

# UPG Sealed Lead-Acid Battery

UPG No. 40505

STAY POWERED®

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.

## UB31 (Group 31)

Maintenance-Free

### Specification

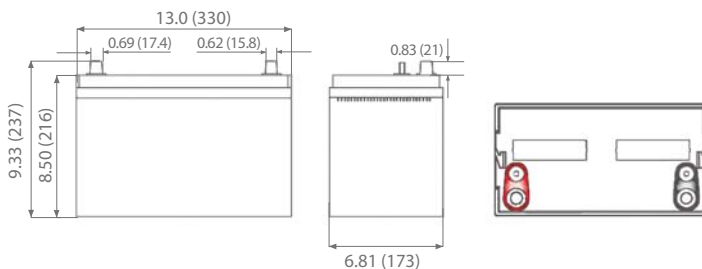
<b>Nominal Voltage</b>	12 volts		
<b>Nominal Capacity</b>	77° F (25° C)		
20-hr. (5.00 A)	100 Ah		
10-hr. (9.30 A)	93.0 Ah		
5-hr. (17.0 A)	85.0 Ah		
1-hr. (60.0 A)	60.0 Ah		
<b>Approximate Weight</b>	65 lbs (29.5 kgs)		
<b>Internal Resistance (approx.)</b>	4.8 mΩ		
<b>Shelf Life (% of normal capacity at 68° F (20° C))</b>			
3 Months	6 Months	12 Months	
91%	83%	64%	
<b>Temperature Dependency of Capacity (20 hour rate)</b>			
104° F	77° F	32° F	5° F
102%	100%	85%	65%
<b>AGM Operational Temperature</b>			
Charge	32°F to 104°F (0°C to 40°C)		
Discharge	5°F to 113°F (-15°C to 45°C)		
<b>AGM Storage Temperature</b>	5°F to 104°F (-15°C to 40°C)		



Due to continuous improvements to our products, product may vary slightly from depiction.

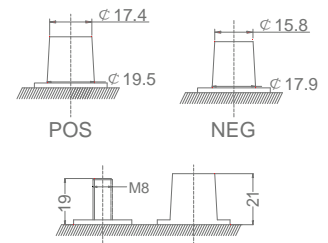
<b>Charge Method (Constant Voltage)</b>	
<b>Cycle Use (Repeating Use)</b>	
Initial Current	30 A or smaller
Control Voltage	14.6 - 14.8 V
<b>Float Use</b>	
Control Voltage	13.6 - 13.8 V

### Physical Dimensions: in (mm)



**L:** 13.0 in (330 mm)  
**W:** 6.81 in (173 mm)  
**H:** 8.50 in (216 mm)  
**TH:** 9.33 in (237 mm)  
 Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

### Terminals



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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	5HR	8HR	10HR	20HR
9.60	298	246	193	118	65.0	39.1	29.4	18.9	12.2	10.2	5.33
9.90	289	239	189	115	63.7	38.9	29.3	18.8	12.1	10.1	5.30
10.2	283	234	185	113	62.4	38.5	29.0	18.6	12.1	10.1	5.28
10.5	267	226	180	109	60.5	38.1	28.7	18.4	12.0	10.0	5.27
10.8	244	220	176	107	59.3	37.7	28.4	18.2	12.0	10.0	5.25

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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	5HR	8HR	10HR	20HR
9.60	3218	2686	2145	1318	741	453	346	223	146	121	63.9
9.90	3122	2606	2079	1292	726	450	344	222	145	121	63.6
10.2	3057	2552	2036	1266	711	446	341	220	145	120	63.4
10.5	2880	2471	1973	1226	689	441	338	218	144	120	63.2
10.8	2639	2399	1935	1202	676	437	334	215	144	119	63.0

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ISO 9001

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488 S. Royal Lane | Coppell, Texas 75019 | P 469.892.1122 | T 866.892.1122 | F 469.892.1123 | sales@upgi.com

