

### Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	18.0AH	
Dimensions	Length	181.5±2mm (7.14 inches)
	Width	76.5±1mm (3.01 inches)
	Container Height	167.5±2mm (6.59 inches)
	Total Height (with Terminal)	167.5±2mm (6.59 inches)
Approx Weight	Approx 5.4kg (11.9lbs)	
Terminal	T3	
Container Material	ABS	
Rated Capacity	18.0 AH/0.90A	(20hr , 1.80V/cell,25°C/77°F)
	16.7 AH/1.67A	(10hr, 1.80V/cell,25°C/77°F)
	15.2 AH/3.03A	(5hr, 1.75V/cell,25°C/77°F)
	13.5 AH/4.49A	(3hr, 1.75V/cell,25°C/77°F)
	11.1 AH/11.1A	(1hr, 1.60V/cell,25°C/77°F)
Max. Discharge Current	270A (5s)	
Internal Resistance	Approx 16mΩ	
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 5.4A.Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	SP 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

- ◆ 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
- ◆ Medical equipments
- ◆ Solar Application

### 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	33.9	25.6	22.7	19.9	15.3	11.4	9.11	5.51	4.13	3.35	2.84	2.47	1.96	1.63	0.884
1.80V/cell	40.8	30.2	25.9	22.1	16.7	12.2	9.79	5.85	4.34	3.51	2.94	2.55	2.02	1.67	0.900
1.75V/cell	45.8	33.0	27.8	23.4	17.4	12.8	10.2	6.07	4.49	3.60	3.03	2.62	2.06	1.70	0.918
1.70V/cell	49.9	35.4	29.7	24.7	18.1	13.2	10.6	6.27	4.63	3.69	3.09	2.67	2.09	1.72	0.929
1.65V/cell	53.8	37.7	31.1	25.8	18.9	13.8	10.9	6.44	4.73	3.77	3.14	2.71	2.12	1.74	0.938
1.60V/cell	57.9	39.6	31.9	26.4	19.3	14.0	11.1	6.59	4.82	3.84	3.20	2.74	2.15	1.76	0.945

### 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	64.0	48.8	43.6	38.5	29.8	22.3	17.9	10.9	8.21	6.68	5.68	4.95	3.95	3.29	1.79
1.80V/cell	76.3	57.2	49.5	42.7	32.4	23.9	19.2	11.5	8.59	6.98	5.86	5.09	4.04	3.36	1.81
1.75V/cell	84.8	62.0	52.8	44.8	33.6	24.9	20.0	11.9	8.87	7.14	6.02	5.21	4.11	3.39	1.82
1.70V/cell	91.1	65.6	55.7	46.8	34.7	25.6	20.6	12.2	9.06	7.25	6.08	5.27	4.15	3.42	1.83
1.65V/cell	96.6	68.8	57.5	48.4	35.8	26.3	21.0	12.5	9.19	7.35	6.15	5.32	4.18	3.43	1.84
1.60V/cell	101.5	70.8	58.0	48.7	36.0	26.5	21.3	12.7	9.31	7.45	6.22	5.33	4.21	3.45	1.85

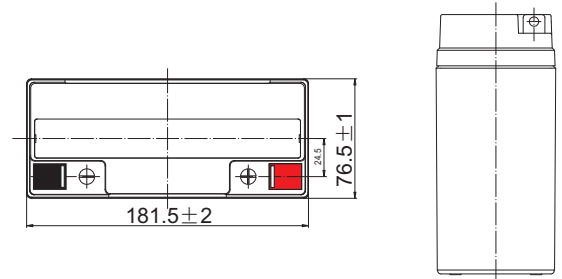
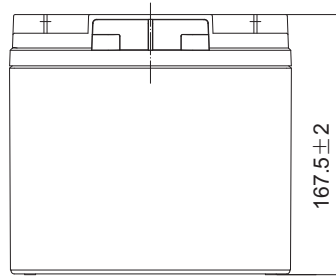
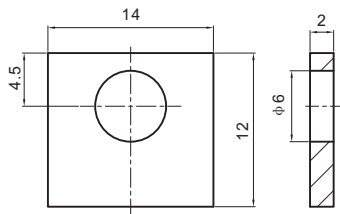
Specifications subject to change without notice.



