

CHALLENGER

G12-100 (12V 100AH)

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	100Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 29.0 Kg (Tolerance ± 3.0%)
Internal Resistance	Approx. 7.5 mΩ
Terminal	F12(M8)/F5 (M8)
Max. Discharge Current	1000A (5 sec)
Design Life	15 years (floating charge)
Max. Charging Current	20.0 A
Reference Capacity	C3 68.4AH C5 77.0AH C10 88.0AH C20 100.0AH
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 charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



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

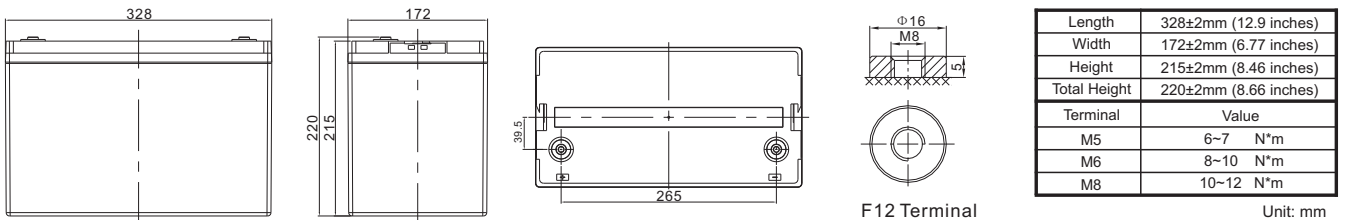
ISO 14001

OHSAS 18001



MH 28539

Dimensions



Constant Current Discharge Characteristics :A(25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	163.7	132.8	87.1	54.3	33.2	24.9	19.8	16.7	11.3	9.28	5.20
1.65V	154.7	126.9	83.6	52.4	32.1	24.1	19.3	16.2	11.1	9.17	5.12
1.70V	142.4	118.9	79.9	50.7	31.1	23.5	18.8	15.8	11.0	9.03	5.06
1.75V	130.4	110.6	76.4	48.9	30.0	22.8	18.3	15.4	10.8	8.91	5.00
1.80V	118.0	102.2	73.0	47.0	28.9	22.0	17.8	15.0	10.6	8.80	4.95
1.85V	96.4	84.8	62.9	42.2	26.5	20.4	16.5	14.0	10.0	8.28	4.70

Constant Power Discharge Characteristics : WPC(25°C)

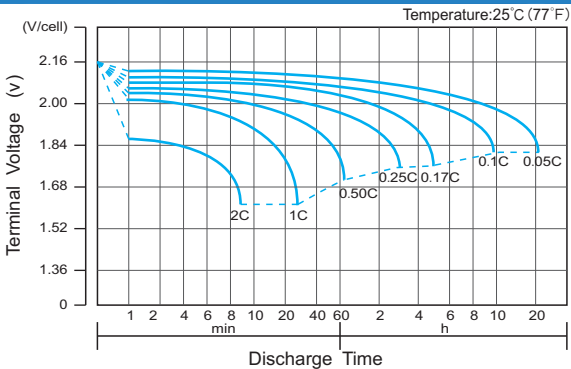
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	316.2	263.8	179.8	116.0	71.5	54.0	43.3	36.5	25.0	20.7	11.6
1.65V	300.9	253.5	174.1	112.8	69.5	52.7	42.3	35.7	24.7	20.5	11.5
1.70V	285.6	243.3	168.4	109.6	67.6	51.3	41.3	34.9	24.4	20.2	11.4
1.75V	266.1	229.7	162.6	106.3	65.5	50.0	40.4	34.1	24.1	20.0	11.2
1.80V	245.1	215.1	157.0	102.8	63.5	48.7	39.4	33.3	23.8	19.8	11.1
1.85V	203.9	181.0	136.6	92.8	58.5	45.2	36.7	31.2	22.4	18.6	10.6

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

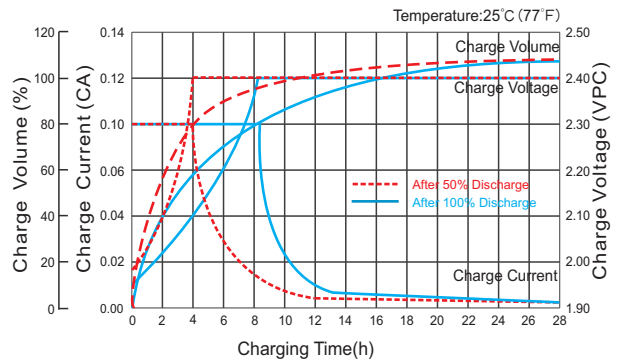
The battery must be fully charged before the capacity test. The C₂₀ should reach 95% after the first cycle and 100% after the third cycle.

