

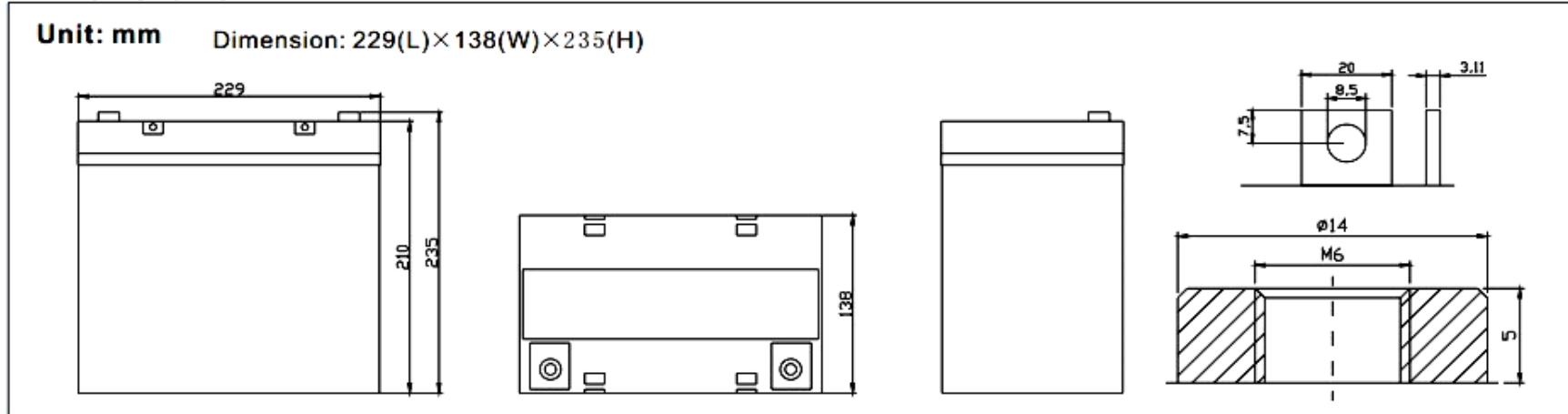
6-EVF-50 is AGM deep cycle battery, with specially designed for frequent cyclic discharge usage. By using strong grid and specific paste plate, it can deliver more than 450 cycles at 100% DOD. It is applicable for electric bicycle, golf cart, electric wheelchair, etc..



**Specification**

|                                    |  |
|------------------------------------|--|
| Cells Per Unit                     | 6  |
| Voltage Per Unit                   | 12V  |
| Capacity                           | 50AH@3hr-rate to 1.75V per cell @ 25°C   |
| Weight                             | Approx. 16.5kg (Tolerance ± 3%)  |
| Max. Discharge Current             | 550A(5sec)   |
| Internal Temperature Range         | Discharge: -20°C~60°C<br>Charge: 0°C~50°C<br>Storage: -20°C~60°C   |
| Normal Operating Temperature Range | 25 ± 5°C   |
| Float Charging Voltage             | 13.6 to 13.8 VDC/unit Average at 25°C  |
| Recommended Maximum Charging       | 16.7A  |
| Current Limit                      |  |
| Equalization and Cycle service     | 14.6 to 14.8 VDC /unit Average at 25°C   |
| Self Discharge                     | YAHENG Vale Regulated Lead Acid(VRLA) Can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at25°C. Please charge batteries before using |
| Terminal                           | Terminal F14/L20   |
| Container Material                 | A.B.S. UL94-HB, Flammability resistance of UL94-V2 can be avail upon request   |

