

VRLA AGM SEALED LEAD ACID Battery

VTA12-18

VALIANT Small SLA VTA series Sealed free maintenance lead acid batteries are designed with AGM technology, high performance pure lead plates and sulfuric acid electrolyte to gain extra power output for common power backup system applications widely used in the fields of UPS, Security and Emergency lighting system. They are sealed and free maintenance whole life, valve regulated type standby AGM battery, also named by **VRLA battery**, **SLA battery**, and **SMF battery**.

12V
Voltage18Ah
CapacityAGM
TechnologyVRLA
Battery

COMPLIED STANDARDS



GENERAL FEATURES

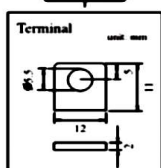
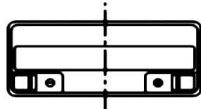
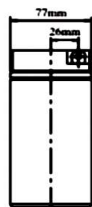
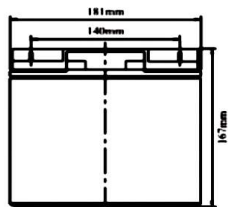
- 30% more cyclic life through innovation at the PAM additives
- Long life expectancy of 10 years in floating condition
- Thick flat plate with high Tin low Calcium alloy
- Excellent deep discharge recovery capability
- Deep cycle performance: up to 700 cycles @50% DOD

APPLICATIONS

- UPS
- Emergency Lighting
- Electric Scooter
- Mobility

DIMENSIONS & WEIGHT

| | |
|-----------------------|----------|
| Length(mm/inch) | 181/7.13 |
| Width(mm/inch) | 77/3.03 |
| Height(mm/inch) | 167/6.58 |
| Total Height(mm/inch) | 167/6.58 |
| Weight(kg/lbs)(±3%) | 5.2/11.5 |



TECHNICAL SPECIFICATIONS

| | | |
|--|----------------------------|---|
| Nominal Voltage | | 12V(6 cells per unit) |
| Design Floating Life @20°C | | 10 Years |
| Nominal Capacity @25°C (20 hour rate@0.90A, 10.8V) | | 18.0Ah |
| Capacity @25°C | 10hour rate (1.71A, 10.8V) | 17.1Ah |
| | 5 hour rate (3.21A, 10.5V) | 16.05Ah |
| | 1 hour rate (11.88A, 9.6V) | 11.88Ah |
| Internal Resistance | Full Charged Battery@25°C | ≤12.0mΩ |
| Ambient Temperature | Discharge | -15°C~45°C |
| | Charge | -15°C~45°C |
| | Storage | -15°C~45°C |
| Max.Discharge Current@25°C | | 108A (5s) |
| Capacity affected by Temperature (10 hour) | 40°C | 105% |
| | 25°C | 100% |
| | 0°C | 85% |
| | -15°C | 65% |
| Self-Discharge@25°C per Month | | 3% |
| Charge (Constant Voltage) @25°C | Standby Use | Initial Charging Current Less than 5.4A Voltage 13.6-13.8V |
| | Cycle Use | Initial Charging Current Less than 5.4A Voltage 14.4-14.9V |

BATTERY DISCHARGE TABEL

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

| F.V/Time | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 8h | 10h | 20h |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|
| 1.60V | 29.80 | 19.80 | 13.86 | 11.88 | 7.43 | 5.09 | 3.39 | 2.28 | 1.88 | 0.99 |
| 1.65V | 29.25 | 19.44 | 13.61 | 11.66 | 7.29 | 5.00 | 3.33 | 2.24 | 1.85 | 0.97 |
| 1.70V | 28.71 | 19.08 | 13.36 | 11.45 | 7.16 | 4.90 | 3.27 | 2.20 | 1.82 | 0.95 |
| 1.75V | 28.17 | 18.72 | 13.10 | 11.23 | 7.02 | 4.81 | 3.21 | 2.16 | 1.78 | 0.94 |
| 1.80V | 27.09 | 18.00 | 12.60 | 10.80 | 6.75 | 4.63 | 3.08 | 2.07 | 1.71 | 0.90 |

