

Absorbant Glass Mat (AGM) technology for superior performance. Valve regulated, spill proof construction allows safe operation in any position. Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified. U.L. recognized under file number MH 20567.

UB12900FR

Maintenance-Free

Specification

Nominal Voltage	12 volts		
Nominal Capacity	77° F (25° C)		
20-hr. (4.50A)	90 Ah		
10-hr. (8.37A)	83.7 Ah		
5-hr. (15.30A)	76.5 Ah		
1-hr. (54.00A)	54 Ah		
Approximate Weight	59.5 lbs (27 kgs)		
Internal Resistance (approx.)	7 mΩ		
Shelf Life (% of normal capacity at 77° F (25° C))			
3 Months	6 Months	12 Months	
91%	82%	64%	
Temperature Dependency of Capacity	(20 hour rate)		
104° F	77° F	32° F	5° F
102%	100%	85%	65%



Charge Method (Constant Voltage)

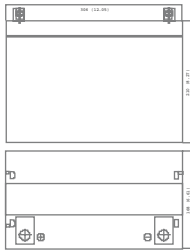
Cycle Use (Repeating Use)

Initial Current	27 A or smaller
Control Voltage	14.5-14.9 V

Float Use

Control Voltage	13.6-13.8 V
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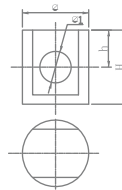
Physical Dimensions: in (mm)



L: 12.05in (306.1 mm)
W: 6.61in (167.9 mm)
H: 8.27in (210.1 mm)
TH: 9.13in (231.9 mm)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

Terminals



Z Series (Z Post Terminal)

Dimension Type	∅	∅1	H	h
Z1	17.0	8.0	21.5	9.0

Constant Current Discharge Characteristics Unit:A (25°C, 77°F)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	309.3	225.7	158.8	96.1	50.2	29.3	21.5	16.7	13.8	9.7	8.8	4.7
10.20V	272.5	205.7	142.1	91.1	47.2	27.9	20.9	16.3	13.5	9.5	8.5	4.6
10.50V	262.5	195.6	133.8	88.6	46.0	27.3	20.4	16.1	13.4	9.4	8.4	4.6
10.80V	252.5	185.6	125.4	86.1	44.3	26.6	19.9	15.8	13.0	9.2	8.4	4.5
11.10V	242.4	175.6	117.0	83.6	42.6	25.9	19.2	15.3	12.7	8.9	7.9	4.3

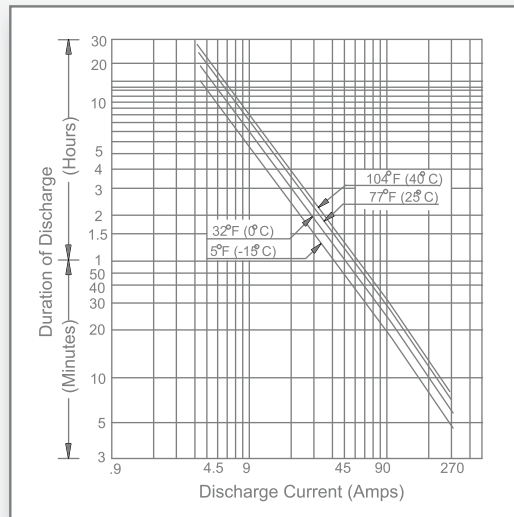
Constant Power Discharge Characteristics Unit:W (25°C, 77°F)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	3284.6	2480.4	1687.0	1020.8	581.0	338.6	249.1	194.0	159.7	112.9	102.0	54.9
10.20V	3025.5	2283.1	1577.5	1011.6	545.9	323.5	242.4	188.9	125.5	110.4	99.5	53.5
10.50V	2977.0	2218.7	1516.5	1004.9	528.4	316.0	236.6	185.6	154.7	109.5	97.8	52.8
10.80V	2938.5	2160.2	1459.7	1002.4	514.1	309.3	231.6	182.2	152.2	107.0	97.0	52.6
11.10V	2885.0	2089.2	1392.8	994.8	507.5	308.5	229.1	181.4	151.3	106.2	94.5	51.0

