

## UP-ST400-2



Specification		
Nominal Voltage	2V	
Nominal Capacity (10HR)	400.0AH	
Dimension	Length	210±3mm (8.27 inches)
	Width	175±2mm (6.89 inches)
	Container Height	330±3mm (12.99 inches)
	Total Height (with Terminal)	350±3mm (13.78 inches)
Approx Weight	Approx 24.3kg (53.6lbs)	
Terminal	T11	
Container Material	ABS	
Rated Capacity	420.0AH/21.0A	(20hr, 1.80V/cell, 25°C/77°F)
	400.0AH/40.0A	(10hr, 1.80V/cell, 25°C/77°F)
	348.0AH/69.6A	(5hr, 1.75V/cell, 25°C/77°F)
	302.4AH/100.8A	(3hr, 1.75V/cell, 25°C/77°F)
	242.8AH/242.8A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	3200A (5s)	
Internal Resistance	Approx 0.7mΩ	
Operating Temperature Range	Discharge: -15~50°C (5~122°F)	
	Charge : 0~40°C (32~104°F)	
	Storage : -15~40°C (5~104°F)	
Nominal Operating Temperature Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 120.0A.Voltage. 2.4V~2.5.0V at 25°C (77°F) Temp. Coefficient -5mV/°C	
Standby Use	No limit on Initial Charging Current Voltage. 2.25V~2.3V at 25°C (77°F) Temp. Coefficient -3mV/°C	
Capacity affected by Temperature	40°C (104°F) 103% 25°C (77°F) 100% 0°C (32°F) 86%	
Self Discharge	Batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required.	

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

F.V/Time	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	412.0	370.8	306.7	243.2	199.6	119.9	92.7	76.1	64.8	56.6	45.6	38.2	20.3
1.80V/cell	468.0	412.8	329.1	255.9	212.0	126.5	97.2	79.5	67.5	59.1	47.4	40.0	21.0
1.75V/cell	/	445.0	348.5	269.0	221.2	131.7	100.8	82.2	69.6	60.5	48.3	40.4	21.2
1.70V/cell	/	475.9	365.7	279.2	228.9	135.6	103.5	84.0	70.8	61.6	49.0	40.8	21.4
1.65V/cell	/	/	383.6	291.3	237.2	139.7	105.7	85.8	72.3	62.7	49.7	41.3	21.7
1.60V/cell	/	/	396.8	299.2	242.8	143.0	108.0	87.0	73.4	63.5	50.4	41.8	21.9

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

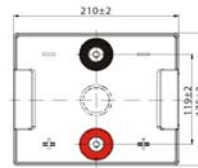
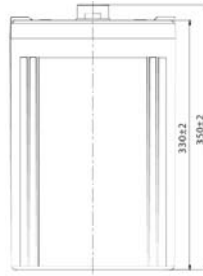
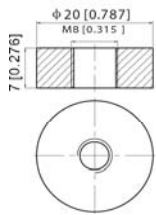
F.V/Time	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	780.1	705.3	586.2	467.6	386.1	233.2	181.1	149.3	127.7	111.8	90.5	76.0	40.3
1.80V/cell	874.8	776.9	623.9	488.7	407.8	244.9	189.1	155.4	132.4	116.4	93.7	79.4	41.7
1.75V/cell	/	827.8	655.6	510.9	423.6	254.0	195.6	160.1	136.0	118.8	95.2	80.1	42.1
1.70V/cell	/	877.8	682.2	526.4	436.1	260.4	200.0	163.0	138.0	120.7	96.6	80.9	42.5
1.65V/cell	/	/	710.2	546.3	449.3	267.1	203.5	165.9	140.4	122.4	97.8	81.8	43.0
1.60V/cell	/	/	727.3	555.8	456.7	271.7	206.7	167.5	141.9	123.7	98.8	82.6	43.4



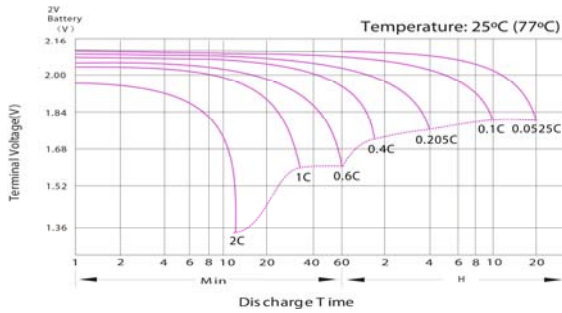
**UP-ST400-2**

**Dimensions**

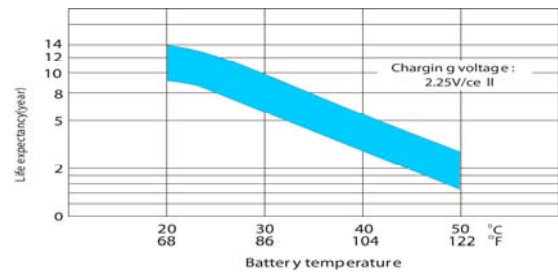
**T11 Terminal**  
Unit: mm [inches]



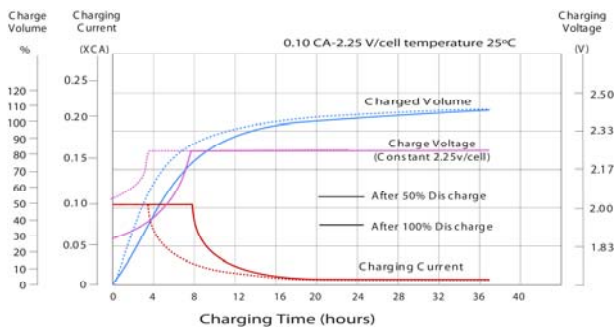
**Discharge Characteristics**



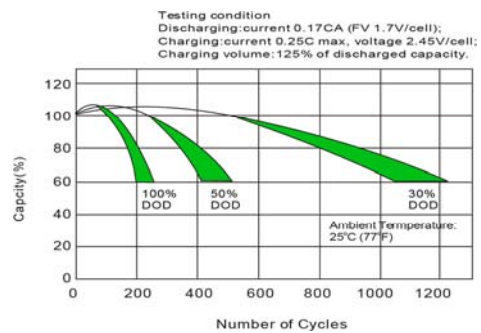
**Effect of Temperature on Long Term Float Life**



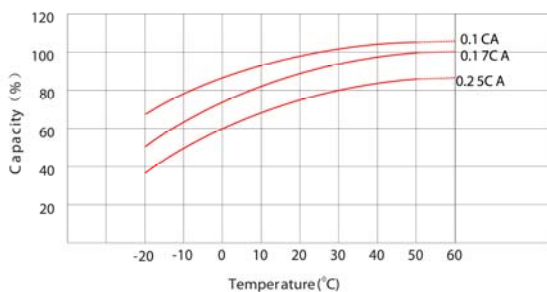
**Float Charging Characteristics**



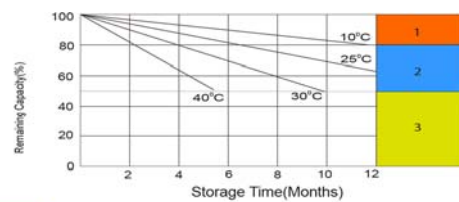
**Cycle Life in Relation to Depth of Discharge**



**Temperature Effects in Relation to Battery Capacity**



**Self Discharge Characteristics**



- 1 No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)
- 2 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.
- 3 Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.