CHALLENGER

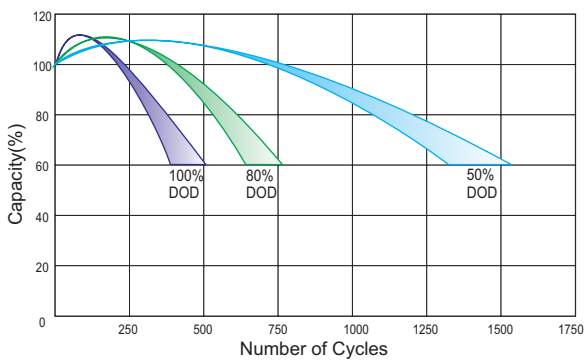
Discharge Characteristics Curve



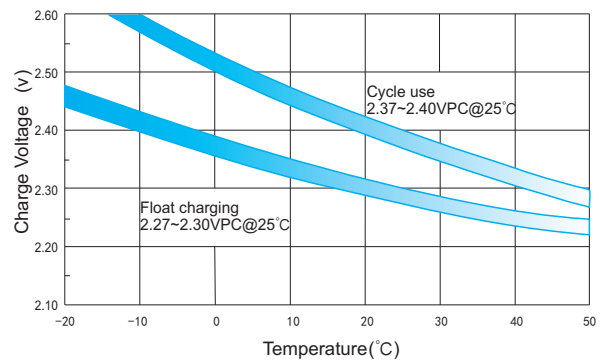
Charge Characteristic Curve for Cycle Use(IU)



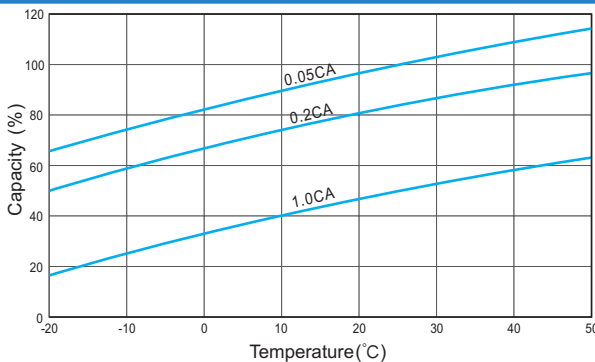
Cycle Life in Relation to Depth of Discharge



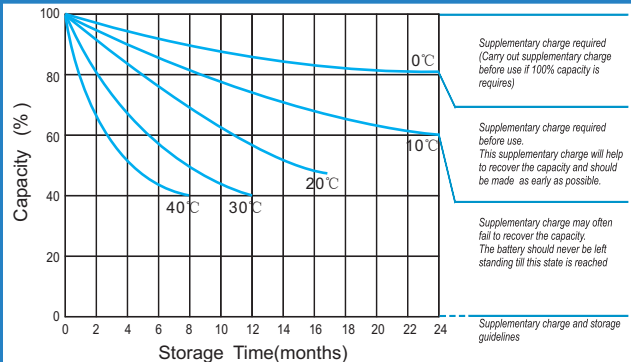
Relationship Between Charging Voltage and Temperature



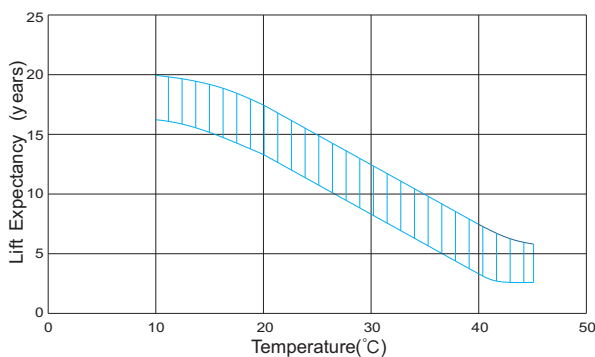
Temperature Effects on Capacity



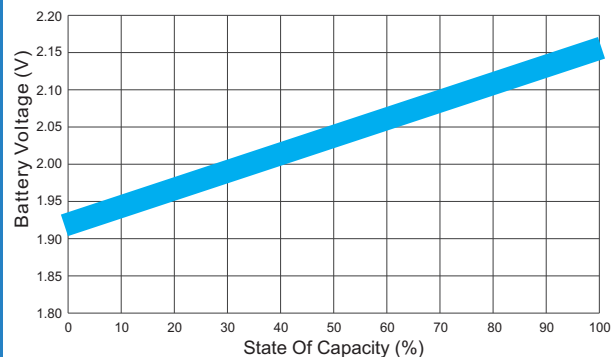
Storage Characteristics



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