1.88	1.52	1.27	1.09	0.854	0.706	0.375
1.60V/cell	27.8	16.4	12.5	10.2	7.66	5.65	4.49	2.63	1.93	1.56	1.30	1.12	0.872	0.718	0.377

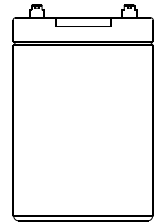
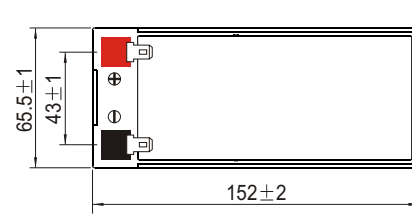
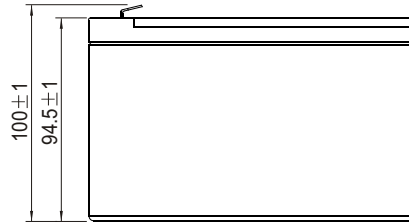
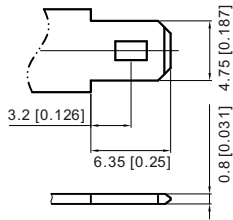
### Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	25.6	17.1	14.1	12.5	10.3	8.10	6.76	4.17	3.15	2.60	2.21	1.92	1.535	1.285	0.706
1.80V/cell	29.7	20.0	16.3	14.1	11.4	8.83	7.27	4.44	3.35	2.75	2.32	2.00	1.587	1.323	0.712
1.75V/cell	35.3	22.7	18.0	15.5	12.1	9.40	7.65	4.61	3.45	2.81	2.37	2.05	1.626	1.354	0.718
1.70V/cell	40.4	25.0	19.6	16.7	12.9	9.79	7.95	4.76	3.53	2.87	2.42	2.09	1.649	1.375	0.731
1.65V/cell	43.9	26.7	20.8	17.7	13.4	10.2	8.18	4.90	3.61	2.93	2.47	2.12	1.671	1.389	0.740
1.60V/cell	47.5	28.5	22.0	18.4	14.0	10.5	8.45	5.00	3.68	2.99	2.51	2.17	1.704	1.411	0.743

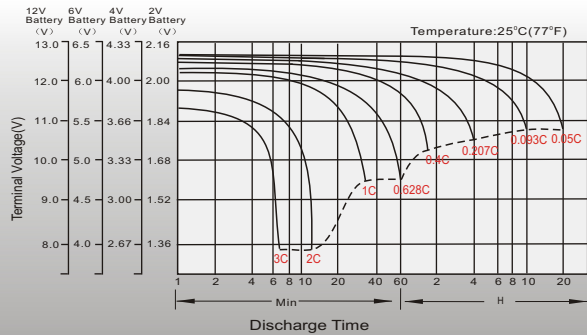
## Dimensions

### T1 Terminal

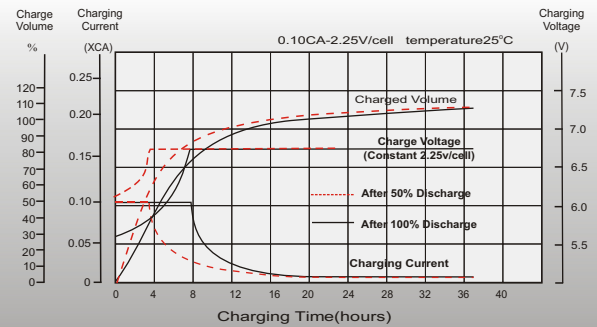
Unit: mm [inches]



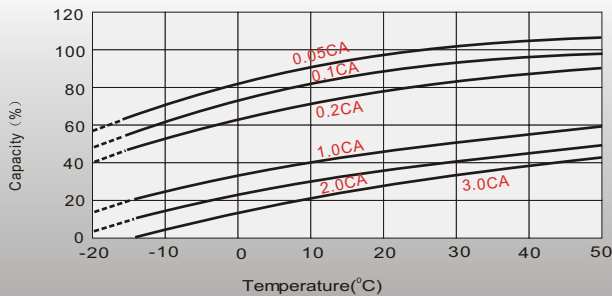
## Discharge Characteristics



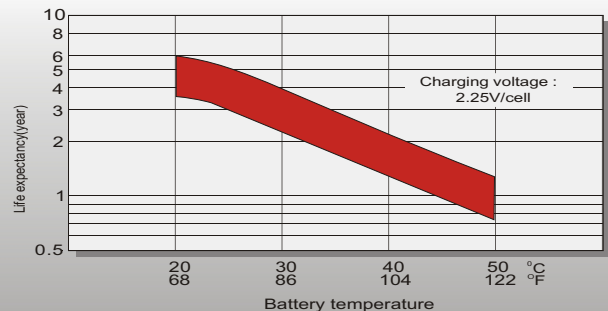
## Float Charging Characteristics



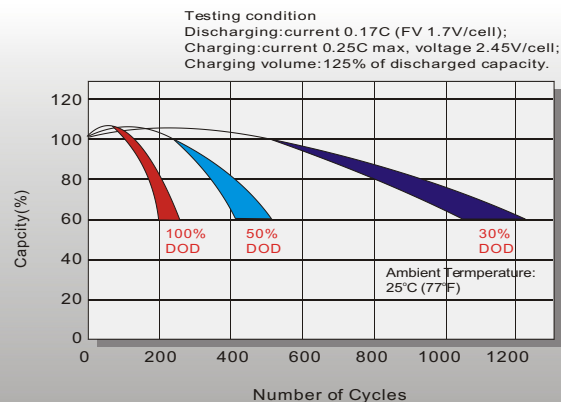
## Temperature Effects in Relation to Battery Capacity



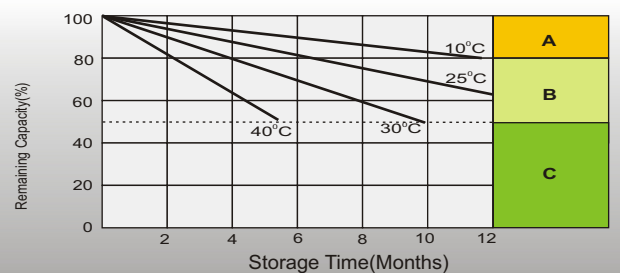
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



- A** No supplementary charge required  
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity.