



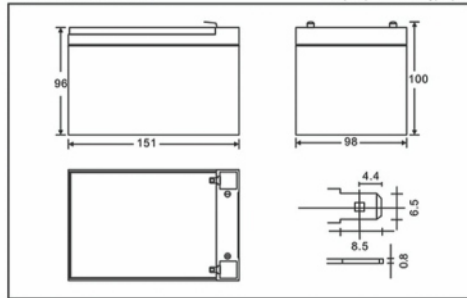
# VALVE REGULATED LEAD ACID BATTERY- MINI CAPACITY SERIES

MODEL: TP 12-12

Product Code: VRLA-1212001



### Plane Chart:



### Characteristic:

1. 100% testing before out of factory, stable and reliable quality is guaranteed.
2. Professional alloy formula and advanced manufacturing techniques.
3. Completely sealed and maintenance free, low self-discharge.
4. Good charge-discharge acceptability.
5. Cyclic application: deep cycle charge-discharge for more than 260 times.
6. Floating application: for 3-5 years.

### Application:

- Anti-theft system
- Radio transceiver
- Power system
- Railroad engine and railway communication
- Emergency lighting and lamps
- Electric tools
- Electronic instruments and other backup power
- Medical facilities
- UPS for banking system
- Computer backup power
- Marine system
- UPS for fire fighting system
- Toys

### Parts:

Executed Standard: GB/T 19639.1-2005

Cover	Container Bottom	Terminal	Positive Plate	Negative Plate	Separator	Electrolyte	Safety Valve	Seal Glue
ABS	ABS	Copper	PbO <sub>2</sub>	Pb	AGM	dilute sulphuric acid	Rubber	Epoxy Resin

### Packing

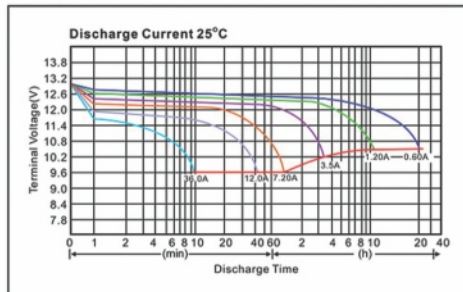
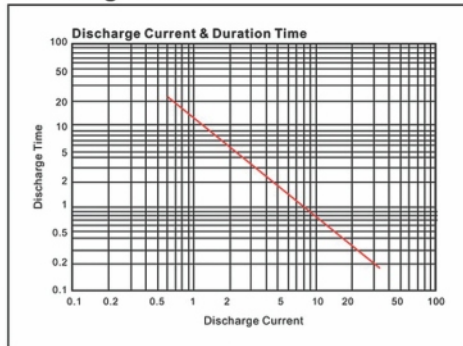
Date	Battery Packing	Inner Packing	Outer Packing
① Printing	① Polybag	Paper Box	Carton Packing
② Branded	② Shrink		
Carton Sealing		Accessories	
① Packing Strap		Bolts&nuts	Mini Charger
② Shrink		With	Optional

### Parameter Chart:

Volts	12V	
Capacity(25°C)	20 hours rate (0.6A)	12.0Ah
Discharge Current Testing (25°C)	20 I <sub>10</sub> rate (12A, 27min)	40min
	60 I <sub>15</sub> rate (36A, 7min)	8.5min
Internal Resistance	Full Charged Battery 25°C	18mΩ
Capacity Affected By Temperature (20 hours rate)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	62%
Residual Capacity (25°C)	Capacity After 3 Months Storage	91%
	Capacity After 6 Months Storage	82%
	Capacity After 12 Months Storage	64%
Cycle (Above 300 Time)	Discharge 2hrs at 3.0A Current Charge 6hrs at 1.2A Current (25°C)	
Charge (Constant Voltage)	Cycle (25°C)	Initial Charging Current Less Than 3.6A Voltage 14.5~14.9V
	Float (25°C)	Charge Voltage 13.6~13.8V
Weight (Approx)		3.57Kg

\*The above are average and date obtained from the first 3 charge/discharge cycles. These are not minimum values.

### Discharge Curve



Constant Current Discharge (Amperes) at 25°C (77°F)												
F.V/Time	5min	10min	15min	30min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.80V/cell	33.12	24.84	18.00	12.12	7.08	3.96	3.000	2.400	2.112	1.728	1.128	0.588
1.75V/cell	34.32	25.32	18.36	12.36	7.18	4.08	3.120	2.520	2.160	1.752	1.152	0.600
1.70V/cell	37.44	26.88	19.44	12.84	7.32	4.20	3.204	2.556	2.196	1.788	1.174	0.610
1.65V/cell	41.16	29.16	21.12	13.56	7.32	4.22	3.240	2.587	2.220	1.800	1.188	0.612
1.60V/cell	44.64	30.60	22.20	14.16	7.44	4.32	3.264	2.604	2.244	1.836	1.200	0.624

Constant Power Discharge (Watts/cell) at 25°C (77°F)												
F.V/Time	5min	10min	15min	30min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.80V/cell	433.87	319.39	255.96	152.21	87.34	47.31	34.970	28.903	24.120	20.263	13.471	7.056
1.75V/cell	502.13	345.96	267.77	158.04	89.95	48.24	35.676	29.417	24.480	20.571	13.680	7.200
1.70V/cell	533.52	358.49	275.98	161.64	91.58	49.06	36.000	29.931	24.617	20.983	13.752	7.236
1.65V/cell	557.50	367.06	282.31	163.87	92.67	49.58	36.259	30.240	24.703	21.189	13.781	7.250
1.60V/cell	576.00	314.40	288.00	165.60	93.60	50.09	36.461	30.549	24.768	21.394	13.781	7.250