

Model: GW12-450W(12V 120Ah)

# GW Series

VLRA High Rate Discharge Battery



Legacy Canadian products designed in Canada, assembled in China.

Connecting To Legacy

📍 Laval-Quebec-Canada

📍 Beirut-Lebanon

📍 Hongkong-China

🔍 [www.connectinglegacy.com](http://www.connectinglegacy.com)

**Introduction** GW12-450W(12V 120Ah)

**Length** 407±2mm (16.0 inches)

**Width** 177±2mm (6.97 inches)

**Height** 225±2mm (8.86 inches)

**Total Height** 225±2mm (8.86 inches)

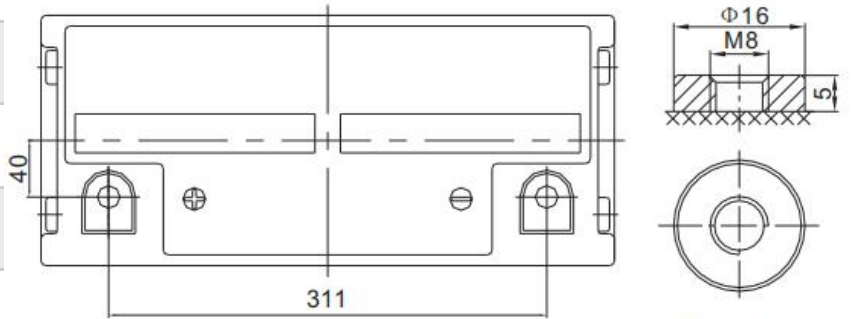
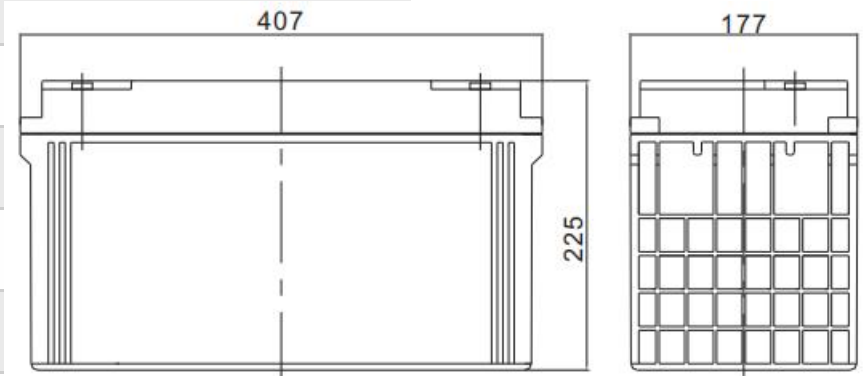
**Weight** Approx. 34.5Kg (Tolerance±5%)

**Terminal** Default F12(M8), Value: 10~12N\*m

**Container Material** A.B.S. UL94-HB, <UL94-V0 Optional>

**Design Life** 15 years

**Application** UPS/EPS,Electric Tools,Toys,Medical,Wheelchair and Security System etc.



F12 Terminal

GW12-450W Dimension

Structure: Compact design of shorter internal connectors among cells for lower I.R.

Plate: Pasted flat type with patent high rate formula of AM supports stable performance during high current discharge.

**Features** Separator: Improved AGM separator increases deep cycle life.

Safety Valve:Flame arrester/filter is equipped with safety valve system.


Design and manufacture with DIN standards by Legacy team, for heavy load discharge applications.

Parameters	GW12-450W (12V 120Ah)
Cell Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	450W@15min-rate to 1.67V per cell @25°C
Internal Resistance	≤4.5 mΩ(Full Charge Condition @25°C)
Max. Discharge Current	1200A (5 sec)
Max. Charging Current	36.0A
Short Circuit Current	3000A
Reference Capacity	C10: 113.2Ah C20: 120.0Ah
Standby Use Voltage	13.50 V~13.62 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.10 V~14.40 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Normal Operating Temperature Range	25°C±5°C
Operating Temperature Range	Discharge and Storage : -20°C~60°C Charge: 0°C~50°C
Self Discharge	Monthly Self-discharge ratio is less than 3% at 25°C
Note	Legacy GW batteries can be stored for up to 6 months at 25°C and recharging is recommended. Please charged batteries before using.



