

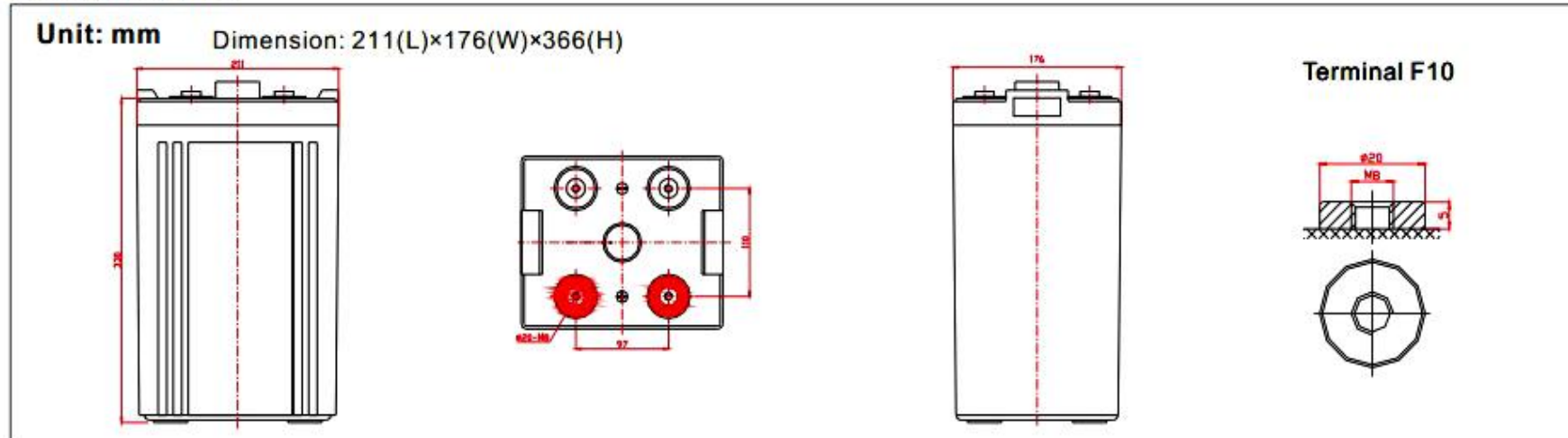
GFM450 is a general purpose battery with 18 years floating design life. With heavy duty grid, thick plates, special additives, GFM series battery maintain very long life time and stable performance.



**Specification**

Cells Per Unit	1
Voltage Per Unit	2
Capacity	450AH@10hr-rate to 1.75V per cell @ 25°C
Weight	Approx.28kg (Tolerance ± 3%)
Max. Discharge Current	2250A(5sec)
Internal Resistance	Approx. 0.72mΩ
Internal Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25 ± 5°C
Float Charging Voltage	2.27 to 2.3 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	90A
Equalization and Cycle service	2.43 to 2.47 VDC /unit Average at 25°C
Self Discharge	<b>YAHENG</b> Vale Regulated Lead Acid(VRLA) Can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using .
Terminal	Thread insert & Bolt (F10)
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	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	611.0	450.6	290.0	172.4	128.4	102.3	86.18	72.38	58.43	48.84
1.65V	581.0	432.6	277.4	166.1	123.0	98.75	82.59	70.64	55.81	47.99
1.70V	541.7	407.8	272.0	163.4	120.3	97.85	81.70	68.90	54.94	47.12
1.75V	480.9	367.0	250.5	154.4	114.0	92.47	78.10	65.41	53.20	46.25
1.80V	414.0	334.3	236.1	147.2	109.5	91.57	75.41	64.54	52.33	45.38
1.85V	350.1	301.0	218.2	139.2	104.1	84.39	71.82	61.05	49.71	42.31

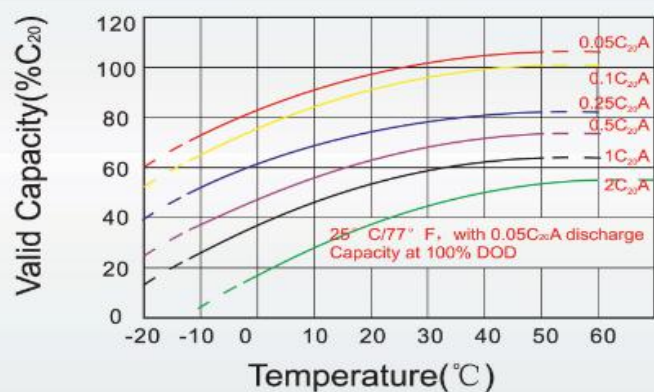
**Constant Power Discharge Characteristics: W(25°C)**

F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	1070	821.2	531.0	319.3	239.3	192.3	162.9	139.7	111.2	94.29
1.65V	1042	816.8	529.1	314.7	234.5	189.5	161.0	137.9	110.2	93.40
1.70V	984.0	773.0	519.5	310.1	231.0	188.7	159.6	134.7	108.6	91.94
1.75V	876.5	696.6	478.5	293.5	222.7	179.3	152.9	128.0	105.1	90.48
1.80V	785.6	635.6	451.2	280.3	213.5	178.4	147.9	126.5	103.4	87.25
1.85V	646.9	573.0	417.1	265.4	203.4	165.3	141.2	119.9	98.29	84.01

