

## GENERAL SERIES BATTERY

## 2FM4.0/4Volt 4.0Ah

General Series VRLA batteries are designed with AGM(Absorbent Glass Mat) technology, High performance plates and electrolyte to give extra power output for common power backup system. General Series Batteries are the general purpose batteries with 5 years floating design life at 25°C.

### APPLICATION

- ☆ Emergency Power System
- ☆ Communication equipment
- ☆ Telecommunication systems
- ☆ Uninterruptible power supplies
- ☆ Electric toy car and wheelchairs, etc
- ☆ Power tools
- ☆ Alarm system
- ☆ Marine equipment
- ☆ Medical equipment
- ☆ Fire and Security System

### GENERAL FEATURES

- ☆ Heavy Duty Grid
- ☆ Mechanized assembly
- ☆ Non-spillable construction
- ☆ High Reliability and Stability
- ☆ Sealed and Maintenance-free
- ☆ Long Life and low self-discharge design

### CONSTRUCTION

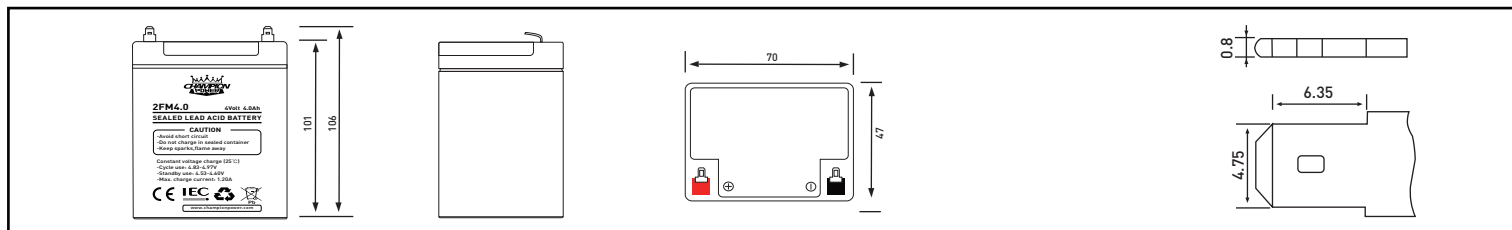
- ☆ Container: ABS(UL94-HB) / Flame Retardant ABS (UL94-V0)
- ☆ Negative: Lead
- ☆ Electrolyte: Sulfuric acid
- ☆ Safety Valve: EPDR
- ☆ Positive: Lead dioxide
- ☆ Separator: Fiber glass
- ☆ Terminal: Copper

### SPECIFICATION

| Battery Model                      | Nominal Voltage                          | 4V                                      |                         |                        |
|------------------------------------|------------------------------------------|-----------------------------------------|-------------------------|------------------------|
|                                    | Rated capacity (20Hour rate)             | 4.0Ah                                   |                         |                        |
|                                    | Cells Per battery                        | 2                                       |                         |                        |
| Dimension                          | Length                                   | Width                                   | Height                  | Total Height           |
|                                    | 70mm                                     | 47mm                                    | 101mm                   | 106mm                  |
| Approx Weight                      | 0.60kg                                   |                                         |                         |                        |
| Internal Resistance                | Full charged at 25°C (77°F): Approx 30mΩ |                                         |                         |                        |
| Max.discharge current              | 60A(5s)                                  |                                         |                         |                        |
| Floating design life @ 25°C (77°F) | 5 years                                  |                                         |                         |                        |
| Capacity @ 25°C (77°F)             | 20Hour rate(0.20A/3.5V)                  | 10Hour rate(0.36A/3.5V)                 | 5Hour rate(0.58A/3.5V)  | 1Hour rate(1.32A/3.5V) |
|                                    | 4.0Ah                                    | 3.60Ah                                  | 2.89Ah                  | 1.32Ah                 |
| Capacity affected by Temp(20 HR)   | 40°C (104°F)                             | 25°C (77°F)                             | 0°C (32°F)              | -15°C (5°F)            |
|                                    | 102%                                     | 100%                                    | 85%                     | 65%                    |
| Self Discharge @ 25°C (77°F)       | After 3 months storage                   | After 6 months storage                  | After 12 months storage |                        |
|                                    | 91%                                      | 82%                                     | 64%                     |                        |
| Charge method @ 25°C (77°F)        | Cycle Use                                | 4.83-4.97V (Max. charge current: 1.20A) |                         |                        |
|                                    | Float Use                                | 4.53-4.60V                              |                         |                        |

