



# FUJIAN YAHENG POWER TECHNOLOGY GROUP CO.,LTD

## GEL GFM450D 2V450AH

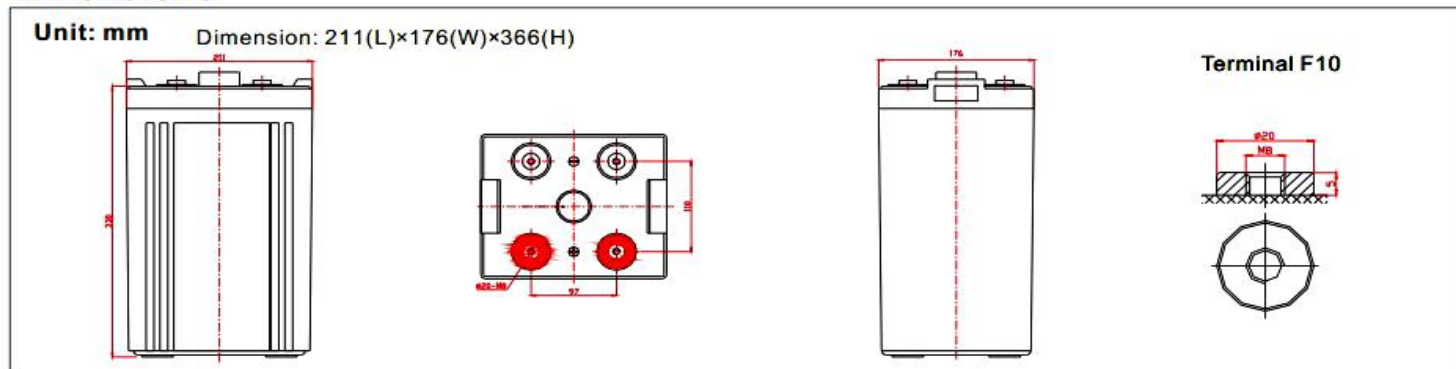
GFM450D is a deep cycle purpose GEL battery . with specially designed for frequent cyclic discharge usage. By using strong grid and specific paste plate, the battery offers 50% more cyclic life than the standby series. It is applicable for power tools, solar & wind energy, telecom system, etc..



### Specification

Cells Per Unit	1
Voltage Per Unit	2V
Capacity	450AH@10hr-rate to 1.75V per cell @ 25°C
Weight	Approx. 28.0kg (Tolerance±3%)
Max. Discharge Current	2250A(5sec)
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	135.0A
Equalization and Cycle service	2.4 to 2.47 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 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.

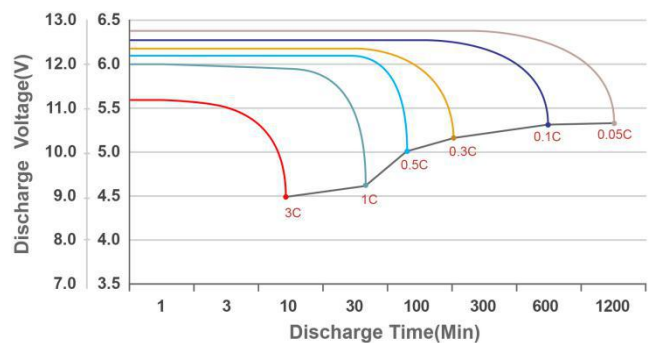


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## Temperature and Valid Capacity



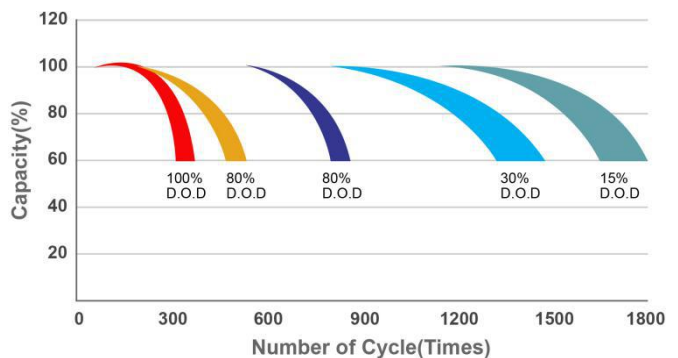
## Discharge Characteristics at Various Rates @25°C/77



## Charge characteristic curve for standby use



## Life characteristics of cyclic use



## Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.75V	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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