

## UP60-12



Specification		
Nominal Voltage	12V	
Nominal Capacity (10HR)	60.0AH	
Dimension	Length	259±2mm (10.20 inches)
	Width	168±2mm (6.61 inches)
	Container Height	208±2mm (8.19 inches)
	Total Height (with Terminal)	230±2mm (9.06 inches)
	Approx Weight	Approx 20.3 Kg (44.8lbs)
Terminal	T6 / T9 / T14	
Container Material	ABS	
Rated Capacity	64.2 AH/3.21A	(20hr, 1.80V/cell, 25°C/77°F)
	60.0 AH/6.0A	(10hr, 1.80V/cell, 25°C/77°F)
	52.2 AH/10.44A	(5hr, 1.75V/cell, 25°C/77°F)
	46.8 AH/15.6A	(3hr, 1.75V/cell, 25°C/77°F)
	37.2 AH/37.2A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	720A (5s)	
Internal Resistance	Approx 7.4mΩ	
Operating Temperature Range	Discharge:	-15~50°C (5~122°F)
	Change :	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 18.0A.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	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	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	70.2	59.0	52.4	43.4	33.5	28.7	18.6	14.0	11.4	9.62	8.43	6.76	5.81	3.10
1.80V/cell	80.3	66.3	57.9	47.2	36.2	30.3	20.0	15.0	12.2	10.2	8.93	7.12	6.00	3.21
1.75V/cell	91.2	74.7	64.0	51.3	39.4	33.0	20.8	15.6	12.6	10.4	9.21	7.36	6.16	3.29
1.70V/cell	103.0	82.9	70.6	56.0	42.5	34.9	21.9	16.4	13.1	11.0	9.65	7.67	6.40	3.38
1.65V/cell	110.7	88.8	75.2	59.1	45.0	36.1	22.7	17.1	13.7	11.4	9.99	7.93	6.58	3.48
1.60V/cell	121.7	97.2	81.6	63.0	46.7	37.2	23.3	17.5	14.0	11.7	10.2	8.06	6.72	3.54

Constant Power Discharge (Watts) at 25°C (77°F)														
F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	131.1	111.3	99.8	83.7	65.1	55.9	36.4	27.5	22.6	19.1	16.7	13.5	11.6	6.21
1.80V/cell	148.2	123.4	108.7	89.5	69.7	58.7	38.9	29.4	23.9	20.1	17.7	14.2	12.0	6.41
1.75V/cell	165.7	137.4	119.0	96.5	75.3	63.7	40.3	30.4	24.6	20.5	18.2	14.6	12.3	6.57
1.70V/cell	182.9	150.3	130.4	104.7	80.8	67.2	42.4	32.0	25.7	21.7	19.0	15.2	12.7	6.73
1.65V/cell	194.7	159.7	137.7	109.6	84.7	69.0	43.7	33.1	26.6	22.3	19.6	15.7	13.1	6.93
1.60V/cell	209.3	172.1	148.0	116.2	87.6	70.7	44.6	33.8	27.1	22.7	20.0	15.9	13.3	7.03



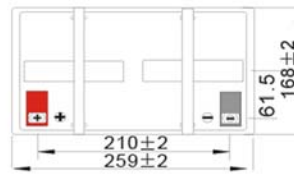
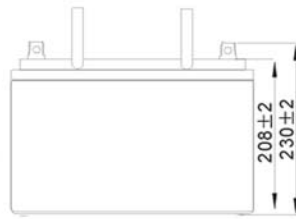
**UP60-12**

**Dimensions**

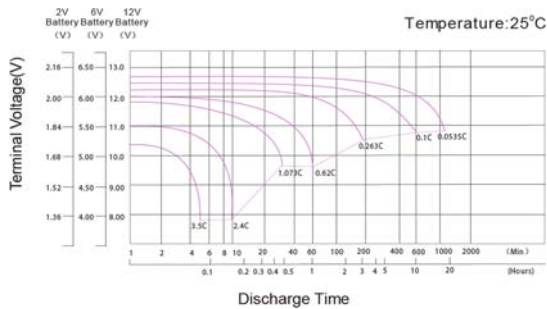
■ T1 4 Terminal  
Unit: mm [inches]

T14-1 Positive

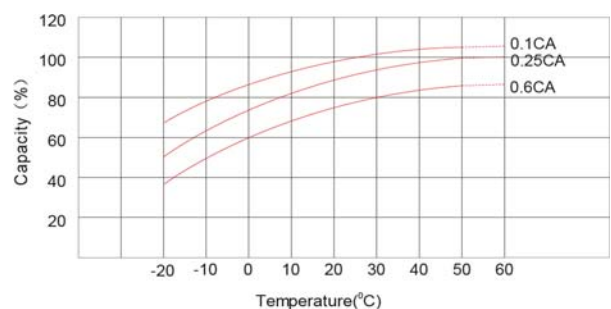
T14-2 Negative



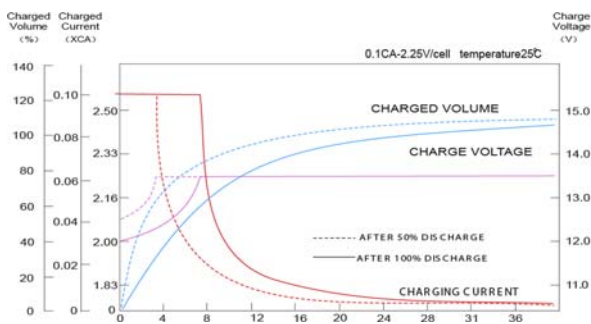
**Discharge Characteristics**



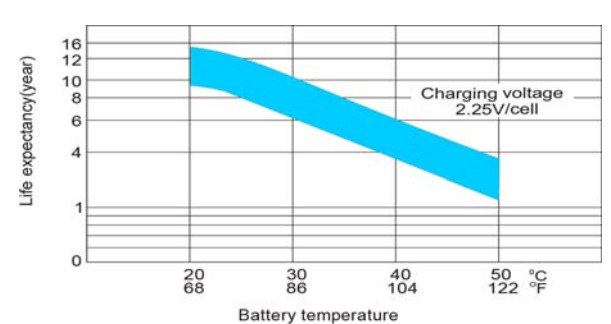
**Temperature Effects in Relation to Battery Capacity**



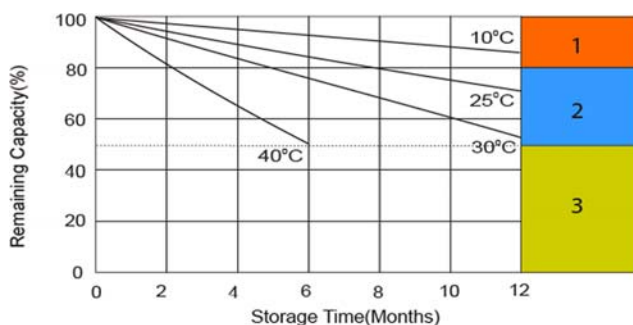
**Float Charging Characteristics**



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



**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.

