



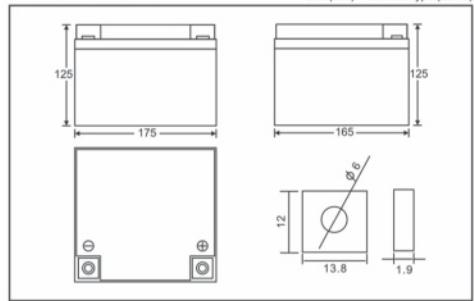
VALVE REGULATED LEAD ACID BATTERY- MEDIUM AND LARGE CAPACITY SERIES

MODEL: TP28-12

Product Code: VRLA-1228001



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 ₂	Pb	AGM	dilute sulphuric acid	Rubber	Epoxy Resin

Packing

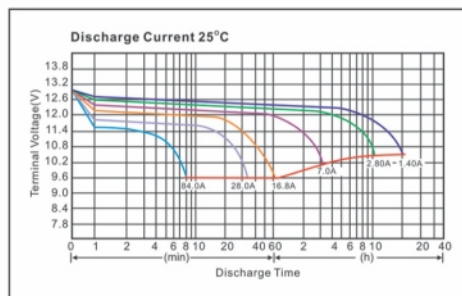
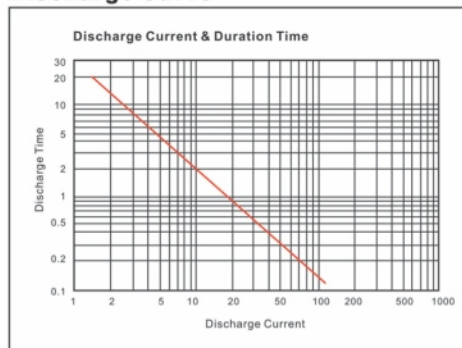
Date	Battery Packing	Inner Packing	Outer Packing
① Printing	① Polybag	Paper Box	Carton Packing
② Branded	② Shrink		
Carton Sealing		Accessories	
① Packing Strap	Bolts&nuts	Mini Charger	
② Shrink	With	Optional	

Parameter Chart:

Volts	12V	
Capacity(25°C)	20 hours rate (1.4A)	28.0Ah
Discharge Current Testing (25°C)	20 I ₁₀ rate (28A, 27min)	34min
	60 I ₁₀ rate(84A, 7min)	8min
Internal Resistance	Full Charged Battery 25°C	10mΩ
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 7.0A Current Charge 6hrs at 2.8A Current (25°C)	
Charge (Constant Voltage)	Cycle (25°C)	Initial Charging Current Less Than 8.4A Voltage 14.5~14.9V
	Float (25°C)	Charge Voltage 13.6~13.8V
Weight (Approx)		8.46Kg

*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	77.28	57.96	42.00	28.28	16.52	9.24	7.000	5.600	4.928	4.032	2.632	1.372
1.75V/cell	80.08	59.08	42.84	28.84	16.74	9.52	7.280	5.880	5.040	4.088	2.688	1.400
1.70V/cell	87.36	62.72	45.36	29.96	17.08	9.80	7.476	5.964	5.124	4.172	2.738	1.422
1.65V/cell	96.04	68.04	49.28	31.64	17.08	9.86	7.560	6.037	5.180	4.200	2.772	1.428
1.60V/cell	96.72	71.40	51.80	33.04	17.36	10.08	7.616	6.076	5.236	4.284	2.800	1.456

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	1012.37	745.25	597.24	355.15	203.80	110.40	81.598	67.440	56.280	47.280	31.433	16.464
1.75V/cell	1171.63	807.24	624.79	368.76	209.88	112.56	83.244	68.640	57.120	48.000	31.920	16.800
1.70V/cell	1244.88	836.47	643.94	377.16	213.68	114.48	84.000	69.840	57.439	48.960	32.088	16.884
1.65V/cell	1300.82	856.46	658.73	382.37	216.23	115.68	84.605	70.560	57.641	49.440	32.155	16.918
1.60V/cell	1344.00	873.60	672.00	386.40	218.40	116.88	85.075	71.280	57.792	49.920	32.155	16.918