GW12-450W Imagine


F.V/TIME	5 MIN	8 MIN	10 MIN	15 MIN	20 MIN	30 MIN	60 MIN	90 MIN
1.60V	392.6	335.6	316.5	248.9	202.6	149.4	86.44	62.03
1.65V	356.2	307.8	292.5	232.1	190.5	141.3	82.46	59.50
1.70V	341.1	295.8	282.0	225.0	185.1	137.9	80.82	58.36
1.75V	314.9	275.6	264.3	212.9	175.9	132.1	78.01	56.52
1.80V	288.5	255.2	246.7	201.4	167.6	126.5	75.19	54.68
1.85V	247.7	217.4	209.0	173.2	145.5	111.9	67.93	49.85



**Constant Current Discharge**  
Ah/Cell (@ 77°F/25°C)

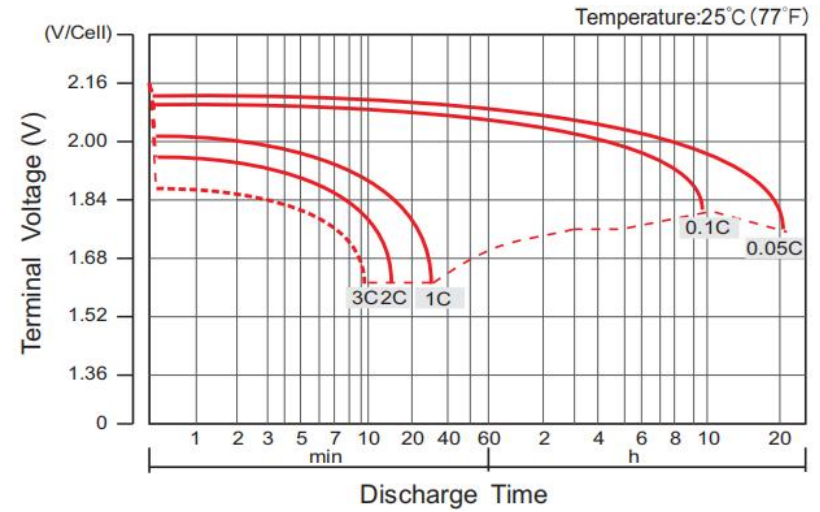
Model: GW12-450W

F.V/TIME	5 MIN	8 MIN	10 MIN	15 MIN	20 MIN	30 MIN	60 MIN	90 MIN
1.60V	721.4	625.0	595.2	474.4	389.5	290.2	162.3	117.4
1.65V	671.4	586.4	561.7	450.0	371.7	278.3	156.2	113.5
1.70V	649.3	568.8	546.0	439.6	363.7	272.7	153.7	111.9
1.75V	609.3	537.5	518.6	420.6	349.1	263.7	149.5	108.9
1.80V	567.1	504.6	489.7	401.9	335.9	254.4	145.0	105.9
1.85V	494.0	435.8	420.5	349.3	294.3	227.0	131.9	97.41

