

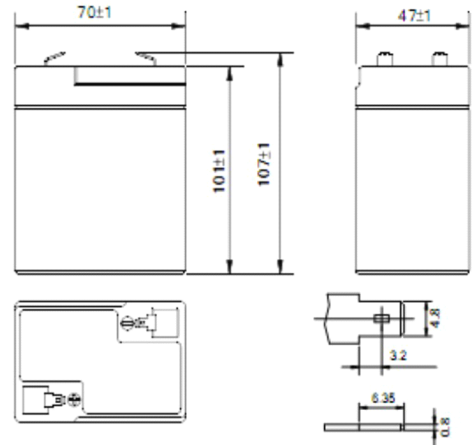
## 3-FM-4.5AH Valve-regulated Lead Acid Battery Specification

Nominal voltages of this series are 6V and 12V. And the capacity ranges from 1.2Ah to 65Ah. Their typical applications include: emergency lighting systems, portable instruments, small UPS, safety & alarm systems, electric tools and toys, etc.

### Performance Characteristics

#### 1. Dimension and weight

Length .....70mm  
 Width .....47mm  
 Height .....101mm  
 Total Height.....107mm  
 Reference Weight .....0.7kg



#### 2. Functional Parameter

Rated Voltage .....6V  
 Numbers of cells.....3  
 Designed Life .....3Years

#### 3. Rated Capacity at 77°F (25°C)

20 hr rate (0.225A, 5.25V) ....4.5Ah  
 10 hr rate (0.38A, 5.25V) .....3.8Ah  
 5 hr rate (0.68A, 5.25V) .....3.4Ah  
 1 hr rate (2.4A, 4.8V) .....2.4Ah

#### 4. Inner Resistance

A fully charged battery at 77°F (25°C) ..22mΩ

#### 5. Self-discharge

3% of the capacity per month at 25°C.

#### 6. Environment Temperature requirements

Discharge Temperature .....-20~60°C  
 Charge Temperature .....-10~60°C  
 Storage Temperature .....-20~60°C

#### 7. Charge Method: constant-voltage charging at 77°F (25°C)

Cyclic use .....7.2~7.5V  
 Initial current .....1.5A  
 Temperature Compensation.....-15mV/°C  
 Float Use .....6.8~6.9V  
 Temperature Compensation .....-10mV/°C



## 3-FM-4.5Ah Valve-regulated Lead Acid Battery Specification

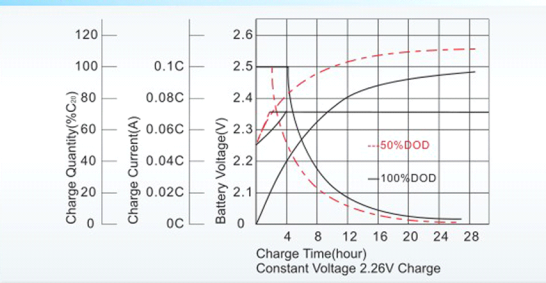
### Constant-current discharge parameter Unit: A (25°C)

End Point Vol./Cell	5MIN	10MIN	15MIN	30MIN	1H	3H	5H	10H	20H
1.60V	16.78	13.51	10.02	5.21	3	1.36	0.94	0.5	0.26
1.65V	15.85	12.92	9.55	5	2.85	1.31	0.9	0.49	0.26
1.70V	15.02	12.23	9.12	4.76	2.73	1.27	0.88	0.48	0.25
1.75V	14.16	11.49	8.61	4.52	2.65	1.25	0.85	0.475	0.25
1.80V	13.08	10.47	8.15	4.28	2.58	1.19	0.82	0.46	0.25

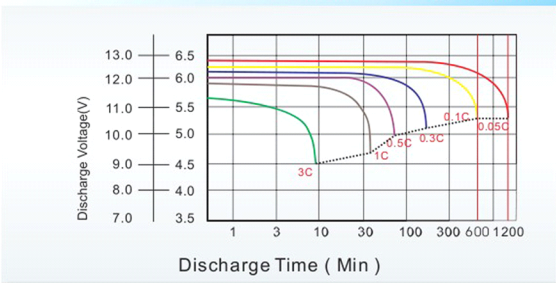
### Constant-current discharge parameter Unit: W (25°C)

