

### General Features



- ◆ Using oxygen recombination technology: maintenance-free
- ◆ Special grid alloy: less gassing, less self-discharging
- ◆ For longer cycle life: special paste formula, over dimensioned negative plate, optimised manufacturing process, additives for deep discharge
- ◆ Thermal management system (optional)
- ◆ Special anti-vibration design (optional)
- ◆ High quality AGM separator: extend cycle life and prevent micro short circuit
- ◆ ABS material: increase the strength of battery container.  
(Flame-retardant ABS is optional)



Battery Type	Valve-Regulated, Absorbed Glass Mat (AGM) Technology			
Nominal Voltage	12V			
Capacity (20 °C)	20HR(10.1A, 1.8V/cell)	10HR(19.4A, 1.8V/cell)	5HR(36.0A, 1.75V/cell)	1HR(146.1A, 1.6V/cell)
	201.2AH	194.0AH	180.2AH	146.1AH
Dimensions	Length	Length	Length	Length
	522mm(20.55inches)	240mm(9.45inches)	218mm(8.58inches)	224mm(8.81inches)
Approx Weight	Approx 62.5 kg (137.8lbs)			
Internal Resistance	Full Charged at 20 °C: Approx 2.7 mΩ			
Self Discharge	3% of capacity declined per month at 20 °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 20 °C. Temp. Coefficient -30mV/ °C		13.5V~13.8V at 20 °C. Temp. Coefficient -20mV/ °C	
Current	Max. Discharge Current(5s)		Initial Charging Current	
	2000A		Less than 60A	
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 20 °C (68 °F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	274.7	256.9	237.1	193.5	150.0	122.4	72.6	52.8	41.5	34.3	29.8	23.1	18.9	9.85
1.80V/cell	329.5	293.4	262.2	211.9	160.9	130.2	76.0	54.6	42.9	35.5	30.7	23.8	19.4	10.1
1.75V/cell	364.8	319.2	279.3	221.3	166.2	133.4	77.8	55.7	43.7	36.0	31.2	24.1	19.6	10.2
1.70V/cell	396.7	342.0	294.7	232.1	172.3	137.4	79.8	57.0	44.5	36.9	31.8	24.5	20.0	10.3
1.65V/cell	425.2	361.8	311.2	240.5	176.8	141.4	81.9	58.6	45.7	37.9	32.5	25.0	20.3	10.5
1.60V/cell	460.6	381.5	325.5	249.3	182.4	146.1	83.6	59.5	46.6	38.4	32.9	25.3	20.6	10.7

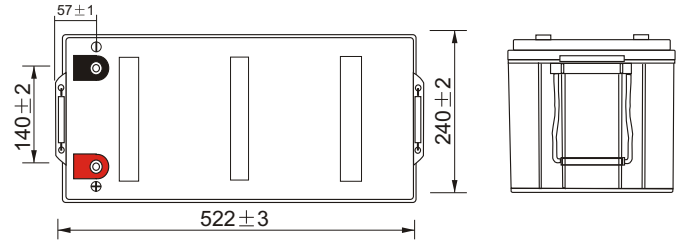
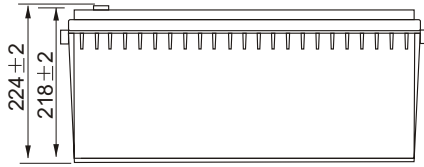
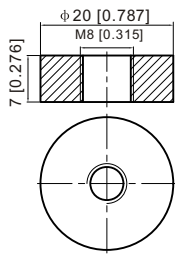
### Constant Power Discharge (Watts) at 20 °C (68 °F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	514.9	485.0	450.5	370.7	289.4	237.6	141.8	103.6	81.8	68.0	59.3	46.3	38.0	20.0
1.80V/cell	607.7	547.5	494.3	403.5	308.9	251.6	147.9	106.7	84.2	70.0	60.9	47.5	38.9	20.3
1.75V/cell	664.5	588.9	522.0	418.2	317.1	256.5	150.6	108.5	85.5	70.9	61.6	47.8	39.2	20.5
1.70V/cell	712.4	623.7	545.9	435.7	327.1	262.9	153.8	110.5	86.7	72.1	62.6	48.6	39.8	20.7
1.65V/cell	755.2	655.0	573.3	449.1	334.2	269.7	157.5	113.2	88.8	74.0	63.9	49.4	40.4	20.9
1.60V/cell	803.9	682.3	593.4	462.4	342.9	277.8	160.1	114.7	90.2	74.8	64.5	49.9	40.9	21.3