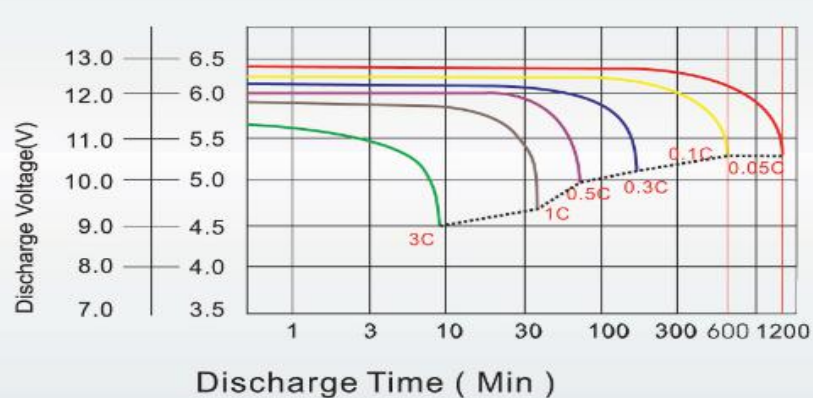
All mentioned values are average values.



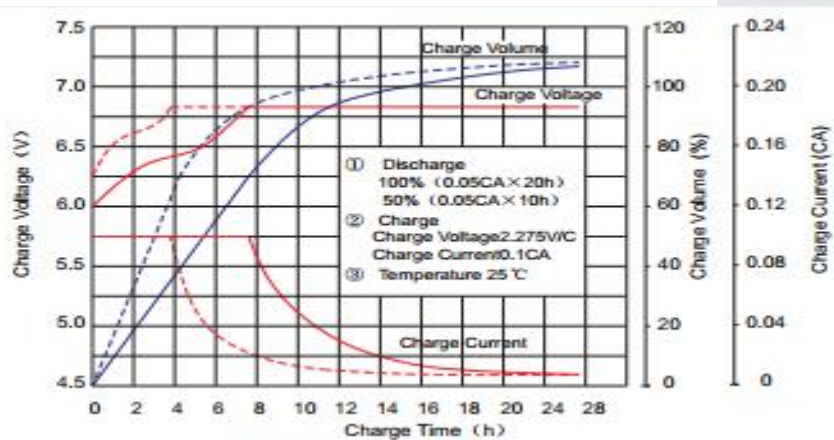
Temperature and Valid Capacity



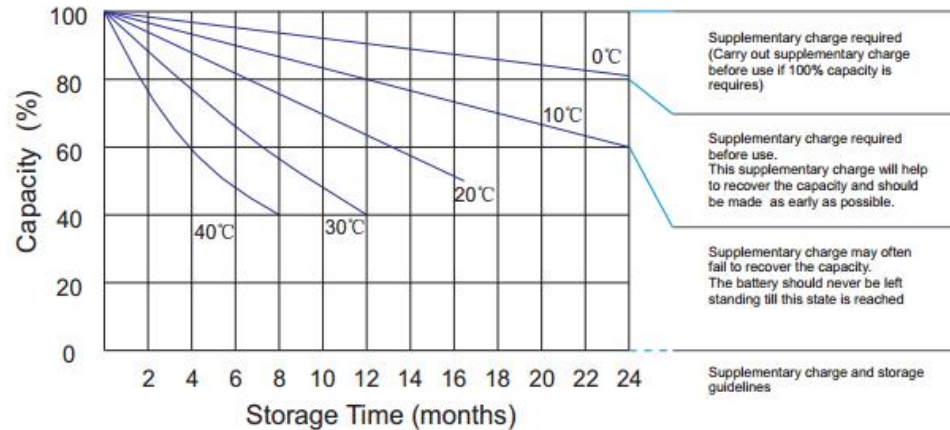
Discharge Characteristics at Various Rates @25°C/77°F



Charge characteristic curve for standby use



Storage characteristic



**Discharge Current VS. Discharge Voltage**

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	$A \leq 0.2C$	$0.2C \leq A \leq 1.0C$	$\geq 1.0C$

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

Charging Method:

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

**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:**

Fujian Yaheng Power Technology Group Co.,Ltd

Add: Yaheng Industrial Park, Jianyang District, Nanping City, Fujian Province, China

Website:[www.yahengpower.com](http://www.yahengpower.com) Email:[liwendu@yahengpower.com](mailto:liwendu@yahengpower.com)

Tel:+86-599-5837578 Fax:+86-599-5823986

Yaheng Power Shenzhen office:

Rm D703, UNIS, Langshan Rd. 13, North high-tech industrial park, Nanshan District, Shenzhen City

Tel:+86-755-86962682 Fax:+86-755-26905060 Email:[sales01@yahengpower.com](mailto:sales01@yahengpower.com)