### OUTER DIMENSION (mm)

### TERMINAL TYPE (mm)

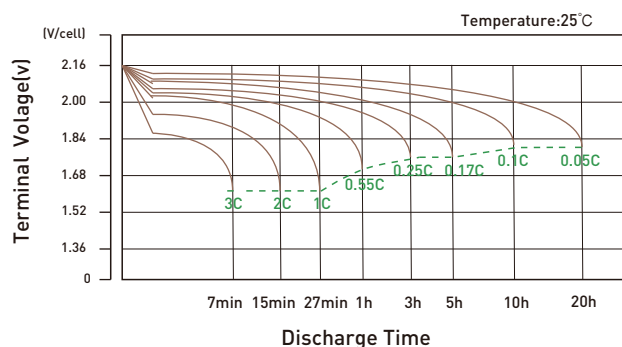


### CONSTANT CURRENT(AMP) AND CONSTANT POWER(WATT) DISCHARGE TABLE AT 25°C (77°F)

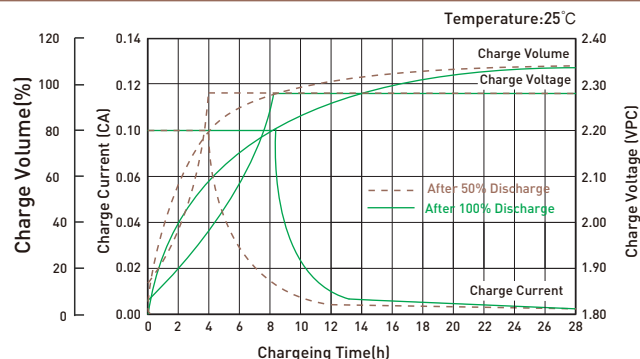
| F.V / TIME |   | 5min  | 10min | 15min | 30min | 1h   | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|------------|---|-------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 3.20V      | A | 14.40 | 9.40  | 7.00  | 4.60  | 2.40 | 1.40 | 1.04 | 0.83 | 0.70 | 0.46 | 0.38 | 0.20 |
|            | W | 50.88 | 33.28 | 24.97 | 16.56 | 8.72 | 5.09 | 3.81 | 3.03 | 2.57 | 1.71 | 1.41 | 0.75 |
| 3.40V      | A | 13.20 | 8.83  | 6.43  | 4.37  | 2.48 | 1.34 | 1.02 | 0.80 | 0.69 | 0.46 | 0.37 | 0.20 |
|            | W | 47.96 | 32.68 | 23.91 | 16.38 | 9.30 | 5.06 | 3.84 | 3.03 | 2.60 | 1.73 | 1.41 | 0.76 |
| 3.50V      | A | 12.24 | 8.44  | 6.00  | 4.23  | 2.40 | 1.32 | 1.00 | 0.76 | 0.68 | 0.45 | 0.37 | 0.20 |
|            | W | 44.89 | 31.65 | 22.60 | 16.09 | 9.12 | 5.03 | 3.82 | 2.91 | 2.61 | 1.73 | 1.41 | 0.77 |
| 3.60V      | A | 11.15 | 8.07  | 5.60  | 4.04  | 2.32 | 1.28 | 0.98 | 0.75 | 0.65 | 0.44 | 0.36 | 0.20 |
|            | W | 61.31 | 30.65 | 21.37 | 15.55 | 8.93 | 4.94 | 3.79 | 2.90 | 2.52 | 1.70 | 1.39 | 0.76 |
| 3.70V      | A | 9.64  | 7.60  | 5.20  | 3.76  | 2.20 | 1.25 | 0.94 | 0.73 | 0.62 | 0.43 | 0.35 | 0.19 |
|            | W | 36.31 | 29.26 | 20.11 | 14.66 | 8.58 | 4.88 | 3.68 | 2.88 | 2.45 | 1.68 | 1.38 | 0.75 |

