

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(5.14A, 1.8V/cell)	10HR(9.71A, 1.8V/cell)	5HR(17.5A, 1.75V/cell)	1HR(68.6A, 1.6V/cell)
	102.9AH	97.1AH	87.5AH	68.6AH
Dimensions	Length	Length	Length	Length
	330mm(13.0inches)	173mm(6.8inches)	212mm(8.35inches)	200mm(7.87inches)
Approx Weight	Approx 30.0 kg (66.2lbs)			
Internal Resistance	Full Charged at 20 °C: Approx 4.9 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	
	1200A		Less than 30A	
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	155.0	136.0	120.3	96.1	74.9	60.4	35.4	25.7	20.3	16.8	14.7	11.6	9.57	5.08
1.80V/cell	170.4	146.3	127.7	101.7	77.9	62.3	36.3	26.1	20.6	17.1	14.9	11.8	9.71	5.14
1.75V/cell	179.6	152.0	131.7	104.3	80.1	63.6	37.1	26.8	21.2	17.5	15.1	11.9	9.80	5.19
1.70V/cell	192.7	159.2	136.8	108.1	82.1	65.6	37.9	27.4	21.6	17.8	15.4	12.1	9.89	5.23
1.65V/cell	205.8	167.2	141.9	111.9	84.2	67.3	38.8	28.1	22.0	18.1	15.6	12.2	10.0	5.27
1.60V/cell	221.2	176.7	147.6	115.0	86.4	68.6	39.5	28.5	22.3	18.4	15.9	12.4	10.1	5.30

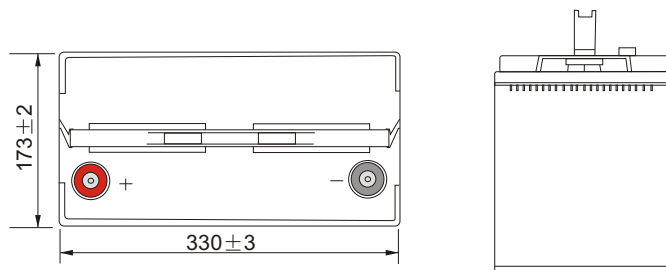
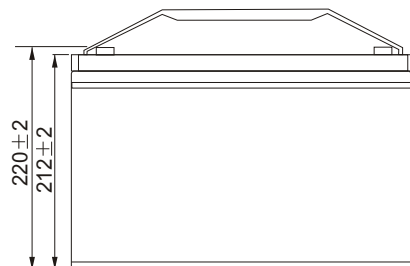
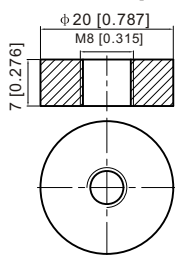
Constant Power Discharge (Watts) at 20 °C (68 °F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	290.5	256.8	228.5	184.2	144.5	117.3	69.2	50.4	40.1	33.4	29.2	23.2	19.3	10.29
1.80V/cell	314.4	273.0	240.7	193.5	149.6	120.5	70.7	51.1	40.5	33.8	29.5	23.5	19.5	10.39
1.75V/cell	327.1	280.4	246.1	197.1	152.7	122.2	71.8	52.1	41.4	34.4	29.9	23.7	19.6	10.44
1.70V/cell	345.9	290.4	253.4	202.9	155.9	125.6	73.1	53.1	42.0	34.9	30.3	23.9	19.7	10.48
1.65V/cell	365.5	302.7	261.4	208.9	159.2	128.3	74.7	54.3	42.7	35.3	30.8	24.1	19.9	10.53
1.60V/cell	386.0	316.0	269.2	213.2	162.4	130.4	75.6	54.9	43.2	35.8	31.1	24.3	20.0	10.57

