



Model: GW12-420W(12V 110Ah)

GW Series

VLRA High Rate Discharge Battery



Legacy Canadian products designed in Canada, assembled in China.

Connecting To Legacy

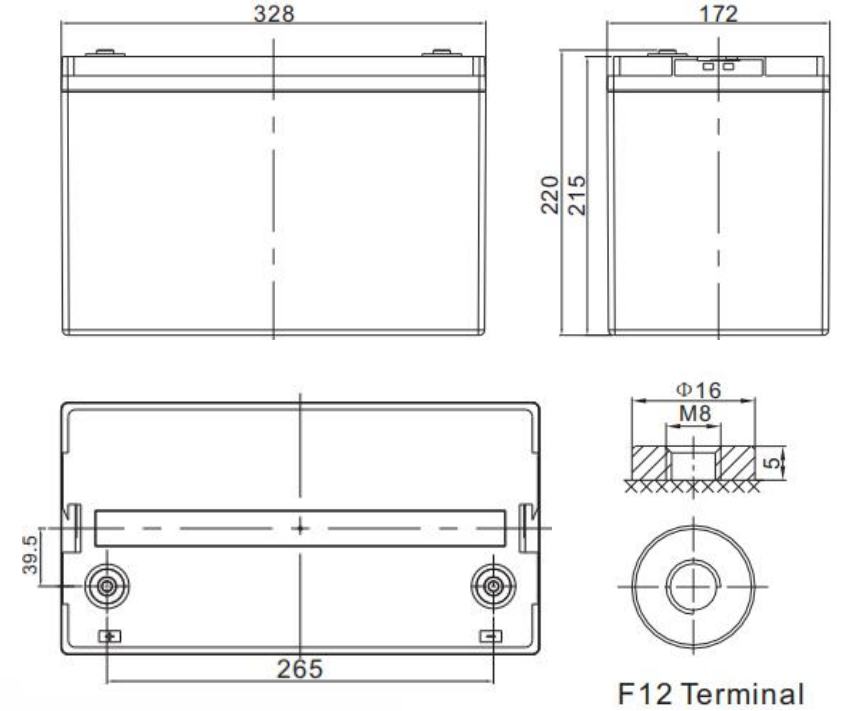
📍 Laval-Quebec-Canada

📍 Beirut-Lebanon

📍 Hongkong-China

🔍 www.connectinglegacy.com

Introduction	GW12-420W(12V 110Ah)
Length	328±2mm (12.9 inches)
Width	172±2mm (6.77 inches)
Height	215±2mm (8.46 inches)
Total Height	220±2mm (8.66 inches)
Weight	Approx. 33.5Kg (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

GW12-420W 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	GW12-420W (12V 110Ah)
Cell Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	420W@15min-rate to 1.67V per cell @25°C
Internal Resistance	≤4.8 mΩ(Full Charge Condition @25°C)
Max. Discharge Current	1100A (5 sec)
Max. Charging Current	33.0A
Short Circuit Current	2700A
Reference Capacity	C10: 104.0Ah C20: 110.0Ah
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.



GW12-420W Imagine


F.V/TIME	5 MIN	8 MIN	10 MIN	15 MIN	20 MIN	30 MIN	60 MIN	90 MIN
1.60V	377.7	330.0	298.3	232.2	189.1	139.4	80.66	57.89
1.65V	342.7	302.6	275.7	216.6	177.7	131.9	76.95	55.53
1.70V	328.2	290.9	265.8	210.0	172.8	128.7	75.42	54.46
1.75V	303.0	271.0	249.2	198.6	164.1	123.3	72.79	52.74
1.80V	277.6	251.0	232.6	188.0	156.4	118.0	70.17	51.03
1.85V	238.3	213.8	197.0	161.6	135.8	104.4	63.39	46.52