End Point Vol./Cell	5MIN	10MIN	15MIN	30MIN	45MIN	1H	2H	3H	5H
1.60V	33	23	18	10.3	7.7	6.34	3.61	2.6	1.75
1.65V	31	21.7	17	9.8	7.3	6.07	3.5	2.54	1.71
1.70V	28.9	20.3	16	9.3	6.9	5.79	3.39	2.48	1.68
1.75V	26.9	19	15.1	8.7	6.6	5.5	3.26	2.4	1.64
1.80V	25	17.6	14.1	8.2	6.2	5.21	3.12	2.32	1.6

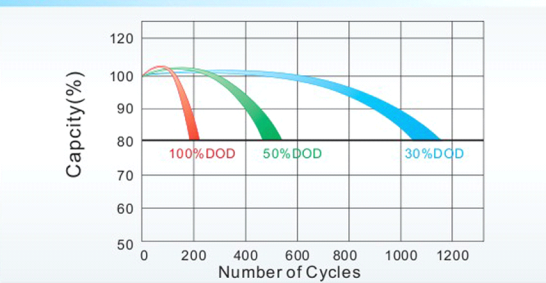
Charge Characteristics for Float Use @ 25°C/77°F



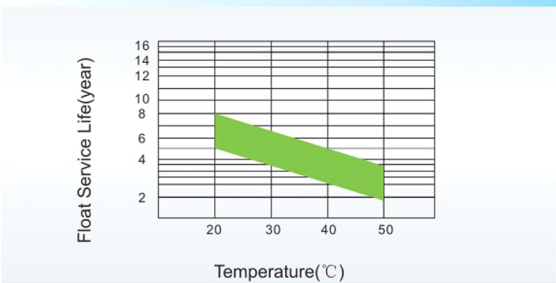
Discharge Characteristics at Various Rates @ 25°C/77°F



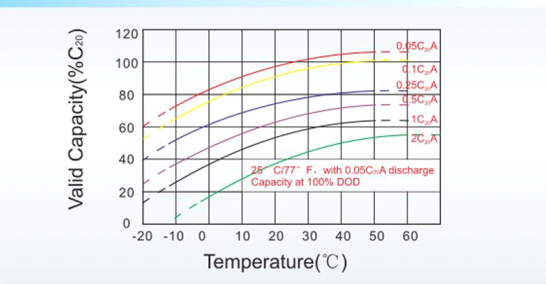
Cycle Life in Relation to Depth of Discharge



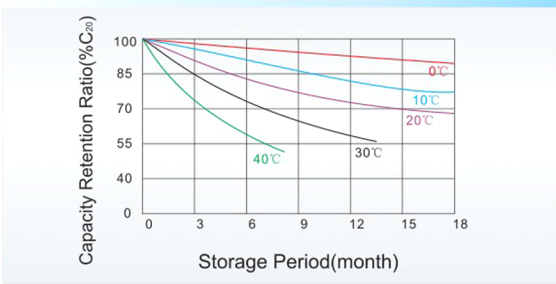
Float Service Life



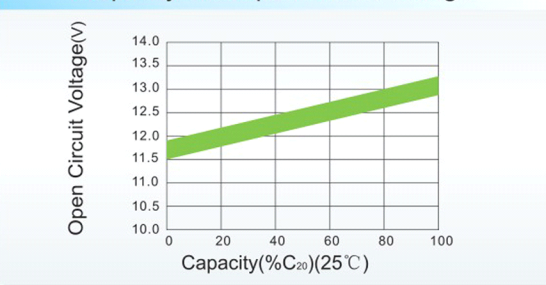
Temperature and Valid Capacity



Self Discharge Characteristics



Capacity and Open Circuit Voltage



Relationship between Charging Voltage and Temperature

