



Marstech

GFM Series - Battery

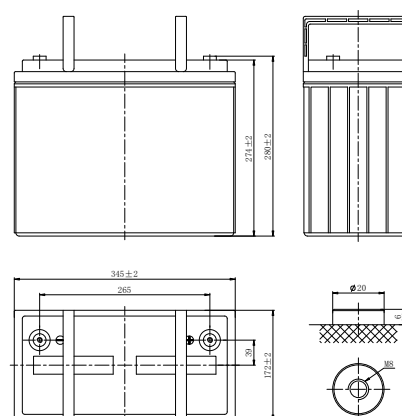
6GFM-135L (12V135Ah)

Specifications of 6GFM-135L

Rated Voltage	12V	
Nominal Capacity	C ₁₀ , 1.80V/cell	135Ah
Dimension	Length	345±3mm(13.6inches)
	Width	172±2mm(6.77 inches)
	Container Height	274±3mm(10.79inches)
	Total Height	280±3mm(11.02inches)
Approx Weight	41.2kg (90.8 lbs)	
Terminal	T11	
Container Material	ABS	
Rated Capacity(25°C)	140.4 Ah	C20(7.02A, 1.80V/cell)
	135.0 Ah	C10(13.5A, 1.80V/cell)
	116 Ah	C5(23.2A, 1.75V/cell)
	105.3 Ah	C3(35.1A, 1.75V/cell)
	82.4 Ah	C1(82.4A, 1.60V/cell)
Max. Discharge Current	1350A (5s)	
Internal Resistance(25°C)	Approx 3.2mΩ	
Operating Temp. Range	Discharge	-20 ~ 50°C (-4 ~ 122°F)
	Charge	-20 ~ 40°C (-4 ~ 104°F)
	Storage	-15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Standby Use	Initial Charging Current less than 40.5A Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Cycle Use	Initial Charging Current less than 40.5A Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	65%
	0°C (32°F)	86%
Self Discharge	GFMseries batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



Layout



Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	181.7	154.5	129.2	102.7	77.7	63.6	40.5	32.0	26.2	21.1	18.4	14.9	12.7	6.95
1.80V/cell	232.1	186.7	152.7	121.2	90.4	71.3	44.2	34.5	28.0	22.7	19.7	15.8	13.5	7.02
1.75V/cell	255.0	203.9	164.3	125.8	93.8	74.6	45.9	35.1	28.6	23.2	20.3	16.1	13.6	7.09
1.70V/cell	278.0	217.7	172.7	130.9	97.6	76.9	47.7	36.1	29.3	23.8	20.7	16.3	13.8	7.22
1.65V/cell	300.0	231.4	183.5	138.1	100.0	79.5	49.0	37.6	30.3	24.5	21.1	16.6	14.1	7.32
1.60V/cell	325.7	247.5	195.4	145.8	104.2	82.4	50.7	38.8	31.3	25.3	21.6	16.7	14.2	7.36

Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	335.6	288.3	243.6	195.7	149.4	122.8	78.7	62.5	51.2	41.4	36.1	29.5	25.2	13.8
1.80V/cell	423.7	343.6	283.7	227.4	172.4	136.8	85.3	66.9	54.4	44.2	38.6	31.1	26.7	13.9
1.75V/cell	458.1	370.7	302.2	234.2	177.2	142.4	88.2	67.8	55.4	45.2	39.5	31.6	26.9	14.0
1.70V/cell	488.0	390.3	315.3	242.4	183.6	146.5	91.5	69.6	56.7	46.3	40.3	32.0	27.2	14.3
1.65V/cell	521.8	411.8	332.4	253.6	186.5	150.3	93.5	72.2	58.5	47.4	41.1	32.4	27.7	14.4
1.60V/cell	553.6	433.1	350.2	265.8	193.3	154.8	96.2	74.1	60.1	48.8	41.8	32.7	27.9	14.5



GFM Series-Battery

6GFM-135L (12V135Ah)