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

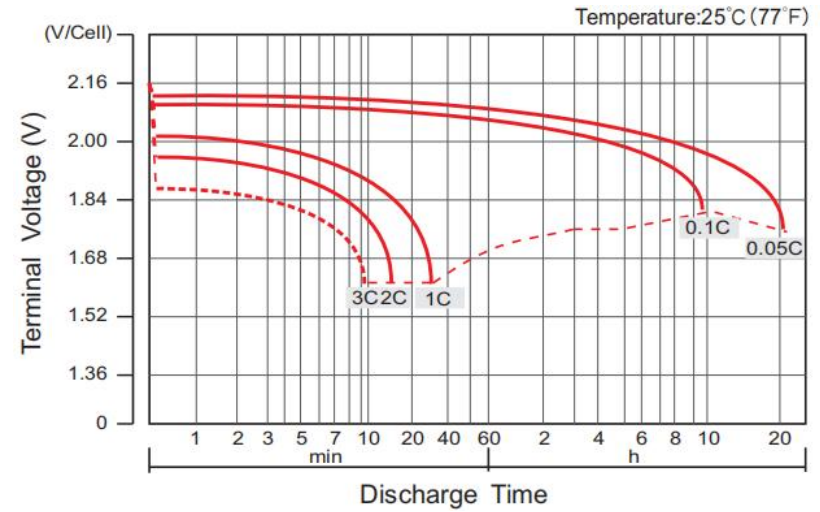
Model: GW12-420W

F.V/TIME	5 MIN	8 MIN	10 MIN	15 MIN	20 MIN	30 MIN	60 MIN	90 MIN
1.60V	694.0	614.6	561.1	442.7	363.4	270.8	151.5	109.6
1.65V	645.9	576.6	529.5	420.0	346.9	259.7	145.8	105.9
1.70V	624.7	559.3	514.7	410.2	339.4	254.5	143.4	104.4
1.75V	586.2	528.5	488.9	392.5	325.8	246.1	139.5	101.6
1.80V	545.6	496.1	461.7	375.0	313.5	237.5	135.3	98.84
1.85V	475.3	428.5	396.4	326.0	274.7	211.8	123.1	90.91

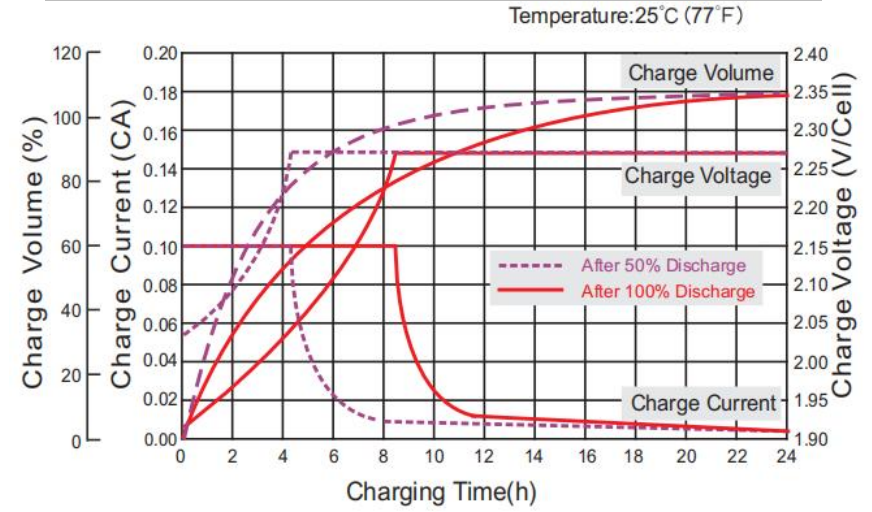


Constant Power Discharge
W/Cell (@ 77°F/25°C)

