

Overview

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special oneway valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.



Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

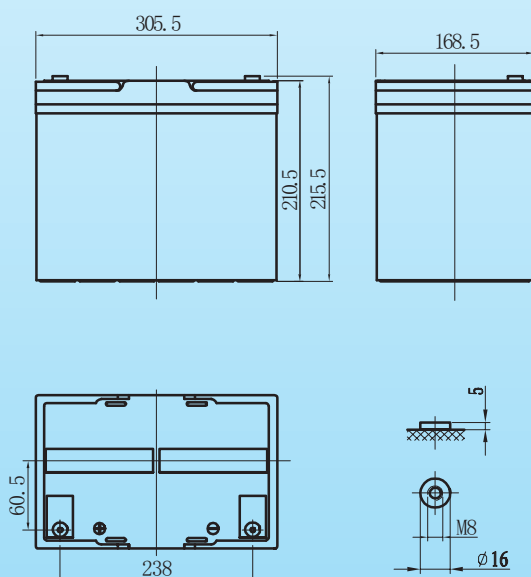
General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.
- Case and cover available in both standard and flame retardant ABS.

Dimensions and Weight

Length(mm / inch)	305.5/12.0
Width(mm / inch)	168.5/6.63
Height(mm / inch)	210.5/8.29
Total Height(mm / inch)	215.5/8.48
Approx. Weight(Kg / lbs)	26.5/ 58.4

* Weight deviation: $\pm 5\%$



Battery Specification

Performance Characteristics	
Nominal Voltage	12V
Number of cell	6
Design Life	10 years
Nominal Capacity 77°F(25°C)	
10 hour rate (9.0A, 10.8V)	90Ah
5 hour rate (15.4A, 10.5V)	77.0Ah
1 hour rate (53.5A, 9.6V)	53.5Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	≤ 5.7 mOhms
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operating Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max. Discharge Current 77°F(25°C)	900A(5s)
Short Circuit Current	1800A
Charge Methods: Constant Voltage Charge 77°F(25°C)	
Cycle use	2.40~2.45VPC
Maximum charging current	27.0A
Temperature compensation	-30mV/°C
Standby use	2.20~2.28VPC
Temperature compensation	-20mV/°C

Discharge Constant Current (Amperes at 77°F25°C)

End Point								
Volts/Cell	10min	15min	30min	45min	1h	3h	5h	10h
1.60V	207	162	92.0	66.5	53.5	24.0	16.2	9.20
1.65V	195	154	89.3	65.1	52.5	23.5	16.0	9.15
1.70V	183	145	86.4	63.6	51.3	23.0	15.7	9.10
1.75V	170	136	83.2	62.0	50.0	22.5	15.4	9.05
1.80V	155	126	80.0	60.0	48.5	21.8	15.0	9.00

Discharge Constant Power (Watts at 77°F25°C)

End Point							
Volts/Cell	10min	15min	30min	45min	1h	2h	5h
1.60V	375	305	172	125	103	62.0	31.5
1.65V	363	289	168	123	101	61.0	31.2
1.70V	350	281	163	121	99	59.7	30.9
1.75V	335	271	158	118	97	58.2	30.5
1.80V	315	258	152	115	95	56.6	30.0

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values. All data shall be changed without notice, Vision reserves the right to explain and update the information contained hereinto.