**Dimensions**



**Constant Current Discharge Characteristics: A(25°C)**

| F.V/Time | 5MIN  | 10MIN | 15MIN | 30MIN | 1HR   | 2HR   | 3HR   | 4HR   | 5HR   | 8HR   | 10HR  | 20HR  |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 9.60V    | 234.5 | 172.7 | 134.6 | 82.03 | 45.50 | 27.21 | 18.79 | 15.56 | 14.10 | 9.951 | 8.424 | 4.961 |
| 10.0V    | 227.8 | 164.3 | 131.9 | 80.62 | 45.29 | 27.01 | 18.72 | 15.49 | 14.03 | 9.878 | 8.353 | 4.889 |
| 10.2V    | 221.0 | 158.5 | 129.8 | 79.13 | 44.87 | 26.80 | 18.57 | 15.42 | 13.95 | 9.805 | 8.281 | 4.817 |
| 10.5V    | 198.5 | 146.3 | 123.6 | 78.53 | 44.45 | 26.60 | 18.50 | 15.28 | 13.80 | 9.733 | 8.210 | 4.745 |
| 10.8V    | 179.1 | 133.4 | 113.9 | 77.19 | 43.40 | 26.12 | 18.00 | 14.92 | 13.56 | 9.587 | 8.139 | 4.673 |
| 11.1V    | 152.9 | 119.2 | 102.2 | 72.27 | 41.23 | 24.96 | 17.21 | 14.20 | 13.02 | 9.223 | 8.924 | 4.457 |

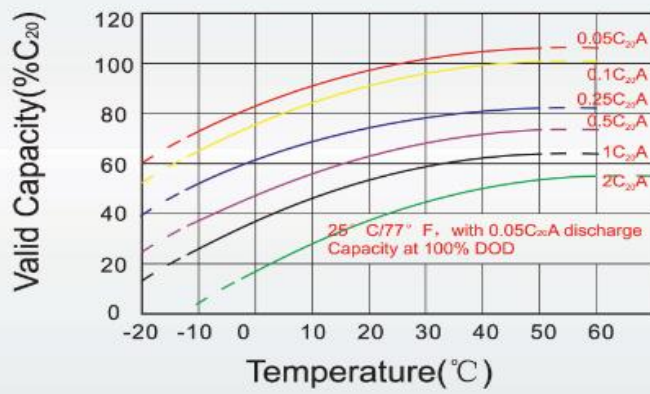
**Constant Power Discharge Characteristics: W(25°C)**

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR   | 2HR   | 3HR   | 4HR   | 5HR   | 8HR   | 10HR  | 20HR  |
|----------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 9.60V    | 2474 | 1839  | 1468  | 920.5 | 525.8 | 320.7 | 223.6 | 185.5 | 156.3 | 106.9 | 88.72 | 47.50 |
| 10.0V    | 2426 | 1783  | 1444  | 909.3 | 524.5 | 319.0 | 223.7 | 185.3 | 155.9 | 106.4 | 88.16 | 46.67 |
| 10.2V    | 2398 | 1736  | 1428  | 902.8 | 520.5 | 317.1 | 222.7 | 184.9 | 155.4 | 105.7 | 87.38 | 45.81 |
| 10.5V    | 2183 | 1616  | 1362  | 896.6 | 515.8 | 314.8 | 221.8 | 183.2 | 153.5 | 104.8 | 86.52 | 44.94 |
| 10.8V    | 1988 | 1490  | 1259  | 882.2 | 506.3 | 310.8 | 215.8 | 179.0 | 150.8 | 103.0 | 85.66 | 44.08 |
| 11.1V    | 1746 | 1347  | 1133  | 830.9 | 484.6 | 299.2 | 206.5 | 170.3 | 144.3 | 98.68 | 83.09 | 41.49 |

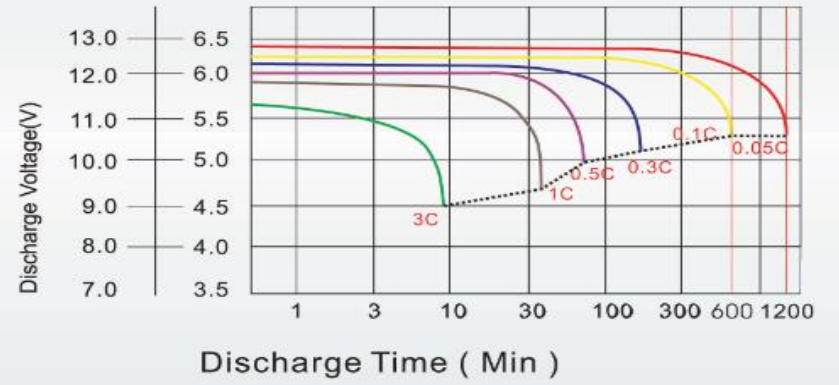
All mentioned values are average values.