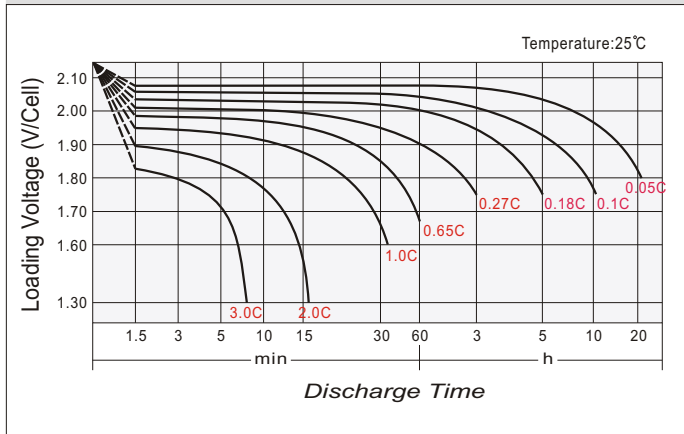
# Dimensions

## T11 Terminal

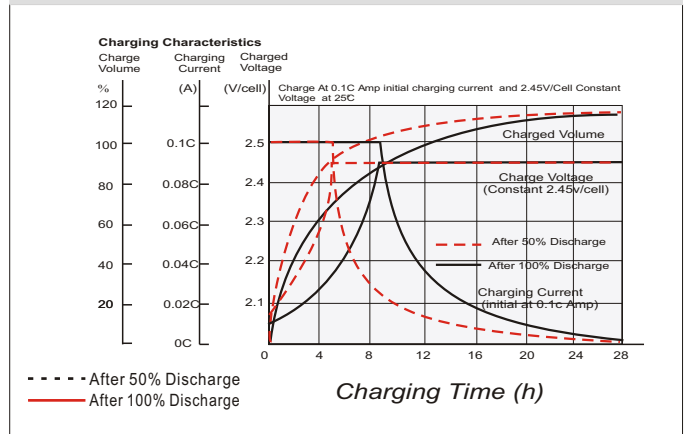
Unit: mm [inches]



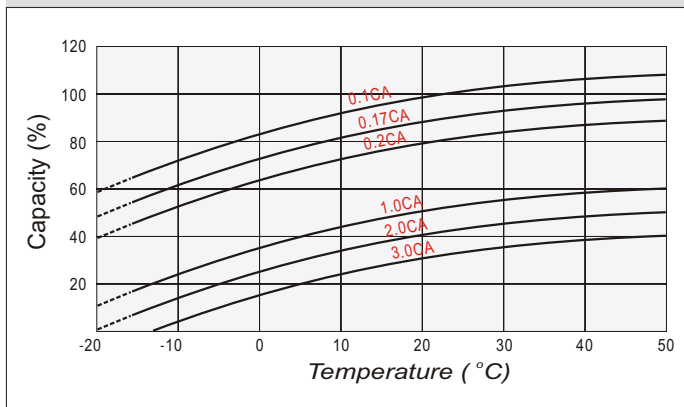
## Discharge characteristics



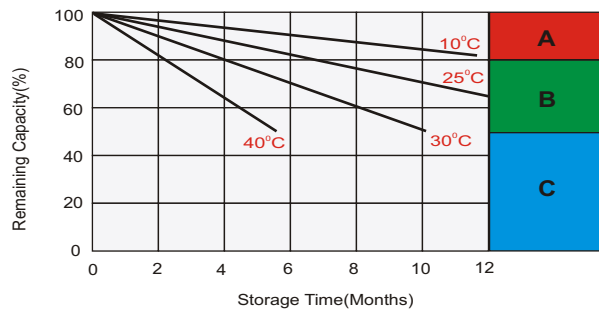
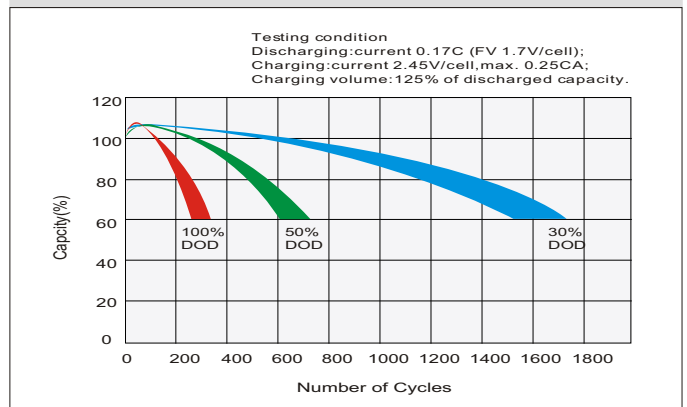
## Cycle use charging characteristics



## Temperature effects in relation to battery capacity



## 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.