

VALVE REGULATED LEAD ACID BATTERY- MINI CAPACITY SERIES

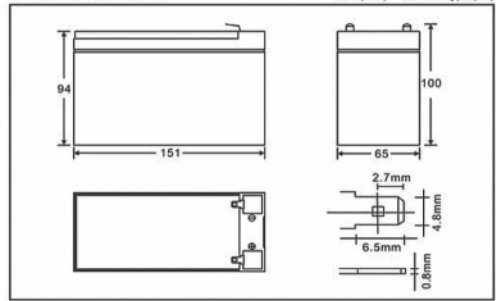


MODEL: TP 4.5-12

Product Code: VRLA-12072001



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

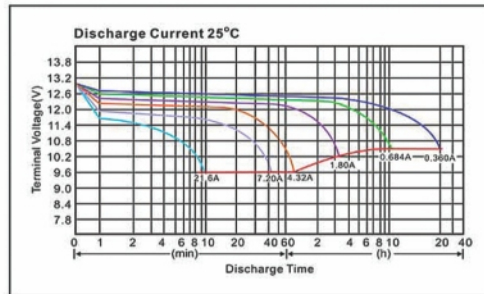
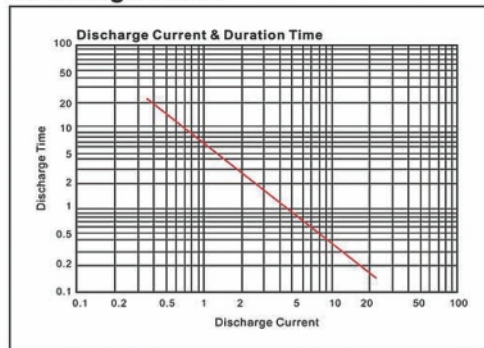
Date	Battery Packing	Inner Packing	Outer Packing
① Printing	① Polybag	Paper Box	Carton Packing
② Branded	② Shrink		
Carton Sealing		Accessories	
① Packing Strap	Bolts&nuts	Mini Charger	
② Shrink	With	Optional	

Parameter Chart:

Volts		12V	
Capacity(25°C)	20 hours rate (0.36A)	7.2Ah	
Discharge Current Testing (25°C)	20 I ₁₀ rate (7.2A, 27min)	39min	
	60 I ₁₀ rate(21.6A, 7min)	9min	
Internal Resistance	Full Charged Battery 25°C	23mΩ	
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 1.8A Current Charge 6hrs at 0.72A Current (25°C)		
Charge (Constant Voltage)	Cycle (25°C)	Initial Charging Current Less Than 2.16A Voltage 14.5-14.9V	
	Float (25°C)	Charge Voltage 13.6-13.8V	
Weight (Approx)		2.10Kg	

*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	19.87	14.90	10.80	7.27	4.25	2.38	1.800	1.440	1.267	1.037	0.677	0.353
1.75V/cell	20.59	15.19	11.02	7.42	4.31	2.45	1.872	1.512	1.296	1.051	0.691	0.360
1.70V/cell	22.46	16.13	11.66	7.70	4.39	2.52	1.922	1.534	1.318	1.073	0.704	0.366
1.65V/cell	24.70	17.50	12.67	8.14	4.39	2.53	1.944	1.552	1.332	1.080	0.713	0.367
1.60V/cell	26.78	18.36	13.32	8.50	4.46	2.59	1.958	1.562	1.346	1.102	0.720	0.374

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	260.32	191.64	153.58	91.32	52.41	28.39	20.982	17.342	14.472	12.158	8.083	4.234
1.75V/cell	301.28	207.58	160.66	94.82	53.97	28.94	21.406	17.650	14.688	12.343	8.208	4.320
1.70V/cell	320.11	215.09	165.59	96.98	54.95	29.44	21.600	17.959	14.770	12.590	8.251	4.342
1.65V/cell	334.50	220.23	169.39	98.32	55.60	29.75	21.756	18.144	14.822	12.713	8.268	4.350
1.60V/cell	345.60	224.64	172.80	99.36	56.16	30.05	21.876	18.329	14.861	12.837	8.268	4.350