

CHALLENGER

G 12-55 (12V 55AH)



G (Deep Cycle GEL) series is pure GEL battery with 15 years floating design life, it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented GEL electrolyte, the G series offers excellent recovery capability after deep discharge under frequent cyclic discharge use, and it can offers 2 times cyclic life than the standard series. It is suitable for solar & wind system, marine, deep discharge UPS etc.



ISO 9001



ISO 14001



OHSAS 18001

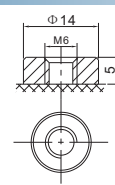
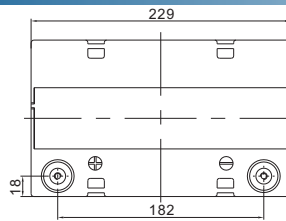
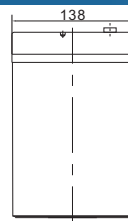
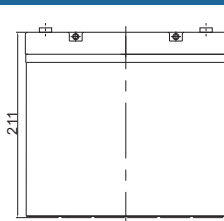


MH 28539



Cells Per Unit	6
Voltage Per Unit	12
Capacity	55Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 16.5 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 11.5 mΩ
Terminal	F15(M6)/F11 (M6)
Max. Discharge Current	550A (5 sec)
Design Life	15 years (floating charge)
Max. Charging Current	11.0 A
Reference Capacity	C3 37.5AH C5 42.4AH C10 48.4AH C20 55.0AH
Float Charging Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.2 V~14.4 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°C~60°C
Normal Operating Temperature Range	25°C ±5°C
Self Discharge	Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C, and then recharging is recommended. Monthly Self-discharge ratio is less than 2% at 20°C. Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

Dimensions



F11 TERMINAL

Length	229±2mm (9.02 inches)
Width	138±2mm (5.43 inches)
Height	211±2mm (8.31 inches)
Total Height	216±2mm (8.50 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Unit: mm

Constant Current Discharge Characteristics :A(25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	90.0	73.0	47.9	29.9	18.2	13.7	10.9	9.16	6.19	5.11	2.86
1.65V	85.1	69.8	46.0	28.8	17.7	13.3	10.6	8.92	6.12	5.04	2.82
1.70V	78.3	65.4	44.0	27.9	17.1	12.9	10.3	8.69	6.03	4.97	2.78
1.75V	71.7	60.9	42.0	26.9	16.5	12.5	10.1	8.47	5.94	4.90	2.75
1.80V	64.9	56.2	40.2	25.9	15.9	12.1	9.78	8.25	5.84	4.84	2.72
1.85V	53.0	46.6	34.6	23.2	14.6	11.2	9.09	7.69	5.48	4.56	2.58

Constant Power Discharge Characteristics : WPC(25°C)

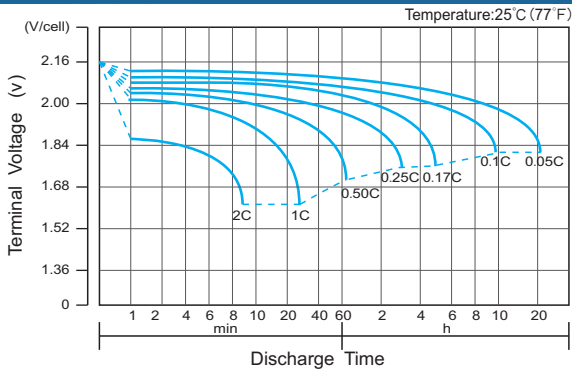
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	173.9	145.1	98.9	63.8	39.3	29.7	23.8	20.1	13.7	11.4	6.40
1.65V	165.5	139.4	95.8	62.0	38.2	29.0	23.3	19.6	13.6	11.3	6.32
1.70V	157.1	133.8	92.6	60.3	37.2	28.2	22.7	19.2	13.4	11.1	6.24
1.75V	146.4	126.3	89.4	58.5	36.0	27.5	22.2	18.8	13.3	11.0	6.18
1.80V	134.8	118.3	86.3	56.5	34.9	26.8	21.7	18.3	13.1	10.9	6.12
1.85V	112.1	99.6	75.1	51.0	32.2	24.9	20.2	17.2	12.3	10.2	5.82

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

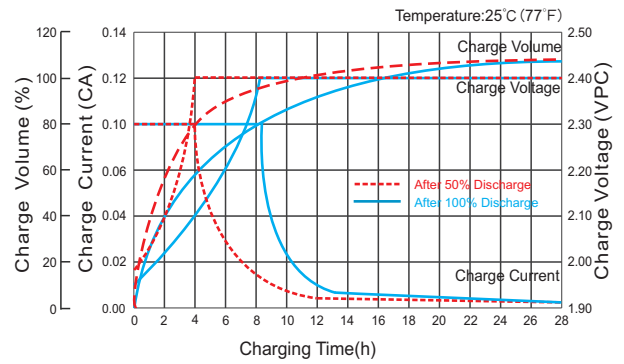
The battery must be fully charged before the capacity test. The C₂₀ should reach 95% after the first cycle and 100% after the third cycle.