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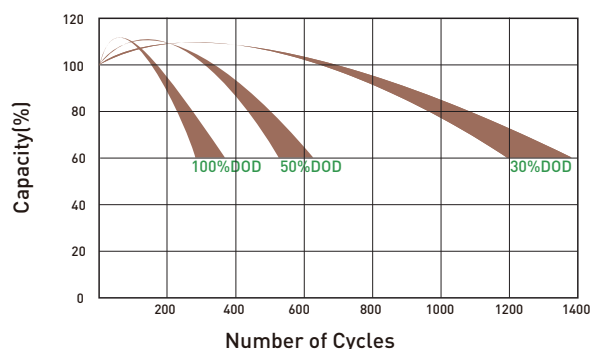
Discharge characteristic Curve



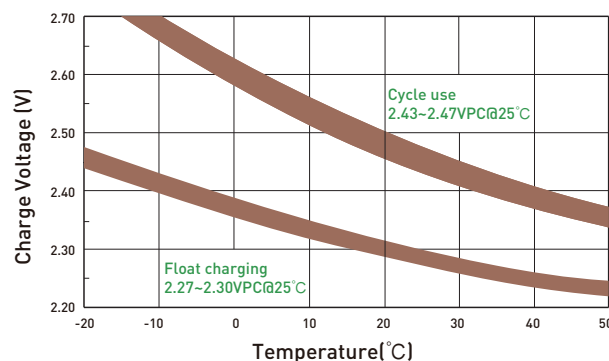
Charge Characteristic Curve For Standby Use



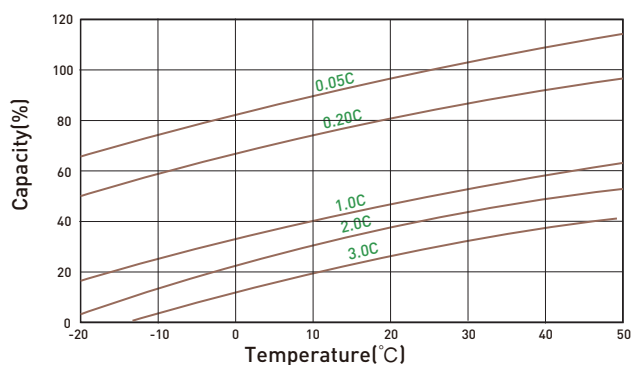
Cycle service life in relation to depth of discharge



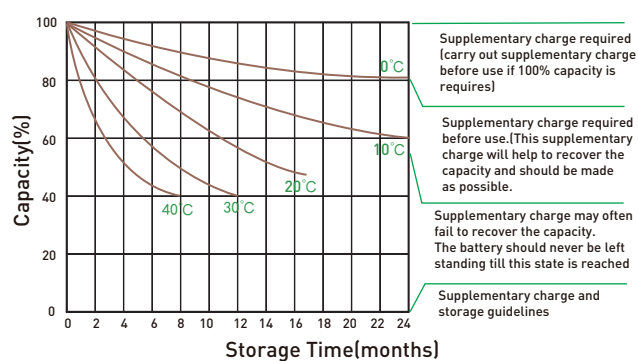
Relationship Between Charging Voltage And Temperature



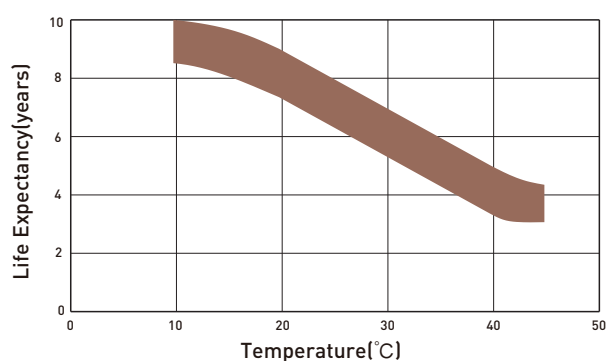
Temperature Effects On Capacity



Storage Characteristics



Effect Of emperature On Long Term Life



Charge Characteristic Curve For Standby Use