Applications

- Telecommunications
- UPS system
- Wind power system
- Engine starting
- Wheelchair, Floor cleaning machines, Golf trolley, Boats

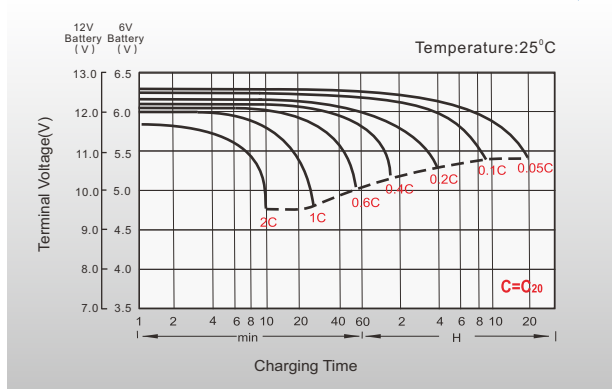
General Features

- Battery design life up to 12 years
- Special plate design guarantees battery floating life more than 1800 times
- High thermal capacity reduce the risk of thermal out of control and drying hard, and the battery can be used in bad environment
- Little water losing, and no electrolyte stratification phenomenon

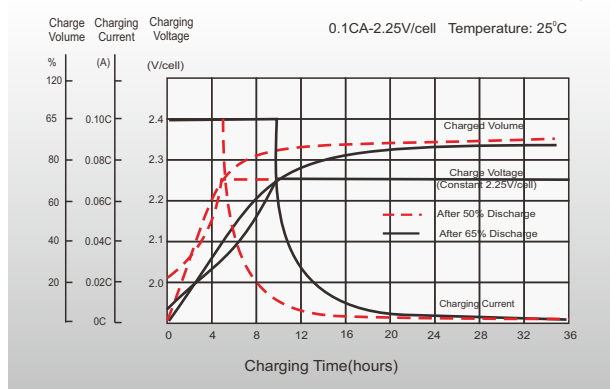
Standards

- IEC 60896 Certified
- Classified as "Long Life"
- ISO 9001 Certified
- Manufactured in standard IATF16949,

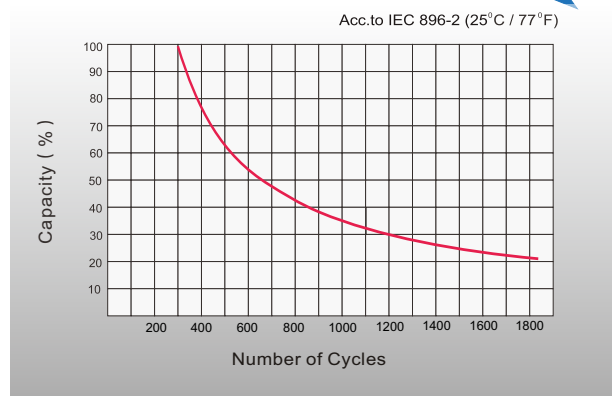
Discharge Characteristics



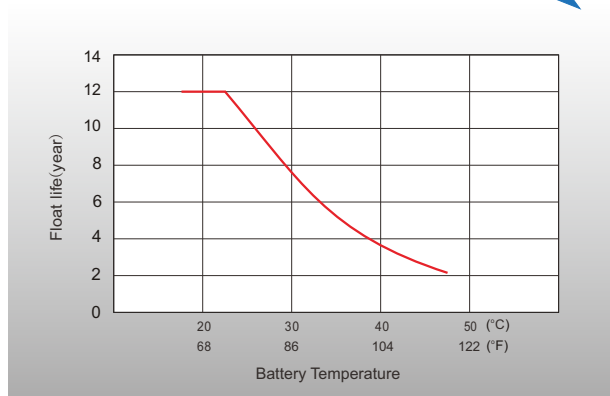
Float Charging Characteristics



Cycle Life in Relation to Depth of Discharge



Effect of Temperature on Long Term Float Life



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