



Specification	
Nominal Voltage	12V
Nominal Capacity(20HR)	2.1AH
Dimensions	Length 178±2mm (7.00 inches)
	Width 35±1mm (1.38 inches)
	Container Height 60±1mm (2.36 inches)
	Total Height (with Terminal) 66±1mm (2.60 inches)
Approx Weight	Approx 0.97 kg (2.14lbs)
Terminal	T1
Container Material	ABS
Rated Capacity	2.10 AH/0.105A (20hr, 1.80V/cell, 25°C/77°F)
	1.95AH/0.195A (10hr, 1.80V/cell, 25°C/77°F)
	1.76 AH/0.352A (5hr, 1.75V/cell, 25°C/77°F)
	1.54 AH/0.514A (3hr, 1.75V/cell, 25°C/77°F)
	1.28 AH/1.28A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	31.5A (5s)
Internal Resistance	Approx 90mΩ
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 0.63A. 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	US 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	4.04	2.81	2.32	2.01	1.62	1.24	1.01	0.620	0.472	0.388	0.330	0.285	0.226	0.189	0.104
1.80V/cell	4.96	3.35	2.68	2.27	1.79	1.35	1.10	0.658	0.497	0.408	0.343	0.298	0.236	0.195	0.105
1.75V/cell	5.87	3.79	2.97	2.47	1.91	1.43	1.15	0.687	0.514	0.421	0.352	0.305	0.242	0.199	0.106
1.70V/cell	6.67	4.18	3.20	2.66	2.00	1.49	1.20	0.715	0.530	0.431	0.362	0.312	0.246	0.203	0.108
1.65V/cell	7.35	4.50	3.40	2.79	2.09	1.55	1.25	0.736	0.544	0.440	0.370	0.319	0.249	0.205	0.110
1.60V/cell	7.72	4.68	3.53	2.88	2.15	1.59	1.28	0.759	0.557	0.451	0.377	0.325	0.255	0.209	0.110

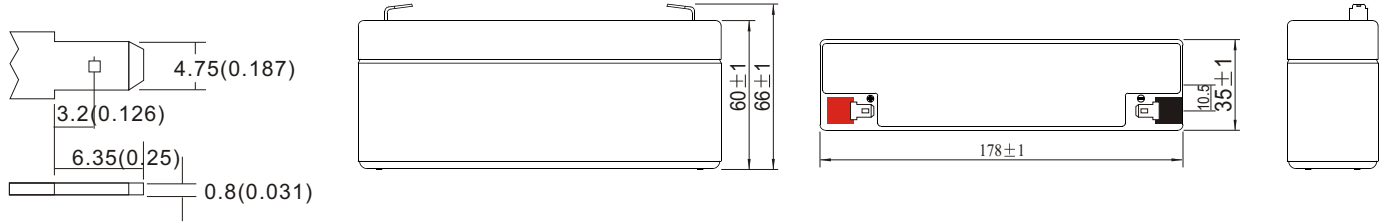
### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	7.61	5.35	4.46	3.90	3.15	2.43	2.00	1.22	0.940	0.774	0.659	0.572	0.457	0.380	0.210
1.80V/cell	9.22	6.33	5.12	4.37	3.46	2.64	2.14	1.30	0.977	0.809	0.683	0.593	0.470	0.391	0.211
1.75V/cell	10.8	7.09	5.60	4.72	3.67	2.78	2.24	1.34	1.01	0.829	0.698	0.604	0.480	0.396	0.212
1.70V/cell	12.1	7.72	6.01	5.03	3.83	2.88	2.32	1.39	1.04	0.845	0.710	0.615	0.484	0.401	0.215
1.65V/cell	13.2	8.21	6.27	5.23	3.95	2.97	2.40	1.42	1.06	0.858	0.723	0.625	0.489	0.404	0.216
1.60V/cell	13.6	8.44	6.46	5.33	4.03	3.00	2.44	1.46	1.08	0.874	0.733	0.634	0.498	0.409	0.216

