



### General Features

- ◆ Sealed and maintenance free operation.
- ◆ Non-Spillable construction design.
- ◆ ABS containers and covers(UL94HB, UL94V-0) optional.
- ◆ Safety valve installation for explosion proof.
- ◆ High quality and high reliability.
- ◆ Exceptional deep discharge recovery performance.
- ◆ Low self discharge characteristic.
- ◆ Flexibility design for multiple install positions.



Battery Type	Valve-Regulated, Absorbed Glass Mat (AGM) Technology			
Nominal Voltage	12V			
Capacity( 25 °C)	20HR(8.25A, 1.8V/cell)	10HR(15.57A, 1.8V/cell)	5HR(28.3A, 1.75V/cell)	1HR(106.5A, 1.6V/cell)
	165.0AH	155.7AH	141.5AH	106.5AH
Dimensions	Length	Width	Height	Total Height
	560mm(22.05inches)	110mm(4.33inches)	280mm(11.02inches)	280mm(11.02inches)
Approx Weight	Approx 43.8 Kg (96.6lbs)			
Internal Resistance	Full Charged at 25 °C : Approx 3.0mΩ			
Self Discharge	3% of capacity declined per month at 25 °C			
Capacity affected by Temperature(10HR)	40 °C	25 °C	0 °C	-15 °C
	103%	100%	86%	65%
Charging Voltage (V)	Cycle use		Float use	
	14.4V~15.0V at 25 °C. Temp. Coefficient -30mV/ °C		13.5V~13.8V at 25 °C. Temp. Coefficient -20mV/ °C	
Current	Max. Discharge Current(5s)		Initial Charging Current	
	1200A		Less than 45.0A	
Operating Temp. Range	Discharge		Charging	
	-15~50 °C(5~122 °F)		0~40 °C(32~104 °F)	
Storage				
-15~40 °C(5~104 °F)				

### 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	260.9	217.5	186.6	146.4	113.5	92.3	55.0	39.6	31.8	26.3	22.9	17.85	14.89	7.89
1.80V/cell	295.8	242.4	206.6	160.2	122.1	98.5	58.0	42.2	33.5	27.7	24.1	18.75	15.57	8.25
1.75V/cell	324.6	262.3	220.4	168.3	126.8	102.0	59.2	42.8	34.3	28.3	24.5	18.98	15.75	8.37
1.70V/cell	347.2	276.3	229.3	173.2	129.7	103.4	60.0	43.3	34.5	28.5	24.8	19.25	15.90	8.43
1.67V/cell	359.3	283.1	234.1	175.4	130.2	103.8	60.2	43.5	34.8	28.8	25.1	19.50	16.05	8.48
1.60V/cell	377.7	294.0	244.5	179.9	133.6	106.5	61.2	44.4	35.6	29.6	25.5	19.95	16.35	8.52

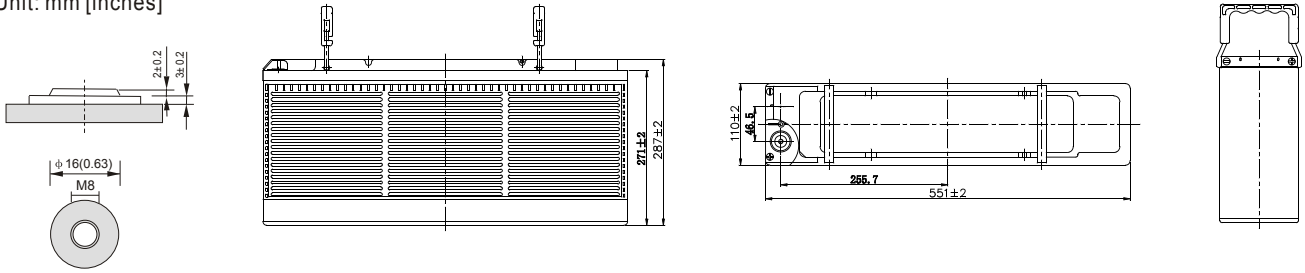
### Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	487.1	410.2	355.5	281.9	220.4	179.8	108.0	78.0	62.8	52.2	45.5	35.6	29.8	15.78
1.80V/cell	545.8	451.0	387.8	303.8	235.3	190.9	113.1	82.6	65.8	54.6	47.6	37.3	31.1	16.48
1.75V/cell	589.5	482.2	409.9	316.6	242.0	196.8	114.9	83.5	67.2	55.7	48.2	37.6	31.4	16.70
1.70V/cell	616.5	500.9	423.2	324.1	246.7	198.8	116.2	84.2	67.5	55.8	48.7	38.1	31.7	16.81
1.67V/cell	635.4	511.2	430.2	327.6	246.8	199.2	116.4	84.5	67.9	56.4	49.2	38.6	31.9	16.88
1.60V/cell	649.5	520.3	443.1	331.5	250.5	202.4	117.3	85.7	69.0	57.6	49.9	39.4	32.5	16.95