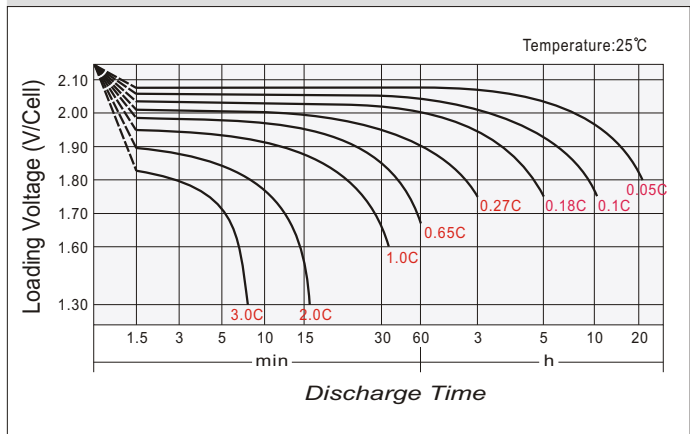
Dimensions

T11 Terminal

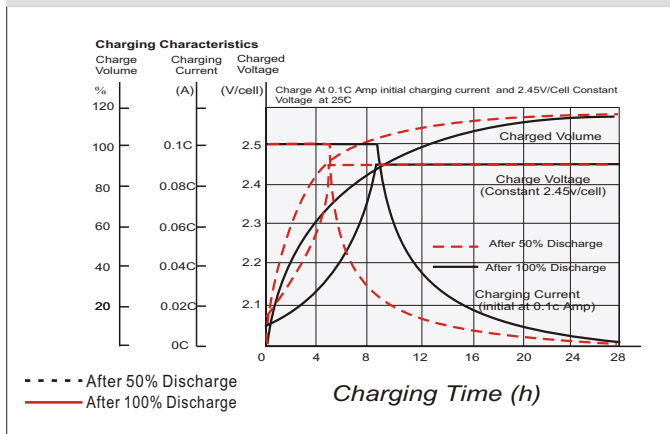
Unit: mm [inches]



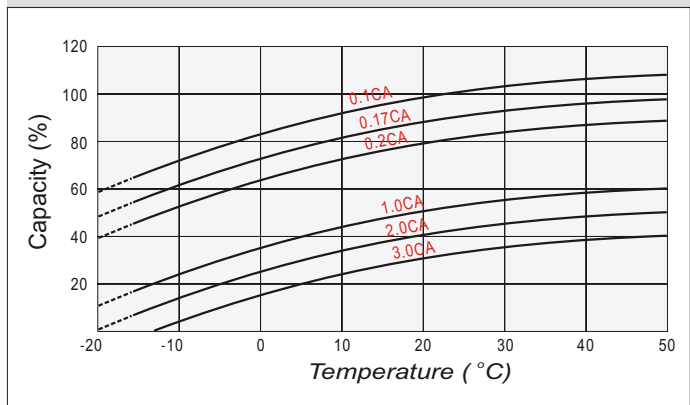
Discharge characteristics



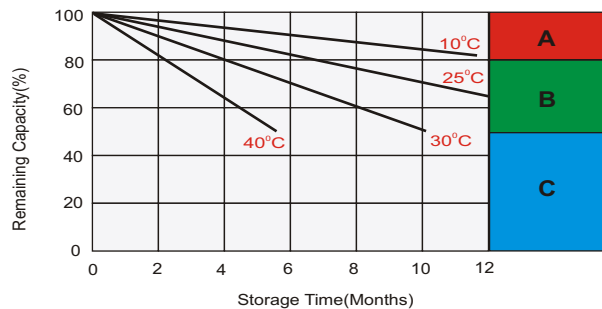
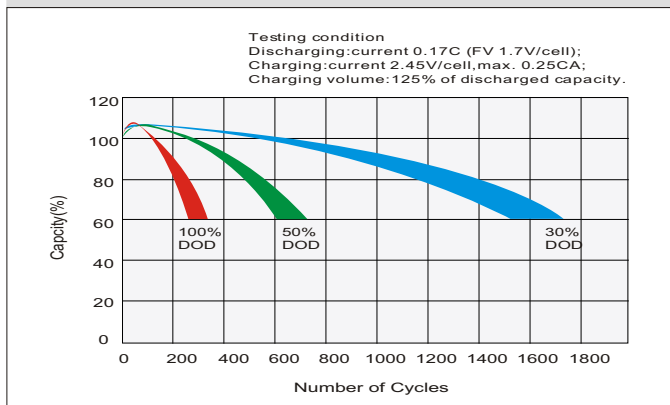
Cycle use charging characteristics



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.