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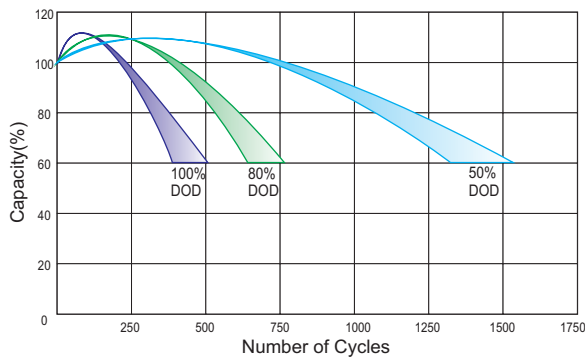
Discharge Characteristics Curve



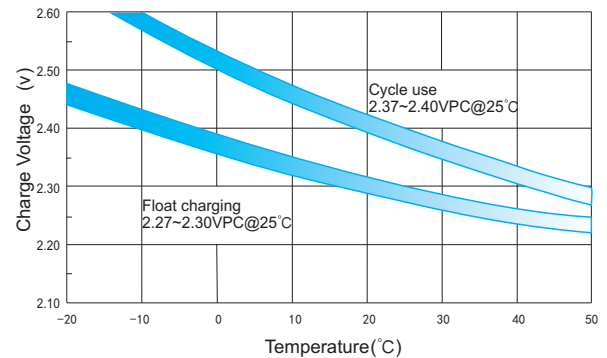
Charge Characteristic Curve for Cycle Use(IU)



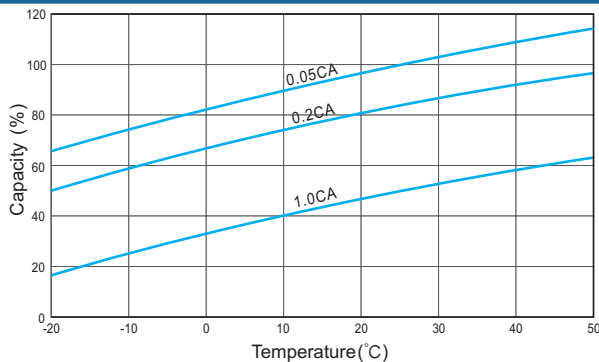
Cycle Life in Relation to Depth of Discharge



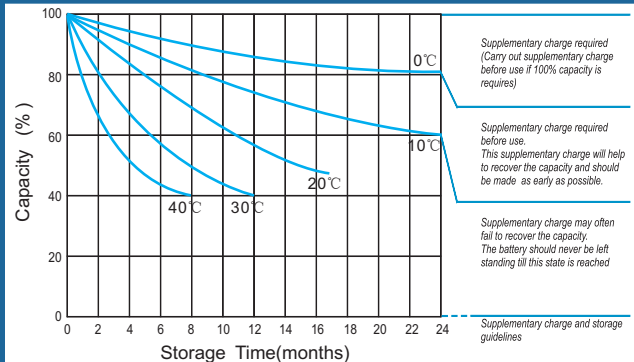
Relationship Between Charging Voltage and Temperature



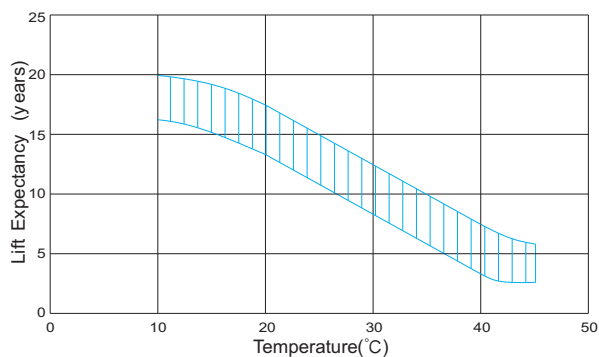
Temperature Effects on Capacity



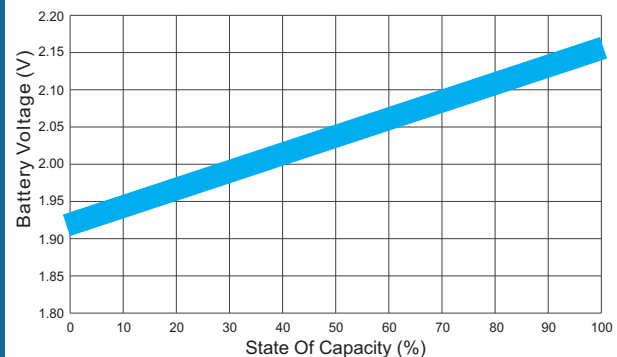
Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV And State of Charge(20°C)



(Note) All above information shall be changed without prior notice, Producer reserves the right to explain and update the latest information