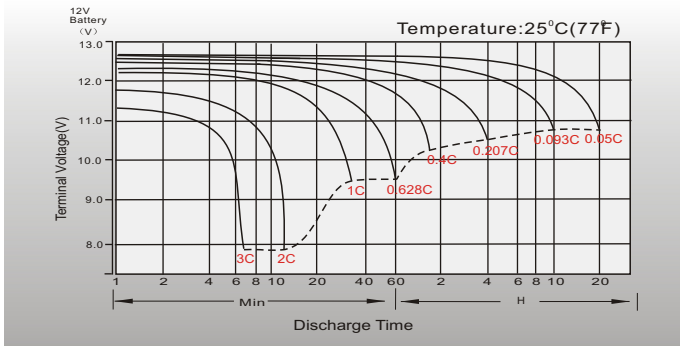
# Dimensions

## T1 Terminal

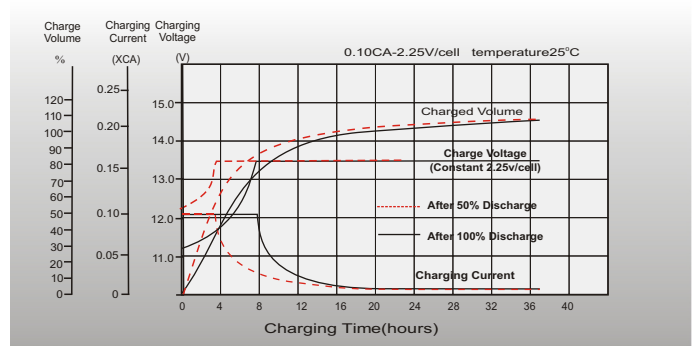
Unit: mm [inches]



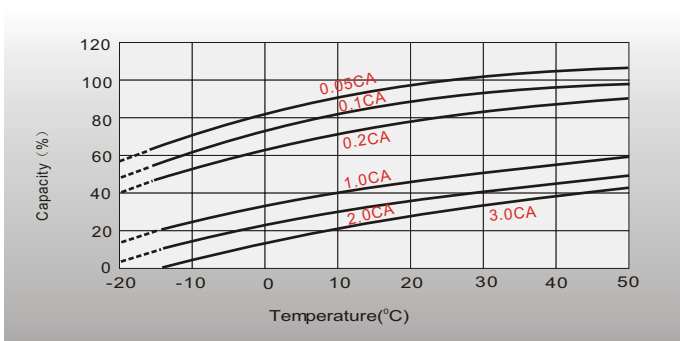
## Discharge Characteristics



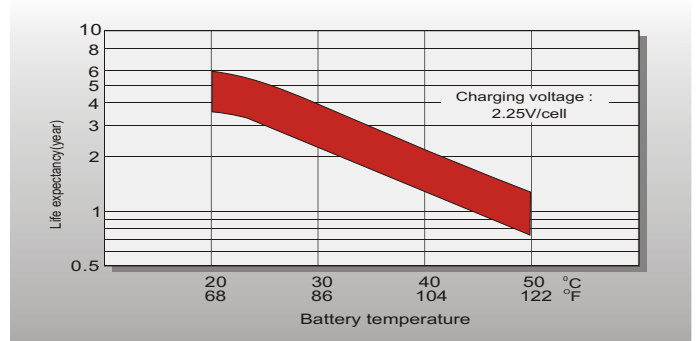
## Float Charging Characteristics



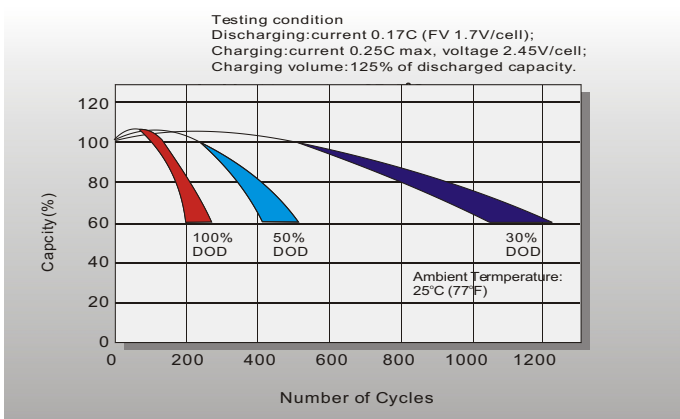
## Temperature Effects in Relation to Battery Capacity



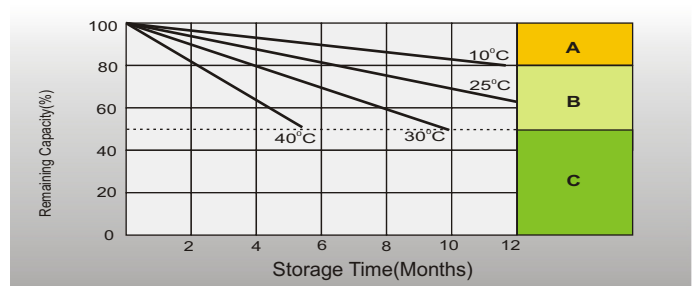
## Effect of Temperature on Long Term Float Life



## 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. The battery should never be left standing till this is reached.