Deep Cycle Long Life AGM Battery VTD12-300

VALIANT VTD series deep cycle long life VRLA AGM battery uses a different chemistry additives in the positive plates and special AGM separators, The DC series features 70% higher cyclic life with 15 years of float life when compared to the standard Duration range. This series is highly suited for very unreliable power applications requiring the batteries to provide extra cyclic life performance such as PV system applications, small RE systems and electric vehicles.

12V 300Ah *AGM Technology* *Deep Cycle*

Applications

- Thicker plate with high Tin low Calcium alloy
- Deep discharge recovery, 1200cycle @ 50% DOD
- 2years full warranty in most applications
- Longer Service Life, in both Float or Cycling applications
- High Power Density

General Features

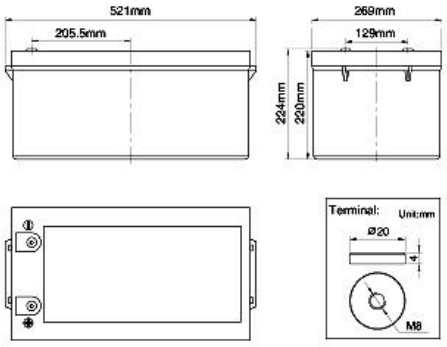
- Off-grid solar systems
- RV and marine
- UPS/Telecom
- Electric vehicle
- Golf cart

COMPLIED STANDARDS

IEC 60896-21/22	JIS C8704
YD/T799	ISO9001
GB/T 19638	CE

Dimensions & Weight

Length(mm)	520±1
Width(mm)	269±1
Height(mm)	220±1
Total Height(mm)	226±1
Weight(kg)/lbs	77.0±3%/169.76



Technical Specifications

Nominal Voltage		12V(6 cells per unit)
Design Floating Life @25℃		15 Years
Nominal Capacity @25℃(20 hour rate@15.0A,10.8V)		300Ah
Capacity @25℃	10hour rate (27.0A,10.8V)	270Ah
	5 hour rate (47.8A,10.5V)	239Ah
	1 hour rate (173.3A,9.6V)	173.3Ah
Internal Resistance	Full Charged Battery@25℃	≤2.8mΩ
Ambient Temperature	Discharge	-15℃~45℃
	Charge	-15℃~45℃
	Storage	-15℃~45℃
Max.Discharge Current@25℃		1160A(5s)
Capacity affected by Temperature (10 hour)	40℃	105%
	25℃	100%
	0℃	85%
	-15℃	65%
Self-Discharge@25℃ per Month		3%
Charge (Constant Voltage) @25℃	Standby Use	Initial Charging Current Less than 60A Voltage 13.6-13.8V
	Cycle Use	Initial Charging Current Less than 60A Voltage 14.4-14.9V

Battery Discharge Table

Discharge Constant Current per Cell (Amperes at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h	100h
1.60V	468.6	278.9	198.0	173.3	105.8	74.3	50.5	33.4	29.7	16.2	3.6
1.65V	460.1	273.8	194.4	170.1	103.9	72.9	49.6	32.8	29.2	15.8	3.5
1.70V	451.7	268.8	190.9	167.0	101.9	71.5	48.7	32.1	28.6	15.6	3.5
1.75V	443.1	263.7	187.2	163.9	100.1	70.2	47.8	31.5	28.0	15.2	3.4
1.80V	426.1	253.5	180.0	157.5	96.1	67.5	45.9	30.4	27.0	15.0	3.3

Discharge Constant Power per Cell (Watts at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h	100h
1.60V	902.2	536.8	381.2	333.5	203.7	143.0	97.2	64.2	57.1	31.2	6.9
1.65V	885.8	527.1	374.2	327.5	199.9	140.3	95.4	63.0	56.1	30.6	6.8
1.70V	869.4	517.3	367.3	321.4	196.2	137.8	93.7	61.9	55.0	30.0	6.7
1.75V	852.9	507.5	360.4	315.4	192.5	135.1	91.9	60.7	54.0	29.4	6.5
1.80V	820.1	488.0	346.5	303.3	185.1	129.9	88.4	58.4	51.9	28.9	6.4

Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact **VALIANT** for the latest information.