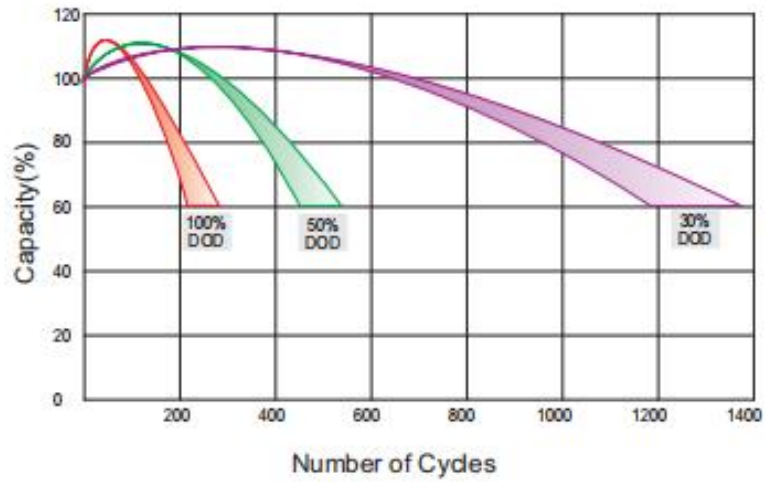
Discharge Characteristics Curve



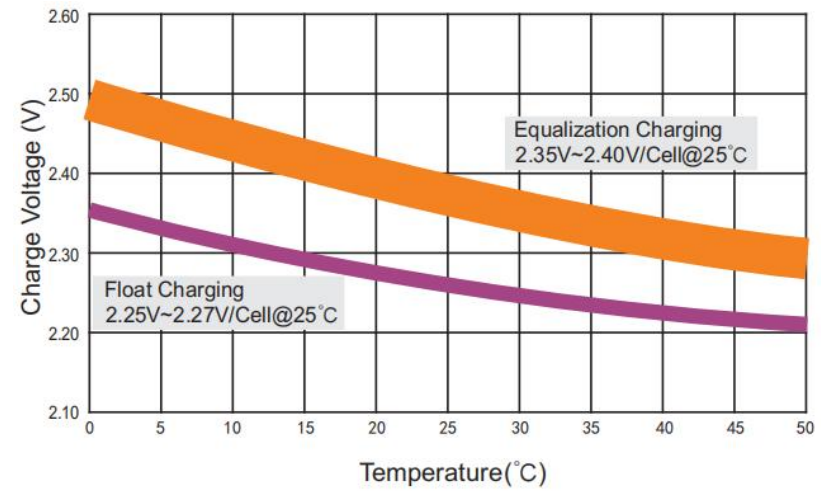
Charge Characteristics Curve For Standby Use(IU)



