

GFMJ SERIES VRLA BATTERY

The GFMJ series is designed for frequent cyclic charge and discharge applications under extreme environments. By combining the newly developed Nano Gel electrolyte with high density paste, the GFMJ range offers high recharge efficiency at very low charge current. The acid stratification is highly reduced by adding Nano Gel.

This series is suited for energy storage for renewable energies such as PV, wind turbine power systems and CATV.



TECHNICAL SPECIFICATIONS

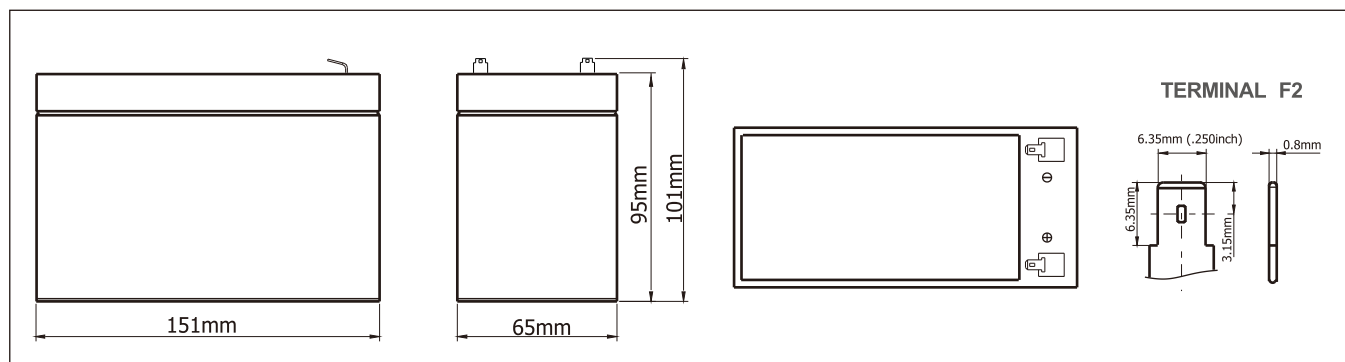
Nominal Voltage (V)	12 (6 cells per unit)
Designed Floating Life (20°C)	5 Years
Nominal Capacity (25°C)	9 Ah @ 20HR-rate (to 1.80Vpc)
Dimension (mm)	L151mm x W65mm x H101mm
Approx. Weight	2.6 kg (5.7 lbs)
Terminal Type	Fasten Tab F2
Internal Resistance	Approx. 0.022 Ohm (fully charged @ 25°C)
Max. Charge Current	2.25A
Max. Discharge Current (5S)	125 A
Short Circuit Current	600 A
Self Discharge	Approx. 2.5% per month @ 20°C
Ambient Temperature	Discharge: -25~65°C Charge: -25~60°C Storage: -25~45°C
Float Charge Voltage	13.5V @25°C (-3mV/ cell/ °C)
Equalize and cycle Use Charge Voltage	14.1-14.4V @25°C
Container Material	ABS (UL94-V0 optional)



Complied standards

- IEC 60896-21/22
- GB/T19638
- IEC61427
- JIS C8704
- BS6290 part 4
- UL1989

BATTERY DIMENSIONS



BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (25°C)									
F.V/Time	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.70V	27.7	17.9	14.7	8.01	5.45	2.46	1.55	0.84	0.48
1.75V	26.8	17.5	14.5	7.88	5.38	2.44	1.53	0.82	0.47
1.80V	23.9	16.7	13.2	7.30	5.04	2.35	1.44	0.81	0.45
1.85V	21.1	15.9	11.8	6.72	4.69	2.26	1.35	0.80	0.43

Constant Power Discharge Characteristics: W/cell (25°C)									
F.V/Time	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.70V	54.2	36.1	27.7	15.3	10.4	4.24	2.67	1.77	0.94
1.75V	52.9	35.6	27.4	15.1	10.4	4.22	2.65	1.76	0.92
1.80V	48.4	35.1	25.4	14.4	9.78	4.10	2.57	1.73	0.90
1.85V	43.9	33.3	23.1	13.5	9.20	3.97	2.49	1.71	0.87