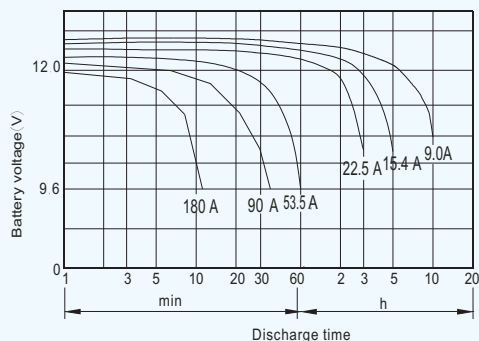
VISION GROUP

Shenzhen Center Power
Tech.Co.Ltd.,

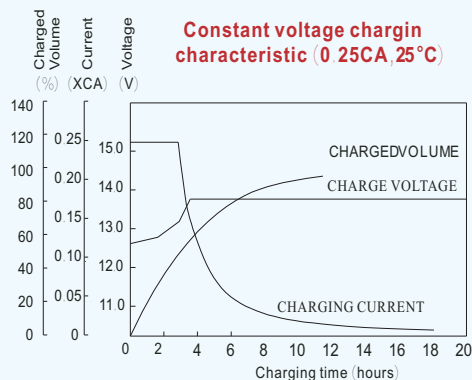
6FM90E-X

12V 90Ah(10hr)

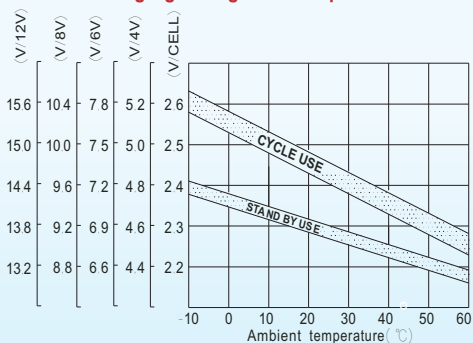
Discharge characteristic (25°C)



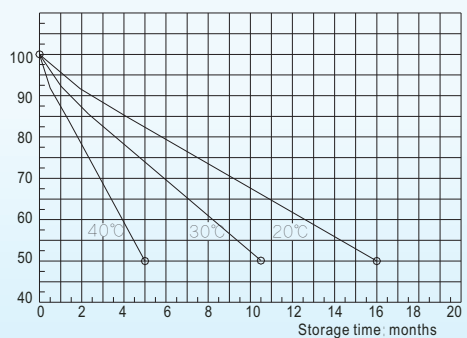
Constant voltage charge
characteristic (0.25CA, 25°C)



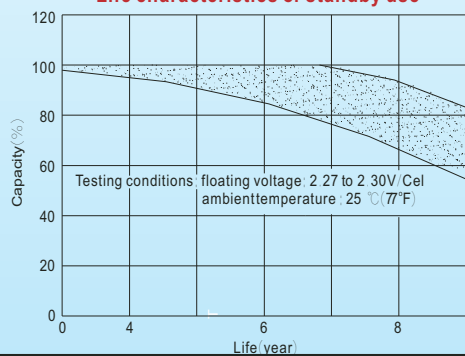
Relationship between
charging voltage and temperature



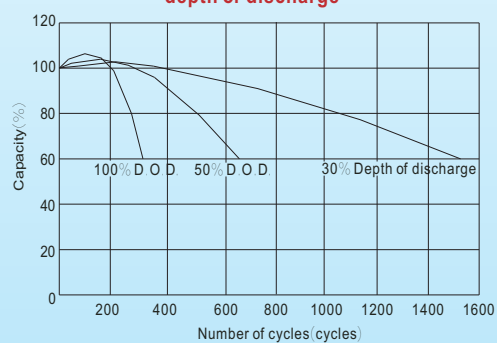
Self-discharge characteristic



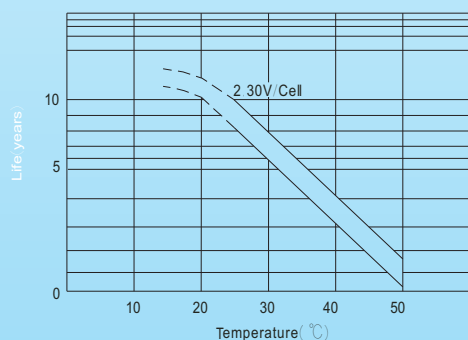
Life characteristics of standby use



Cycle service life in relation to
depth of discharge



Temperature effects on float life



Temperature effects on capacity