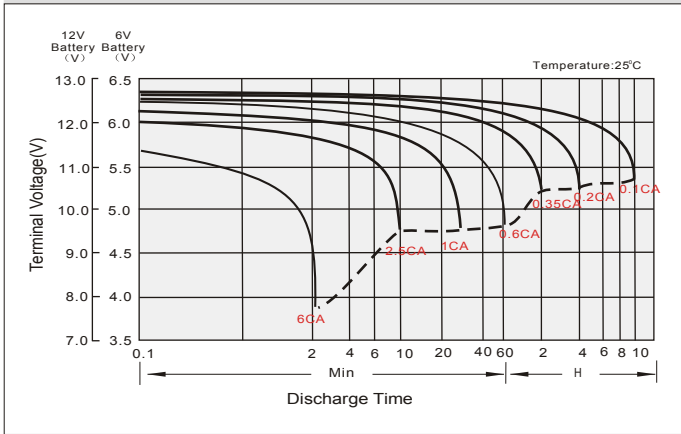
# Dimensions

## Terminal

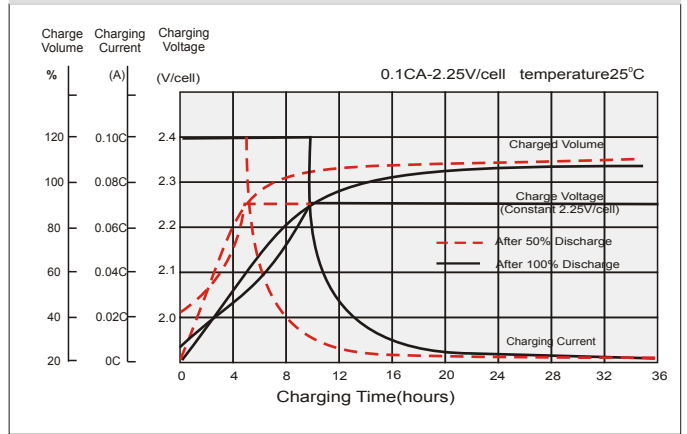
Unit: mm [inches]



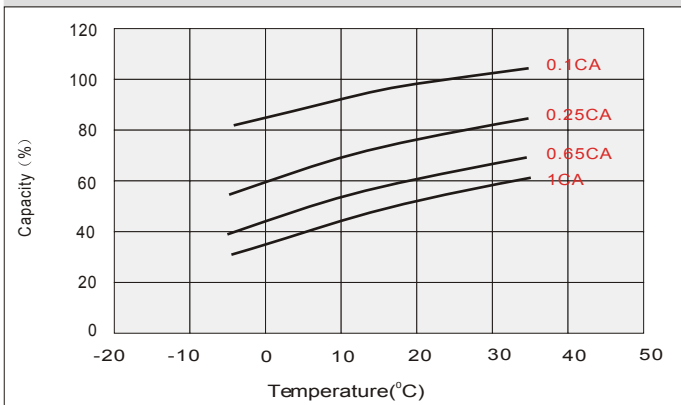
## Discharge characteristics



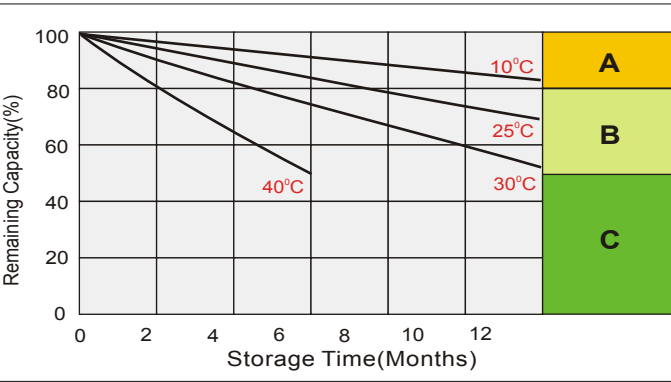
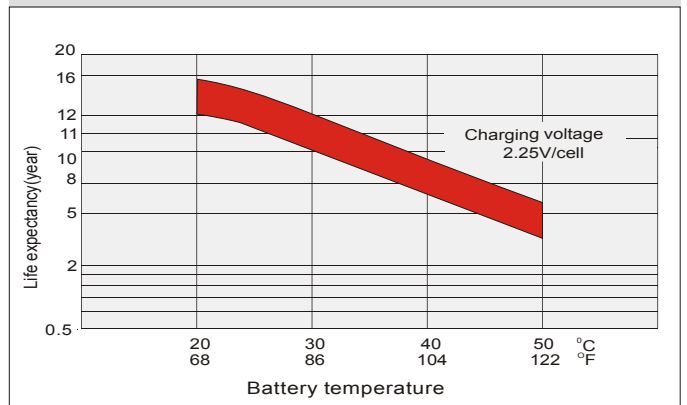
## Cycle use charging characteristics



## Temperature Effects in Relation to Battery Capacity



## Effect of Temperature on Long Term Float Life



## 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 volatge 2.25V/cell.
  2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
  3. Charged for 8-10hours 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.