PARAMETERS FOR SOLAR & WIND APPLICATIONS

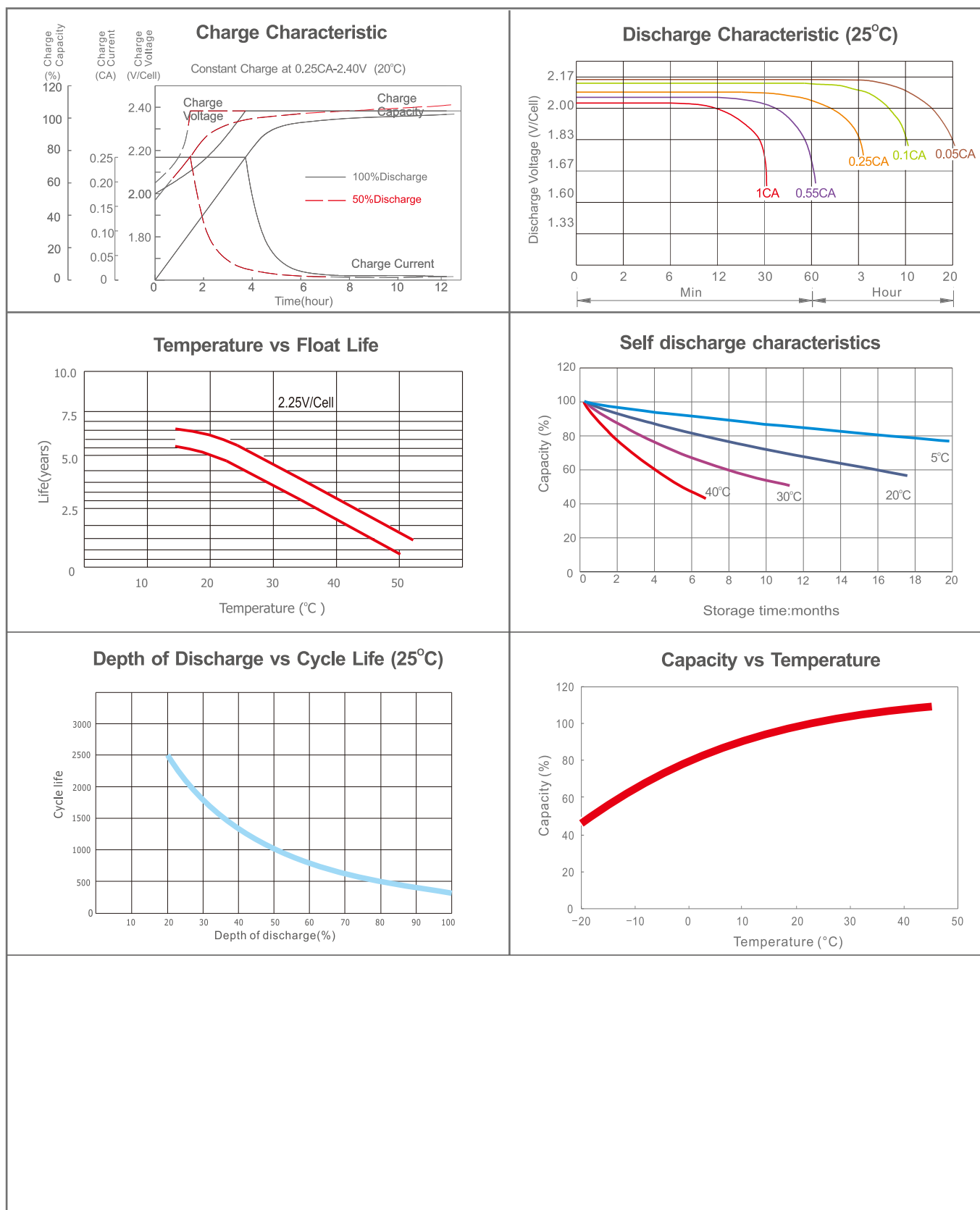
Long time discharge capacity for Solar & Wind applications

Capacity	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)
Solar12-9	9.1	9.2	9.3	9.4	9.6
Final Voltage	1.85V				

Solar & Wind applications parameters settings

Over voltage disconnect:	2.45±0.01V/cell @ 25°C
Regulation/equalize voltage:	2.40±0.01V/cell @ 25°C
Array reconnection voltage:	2.25±0.005V/cell @ 25°C
Float voltage setting:	2.27±0.005V/cell @ 25°C
Low voltage alarm voltage:	1.95±0.005V/cell @ 25°C
Low voltage disconnect:	1.90±0.005V/cell @ 25°C
Load reconnect voltage:	2.09±0.01V/cell @ 25°C
Temp. compensate coefficient:	-3~-5mV/cell/°C

CHARACTERISTICS



FINAL VOLTAGE SETTINGS RECOMMENDED ACCORDING TO THE DISCHARGE CURRENT

Discharge Current I (A)	$I \leq 0.08C$	$0.08C \leq I < 0.2C$	$0.2C \leq I < 0.6C$	$0.6C \leq I < 1.0C$	$I \geq 1.0C$
Final of Voltage	$\geq 1.85V_{pc}$	$\geq 1.80V_{pc}$	$\geq 1.75V_{pc}$	$\geq 1.70V_{pc}$	$\geq 1.60V_{pc}$

HEADQUARTERS AND SUBSIDIARIES

Zhejiang Xupai Power CO.,Ltd
Jiangxi Yatai Electric Co., Ltd.

Xupai Power Co., Ltd.
Tian Wei New Energy Technologies Ltd.,

Jiangxi Hetian New Energy Technology Co., Ltd