

GS 12-9

12V9AH/20HR

GEM Battery

Powered and Powerful



► Technology:

- ✓ Valve Regulated Lead Acid Battery / VRLA
- ✓ Sealed Maintenance Free / SMF
- ✓ AGM technology
- ✓ Complied with IEC60896-21/22 or IEC61056-1/2

► Main Features:

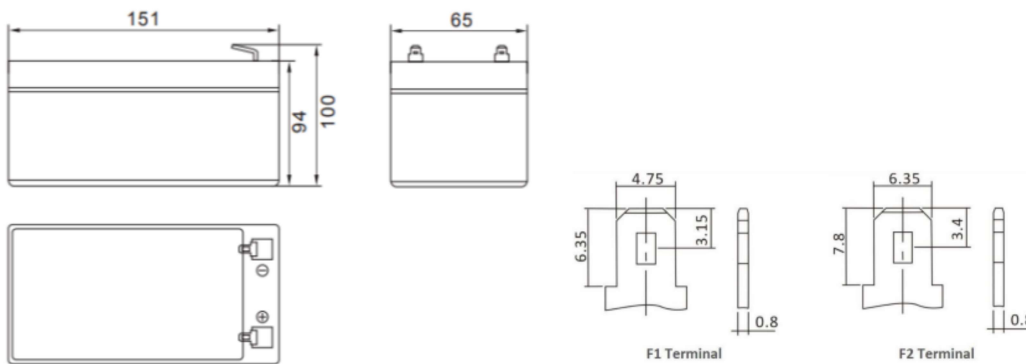
- ◆ Innovated technology of battery plate formula designed for Deep Discharge.
- ◆ Outstanding re-charge acceptability after deep discharged.
- ◆ Extreme low self-discharge, low internal resistance and low internal pressure.
- ◆ Long Life - Assembly using thicker plate with special chemical formation.

► Main Application:

- Commercial UPS and critical power backup
- Telecom & Towers power assurance
- Medical power assurance
- Fire & Emergency & Lighting system
- Security & Alarm system
- Solar power products
- Deep cycle discharge
- Industrial battery & power reserve
- All general purpose

GEM Battery | GS Series batteries have been developed and upgraded over decades manufacturing to meet various general purpose for commercial applications.

① Adopted with latest and most advanced AGM technology for assembly. ② Compact size and sealed maintenance-free design, support to flexible installation and portable handling. ③ Available for many civil applications, lamp and lantern, electric toys, power tools, civil or commercial UPS systems, emergency lights, security facilities, etc. ④ High capacity ideally support to commercial UPS systems and critical power system.



Model	GS 12-9		IR (Max.)	Dimensions (mm ±2)				Weight	Terminal	
Voltage (V)	Nominal Capacity (25°C)		mΩ (25°C)	Length	Width	Height	Total Height	Kgs ±5%	F1	F2
12	8.5Ah	20Hr (10.8V)	20	151	65	94	98	2.55	Faston 187	Faston 254

Capacity Range (25°C)	10Hr (10.5V)	5Hr (10.5V)	3Hr (9.60V)	1Hr (9.60V)	Designed Life (25°C)	Separator	Electrolyte	Case	Sealing
	7.91Ah	7.27Ah	6.46Ah	5.4Ah	5 Years (Float charging)	AGM	Sulfuric Acid	ABS plastic	Epoxy Glue

Max. Current (A)		Charge Voltage @25°C		Self-discharge		Capacity Effected by Temp. @20Hr			
Charge	Discharge	Float use	13.5-13.8V (-18mV/°C)	per month @25°C		40°C	25°C	0°C	-15°C
2.55A	102A (5s)	Cycle use	14.4-14.7V (-30mV/°C)	3%		102%	100%	85%	65%

● Constant-Current (A) Discharge / CCD @25°C

End V./VPC	5min	10min	15min	30min	60min/1h	2h	3h	5h	10h	20h
9.60 / 1.60	34.20	21.60	17.10	9.54	5.85	3.20	2.30	1.56	0.85	0.47
9.90 / 1.65	33.20	21.00	16.70	9.35	5.76	3.18	2.28	1.55	0.85	0.46
10.2 / 1.70	31.80	20.10	16.10	9.06	5.62	3.15	2.27	1.54	0.84	0.46
10.5 / 1.75	30.40	19.20	15.50	8.84	5.50	3.10	2.25	1.53	0.84	0.45
10.8 / 1.80	28.70	18.10	14.70	8.52	5.34	3.02	2.18	1.48	0.82	0.45

● Constant-Power (Watt) Discharge / CPD @25°C

End V./VPC	5min	10min	15min	30min	60min/1h	2h	3h	5h	10h	20h
9.60 / 1.60	63.67	44.06	37.50	20.96	12.01	6.45	5.32	3.52	1.79	0.93
9.90 / 1.65	61.67	42.21	36.45	19.85	11.37	6.10	5.04	3.33	1.69	0.88
10.2 / 1.70	59.17	40.25	35.61	19.10	10.95	5.88	4.85	3.21	1.63	0.84
10.5 / 1.75	56.67	39.43	35.13	18.55	10.63	5.70	4.71	3.11	1.58	0.82
10.8 / 1.80	53.50	38.86	34.50	18.21	10.44	5.60	4.62	3.05	1.55	0.80