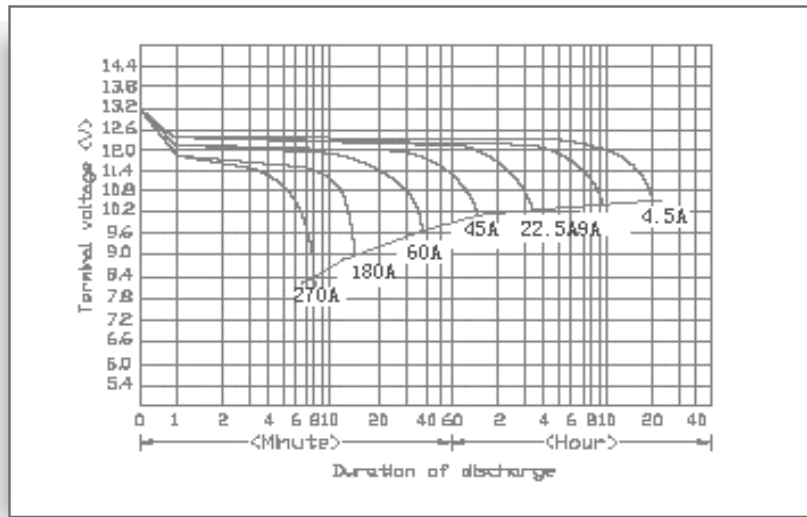
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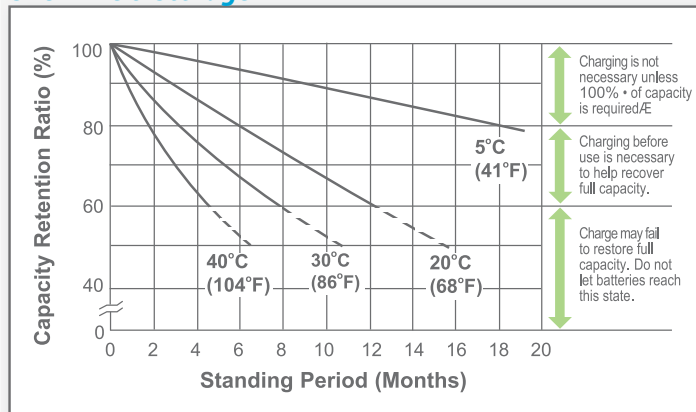
Discharge Time vs. Discharge Current



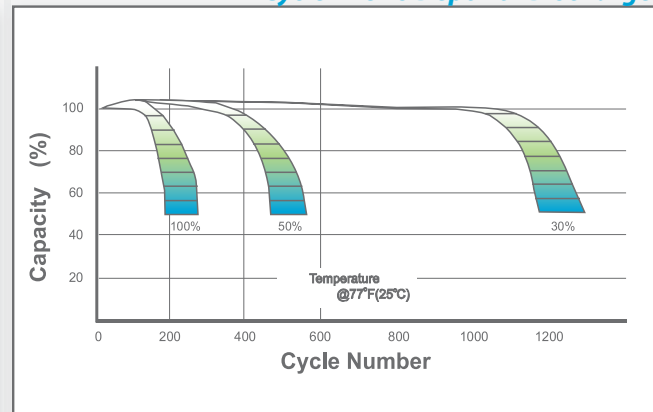
Discharge Characteristics



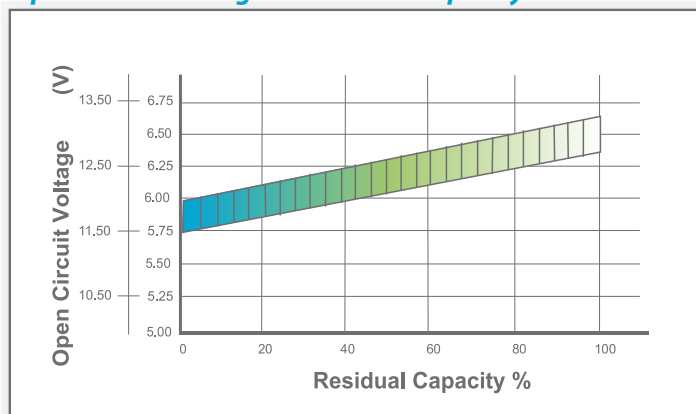
Shelf Life & Storage



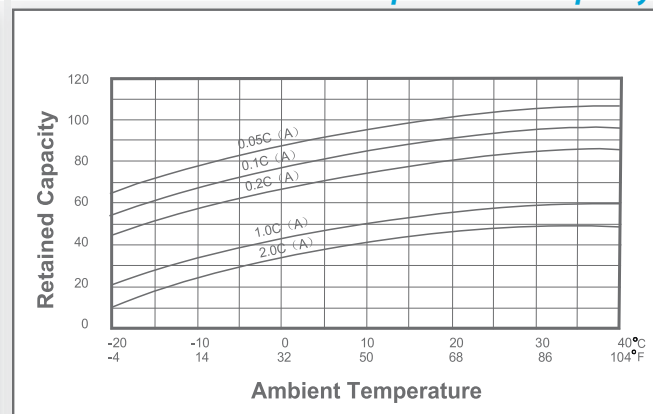
Cycle Life vs. Depth of Discharge



Open Circuit Voltage vs. Residual Capacity



Effect of Temperature on Capacity



Charge Current & Final Discharge Voltage

Application	Charge Voltage(V/Cell)			Max.Charge Current	Final Discharge Voltage V/Cell	1.75	1.70	1.60	1.30
	Temperature	Set Point	Allowable Range						
Cycle Use	25°C(77°F)	2.45	2.40-2.50	0.30C	Discharge	0.2C<(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C
Standby	25°C(77°F)	2.325	2.30-2.35		Current(A)				



Let UPG Power Your Life.

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