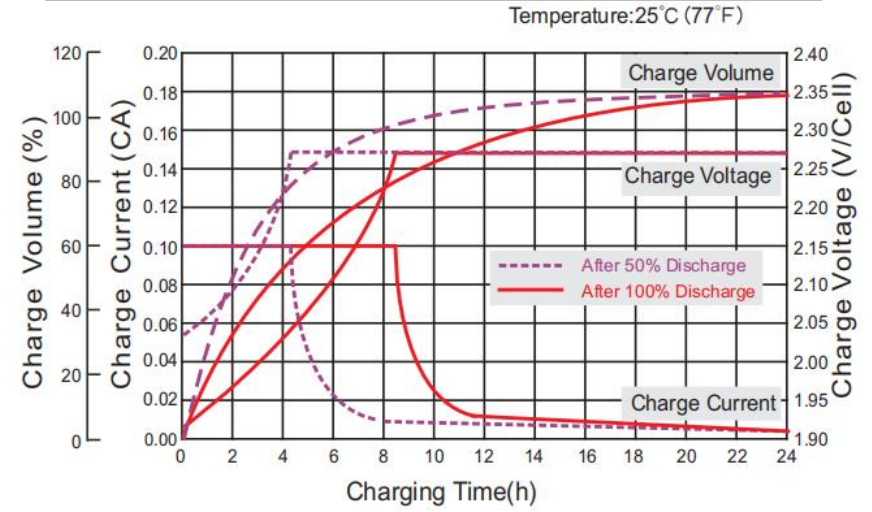


**Constant Power Discharge**  
W/Cell (@ 77°F/25°C)

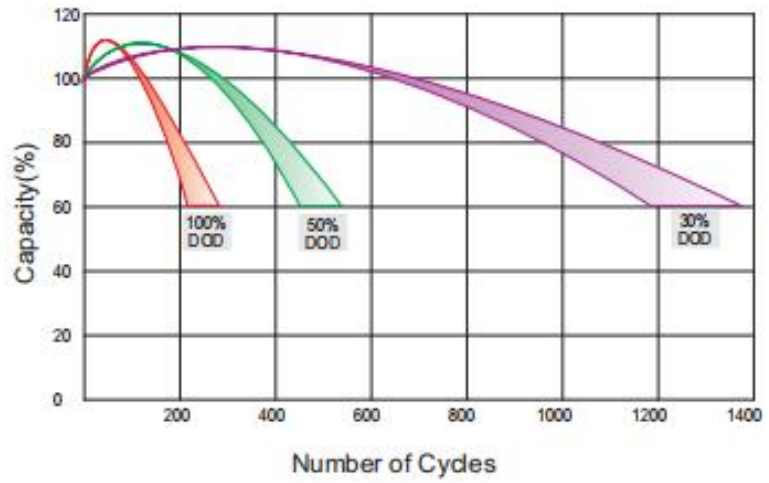
### Discharge Characteristics Curve



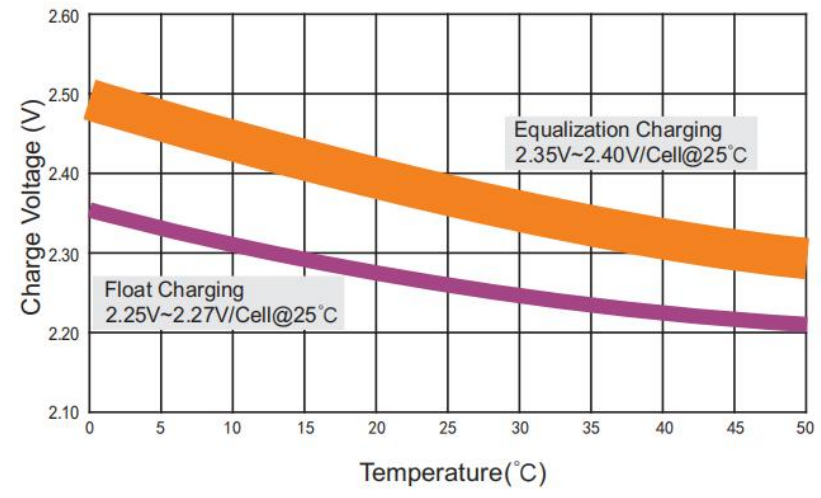
### Charge Characteristics Curve For Standby Use(IU)