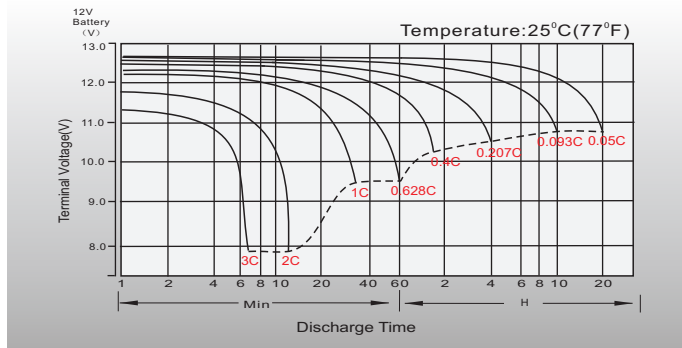
# Dimensions

## T3 Terminal

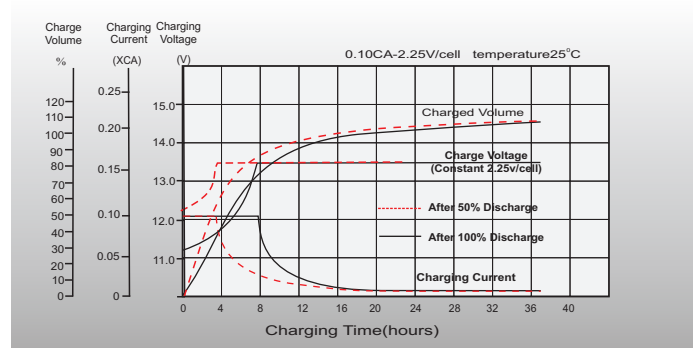
Unit: mm



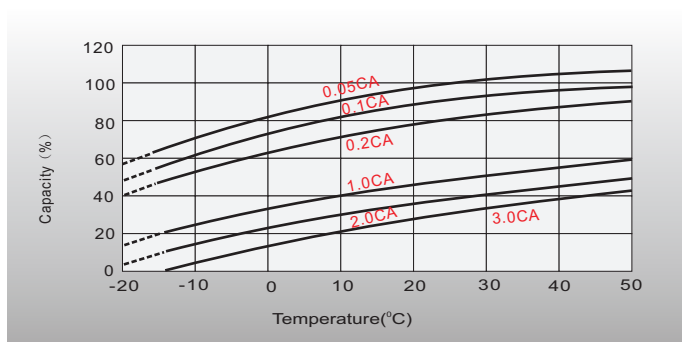
## Discharge Characteristics



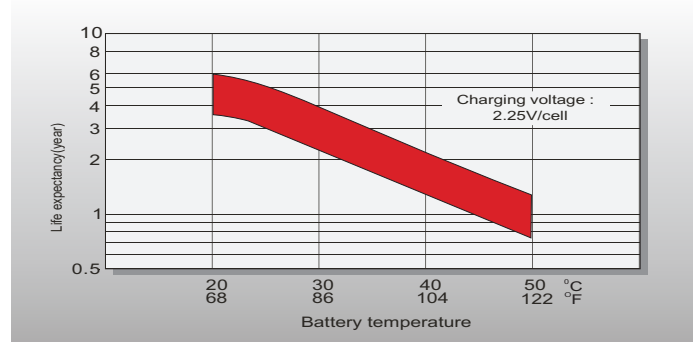
## Float Charging Characteristics



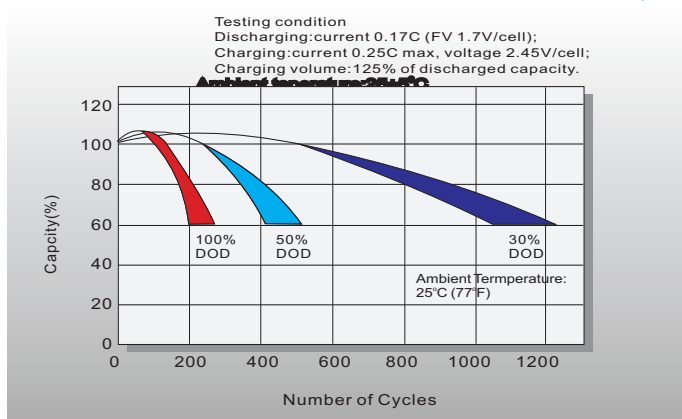
## Temperature Effects in Relation to Battery Capacity



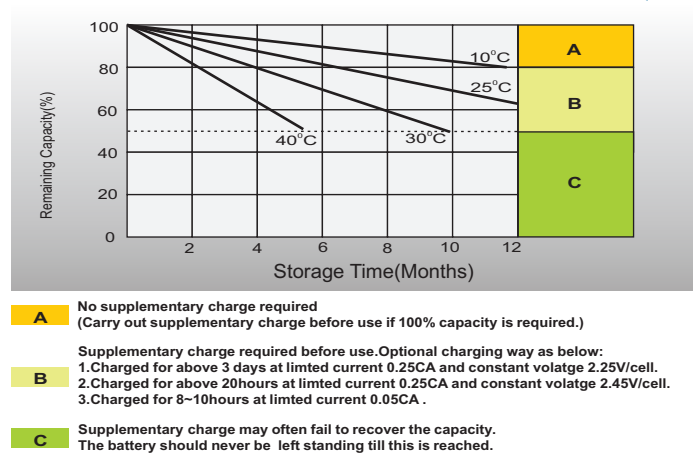
## Effect of Temperature on Long Term Float Life



## 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.