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

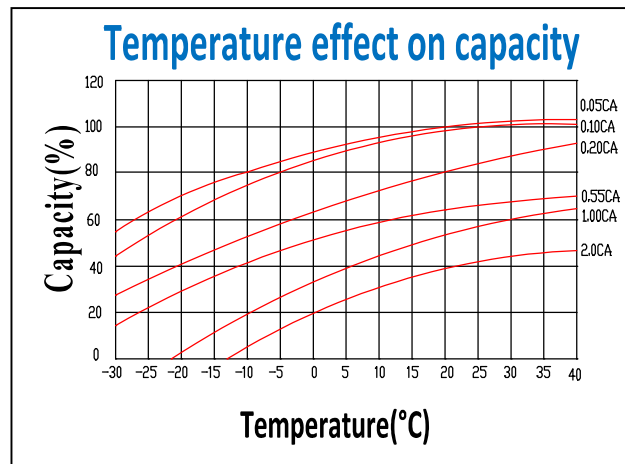
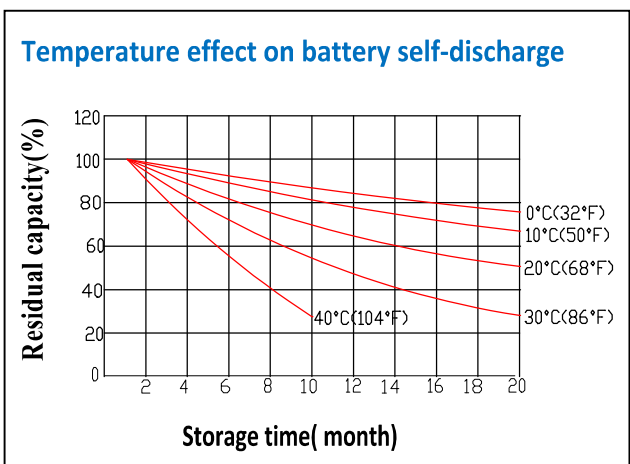
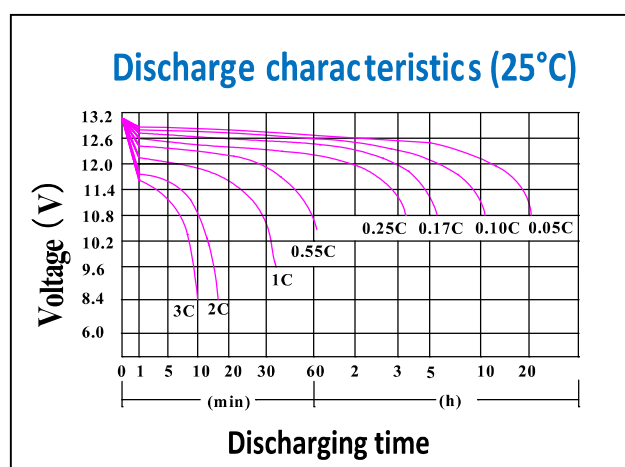
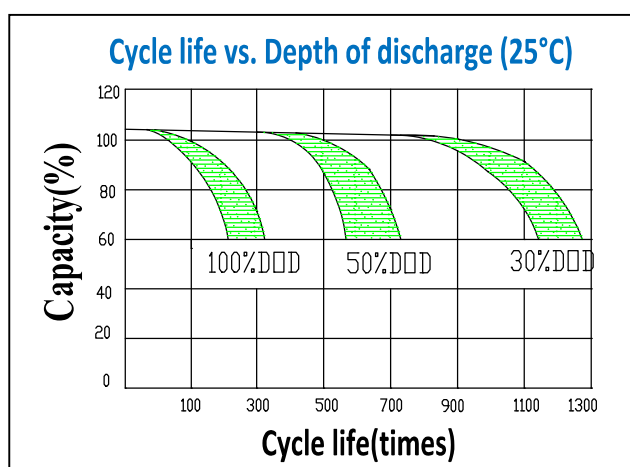
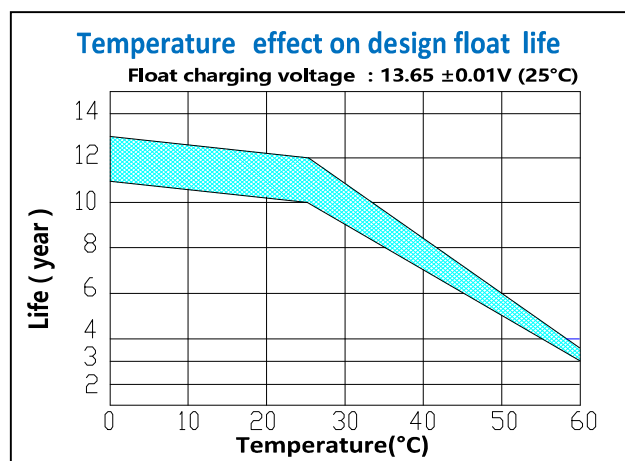
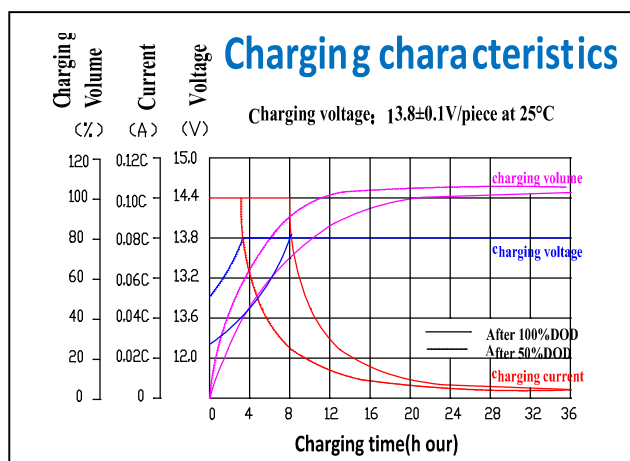
| F.V/Time | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 8h | 10h | 20h |
|----------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 1.60V | 57.36 | 38.12 | 26.68 | 22.87 | 14.29 | 9.80 | 6.53 | 4.39 | 3.63 | 1.91 |
| 1.65V | 56.31 | 37.42 | 26.20 | 22.45 | 14.03 | 9.62 | 6.41 | 4.31 | 3.56 | 1.87 |
| 1.70V | 55.27 | 36.73 | 25.71 | 22.04 | 13.77 | 9.44 | 6.29 | 4.23 | 3.50 | 1.84 |
| 1.75V | 54.23 | 36.04 | 25.23 | 21.62 | 13.51 | 9.26 | 6.17 | 4.15 | 3.43 | 1.80 |
| 1.80V | 52.14 | 34.65 | 24.26 | 20.79 | 12.99 | 8.90 | 5.94 | 3.99 | 3.30 | 1.73 |

Note: The above data is based on average values and can typically be achieved within 3 charge/discharge cycles. Battery designs and specifications are subject to change without notice. Contact **Valiant** for the latest information.

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PERFORMANCE CHARACTERISTICS



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 recombination efficiency | Fire resistance ABS (UL94-V0) | Flame Si-Rubber and aging resistance | Female Copper Insert M5/L1 | Advanced AGM separator for high pressure cell design | Dilute high purity sulfuric acid | Two layers epoxy resin seal |