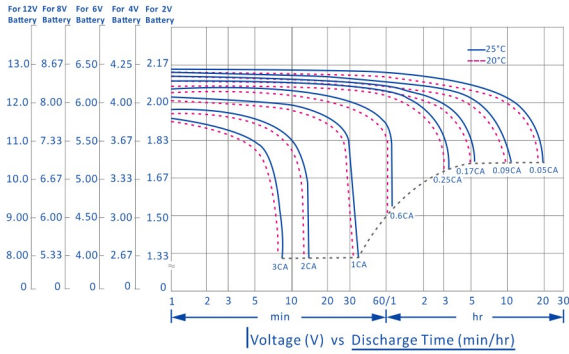
GRAND ENERGY MANUFACTURING CO LIMITED

ISO9001 / ISO14001 / ISO45001 / UL / CE / RoHS

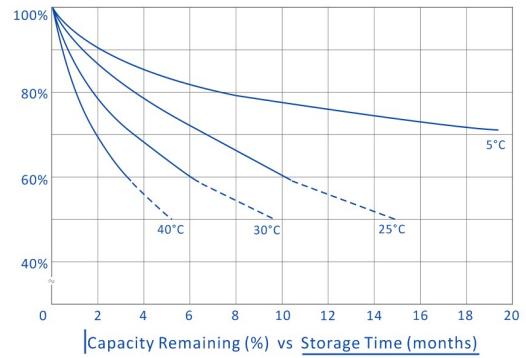
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- To follow the latest information, please contact our sales representative.

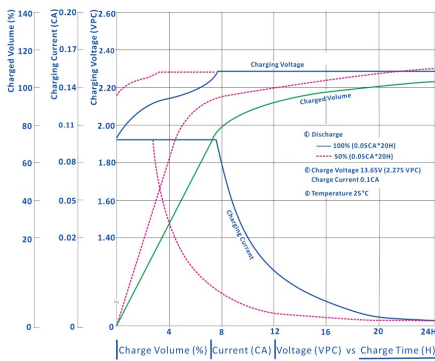
• Discharge Chart



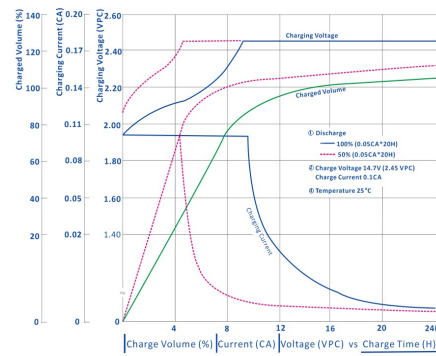
• Self-discharge/Storage Chart



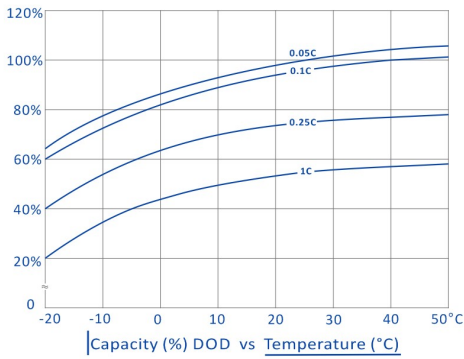
• Charging Chart for Stand-by/Float use (25°C)



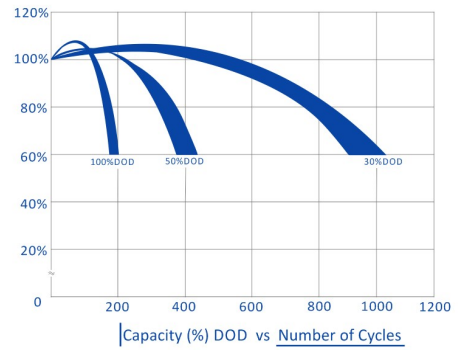
• Charging Chart for Cycle use (25°C)



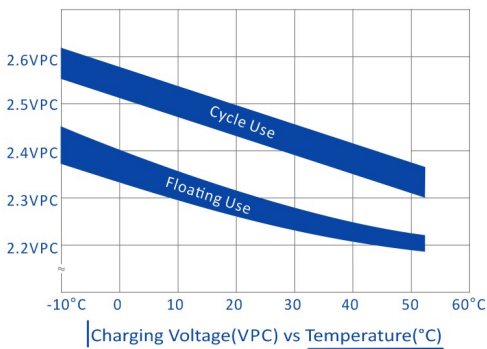
• Capacity effected by Temperature



• Cycle Service Life vs DOD



• Charging Voltage & Temperature



• Float Service Life vs Temperature