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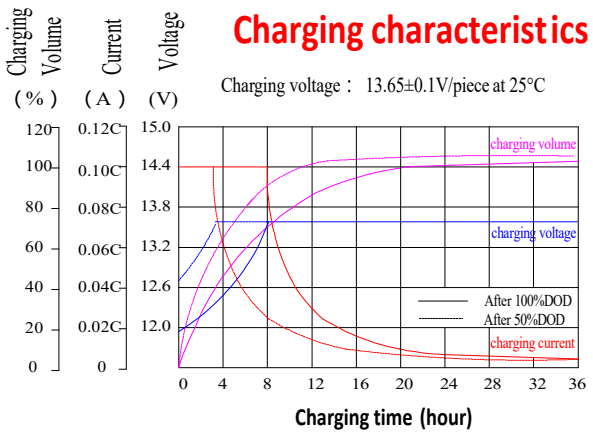
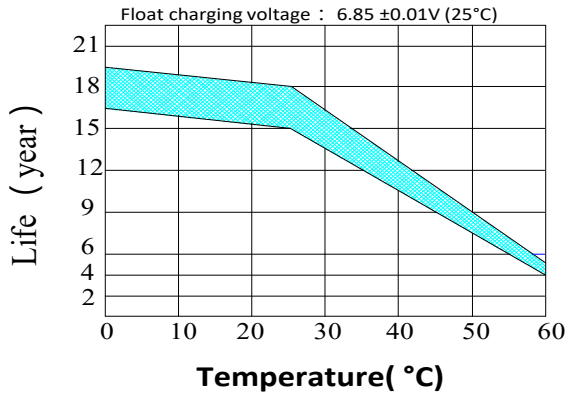
Performance Characteristics

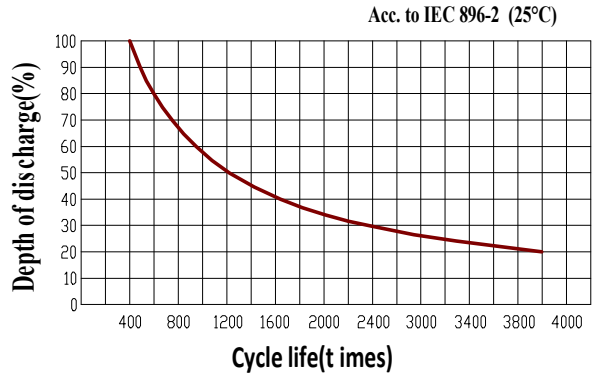
Charging characteristics



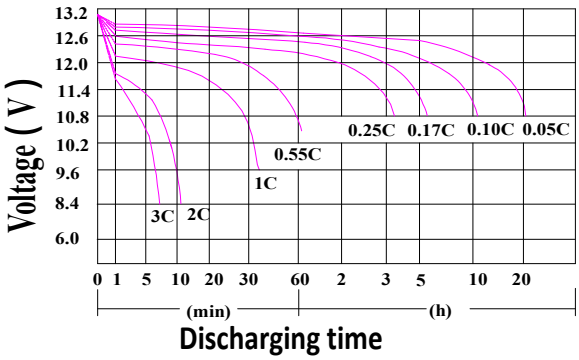
Temperature effect on designed float life



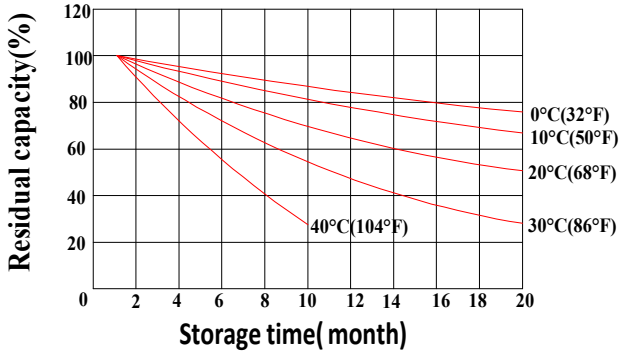
Cycle life vs. Depth of discharge (25°C)



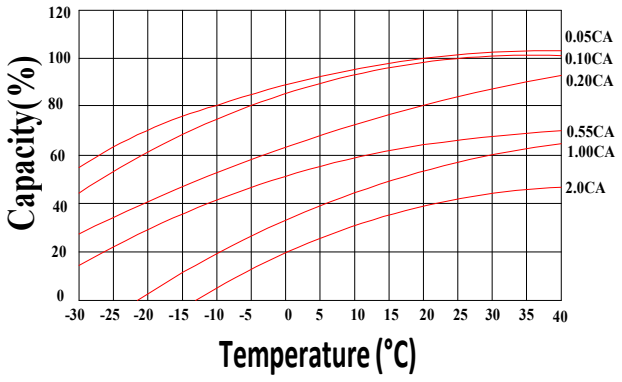
Discharge characteristics (25°C)



Temperature effect on battery self-discharge



Temperature effect on capacity



Battery Construction

Component	Positive plate	Negative plate	Container &Cover	Safety valve	Terminal	Separator	Electrolyte	Pillar seal
Features	Thick high Sn low Ca grid with special paste	Balanced Pb-Ca grid for improved recombinati on efficiency	Fire resistance ABS UL94-V0	Flame Si-Rubber and aging resistancer	Female Copper Insert M8(torgue :10~11N.m	Advanced AGM separator for high pressure cell design	Dilute high purity sulphuric acid	Two layers epoxy resin seal