Cycle Life in Relation to Depth of Discharge

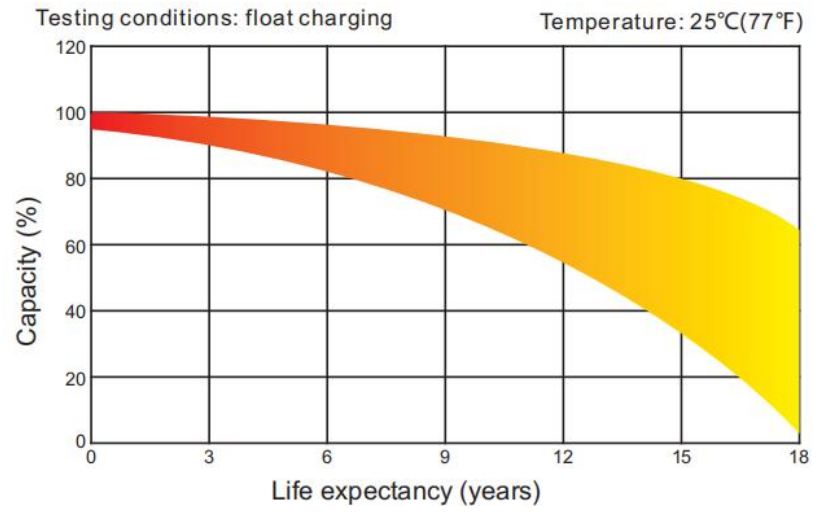


Relationship Between Charging Voltage and Temperature

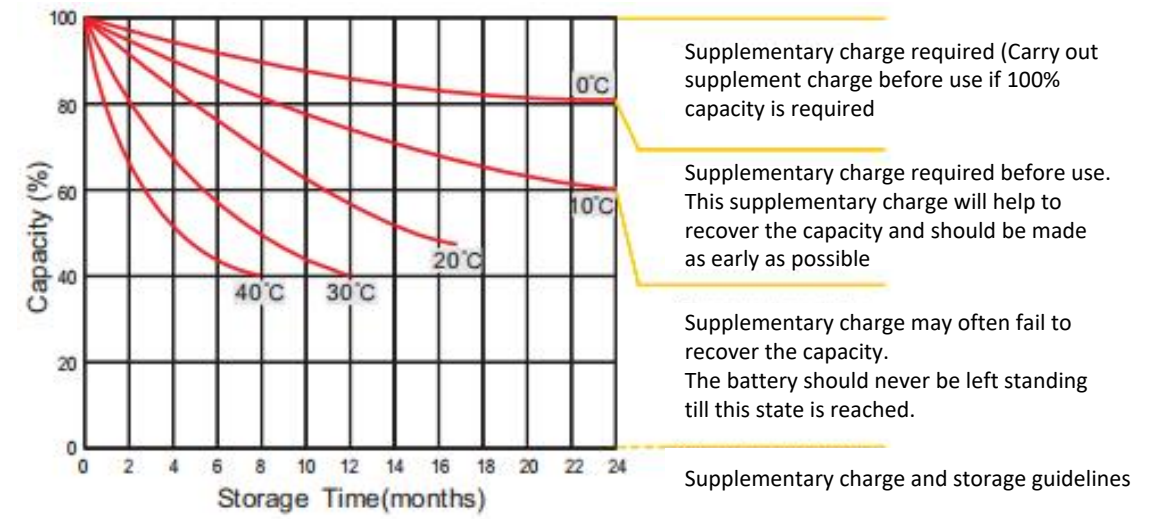


Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Legacy reserves the right to explain and update the latest information.

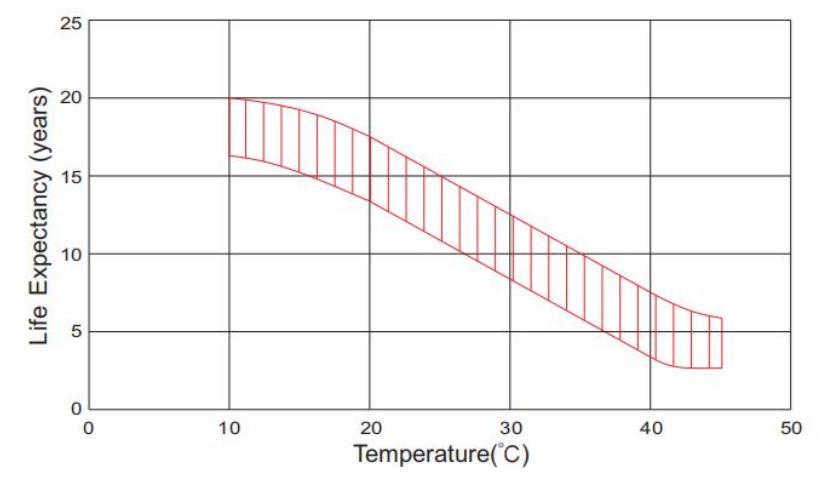
Life Characteristics of Standby Use



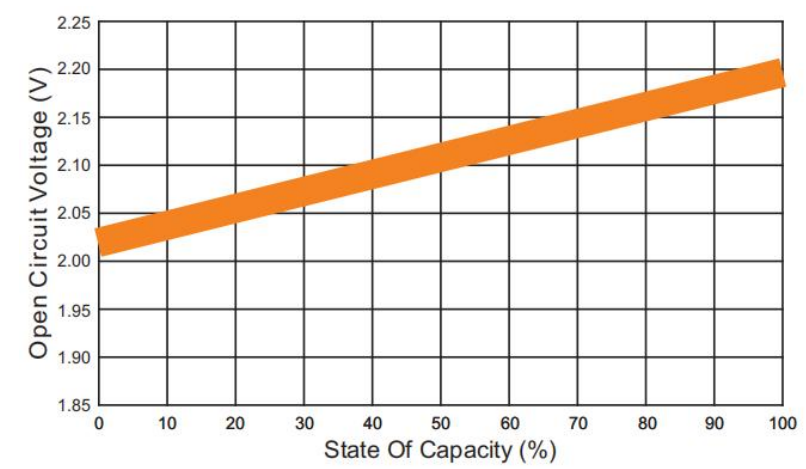
Storage Characteristics



Effect of Temperature on Longterm life



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



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