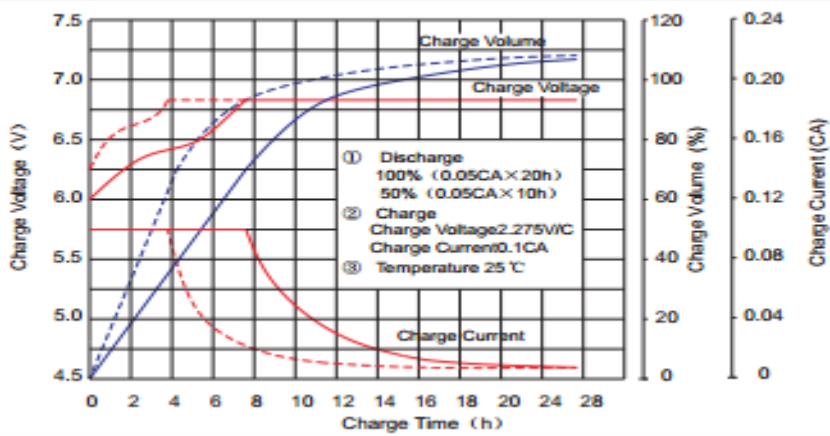
Temperature and Valid Capacity



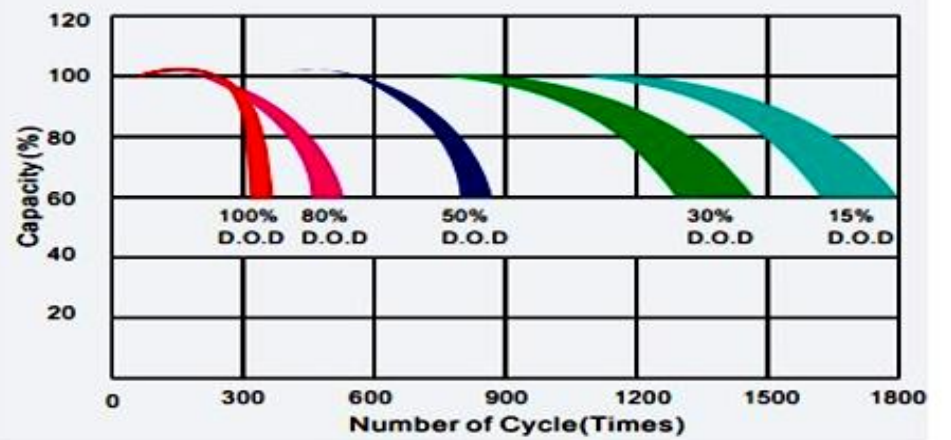
Discharge Characteristics at Various Rates @25°C/77°F



Charge characteristic curve for standby use



Life characteristics of cyclic use



**Discharge Current VS. Discharge Voltage**

|                                |          |                 |        |
|--------------------------------|----------|-----------------|--------|
| Final Discharge Voltage V/cell | 1.75V    | 1.70V           | 1.60V  |
| Discharge Current (A)          | A ≤ 0.2C | 0.2C ≤ A ≤ 1.0C | ≥ 1.0C |

**Charge the batteries at least once every six months, if they are stored at 25°C**

Charging Method:

|                  |   |
|------------------|---|
| Constant Voltage | -0.2C*2h+2.4-2.45V/cell*24h, Max. Current 0.3CA |
| Constant Current | -0.2C*2h+0.1CA*12h                              |
| Fast             | -0.2C*2h+0.3CA*4.0h                             |

**Maintenance & Cautions**

**Float Service**

- ※ Every month, recommend inspection every battery voltage
  - ※ Every three months, recommend equalization charge for one time.
- Equalization charge method:
- Discharge: 100% rate capacity discharge.
- Charge: Max. Current 0.3CA, constant voltage 2.4-2.45V/Cell charge 24h
- ※ Effect of temperature on float charge voltage: -3mV/Cell.
  - ※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.

**Contact us:**

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