### Cycle Life in Relation to Depth of Discharge

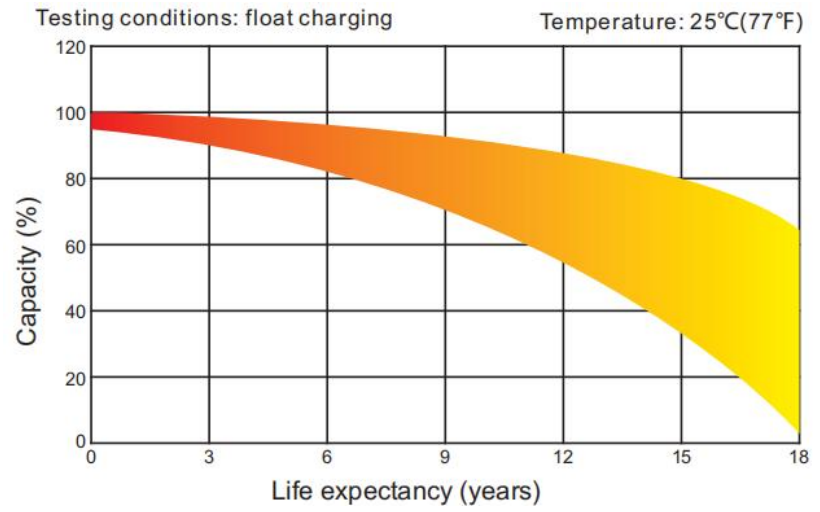


### Relationship Between Charging Voltage and Temperature

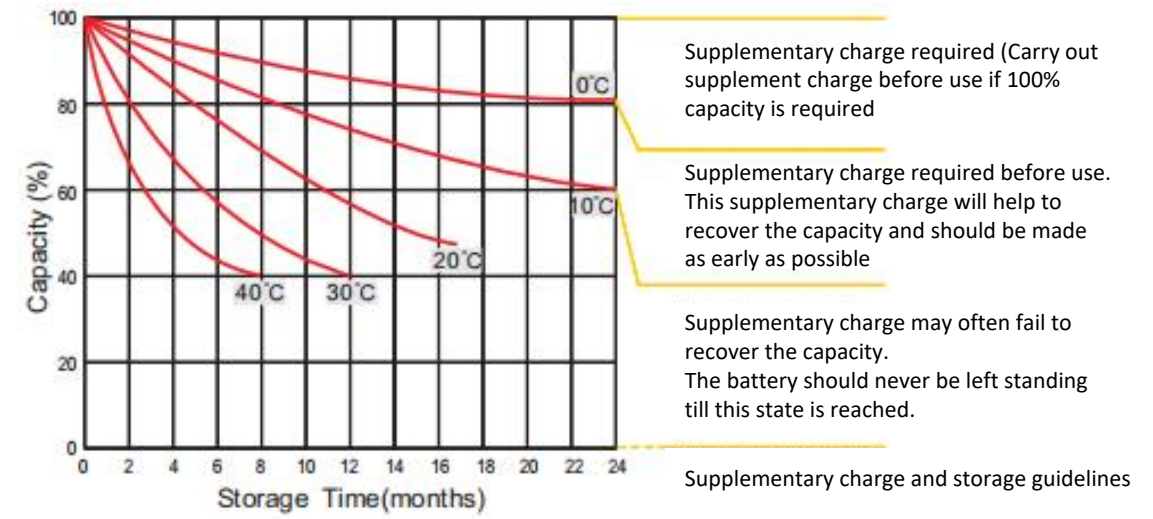


Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Legacy reserves the right to explain and update the latest information.

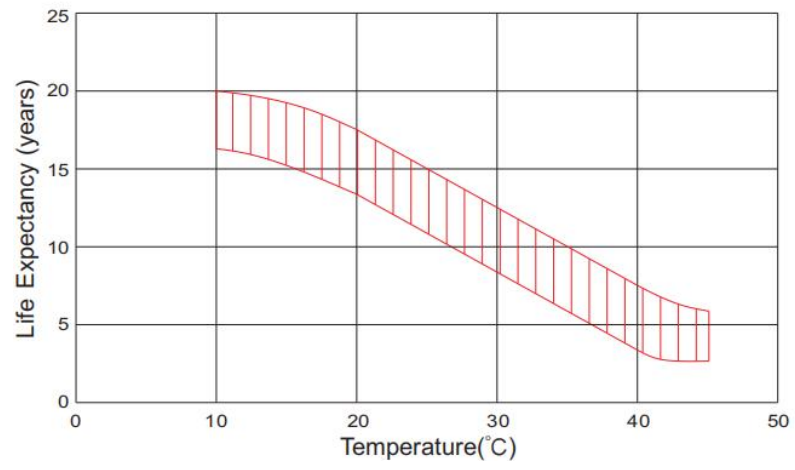
### Life Characteristics of Standby Use



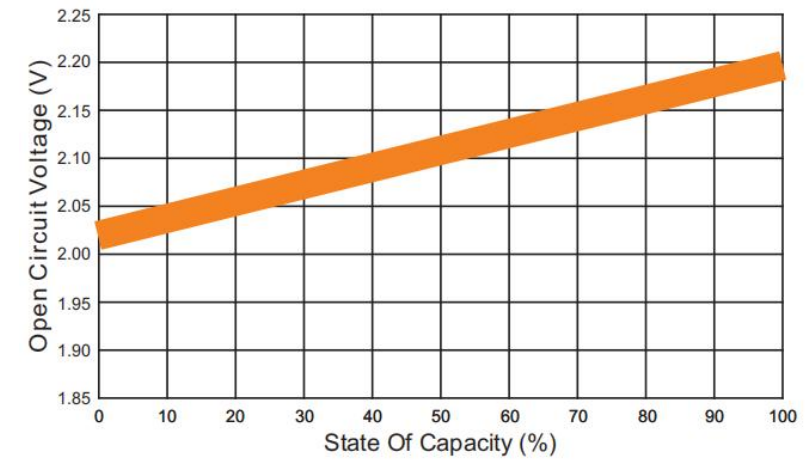
### Storage Characteristics



### Effect of Temperature on Longterm life



### Relationship of OCV and State of Charge(20°C)



Note: The above data are average values, and can be obtained within 3 charge/ discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Legacy reserves the right to explain and update the latest information.



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