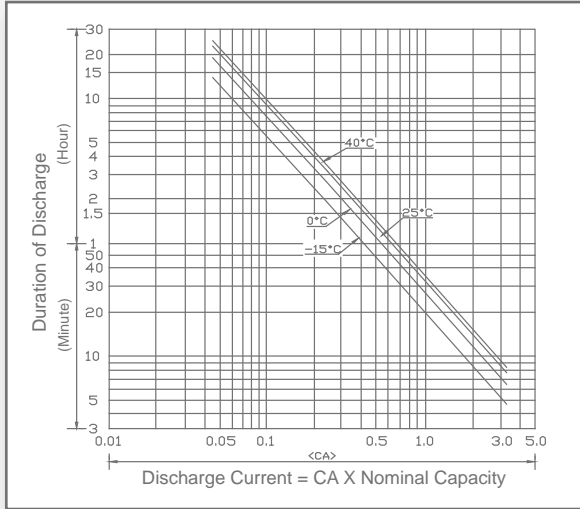
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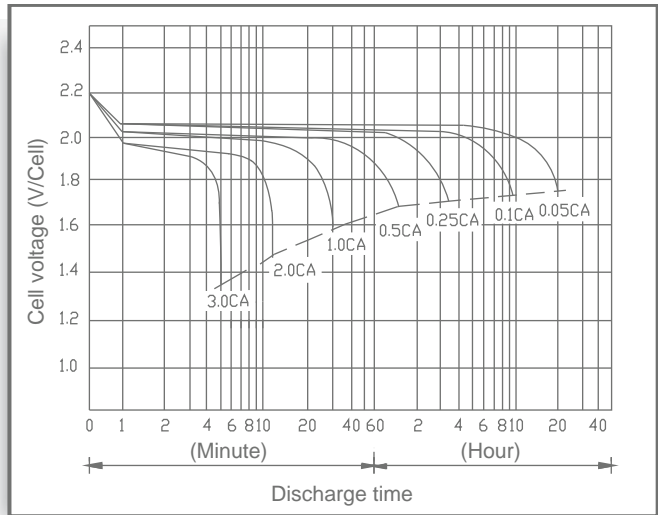
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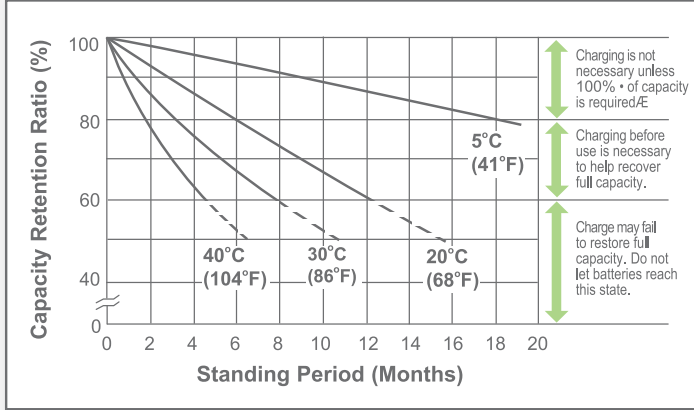
## Discharge Time vs. Discharge Current



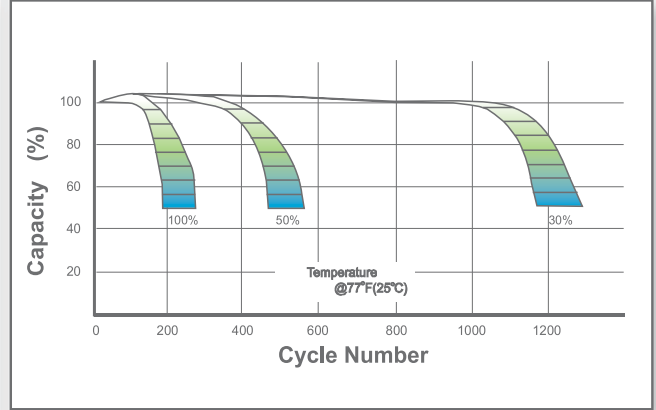
## Discharge Characteristics



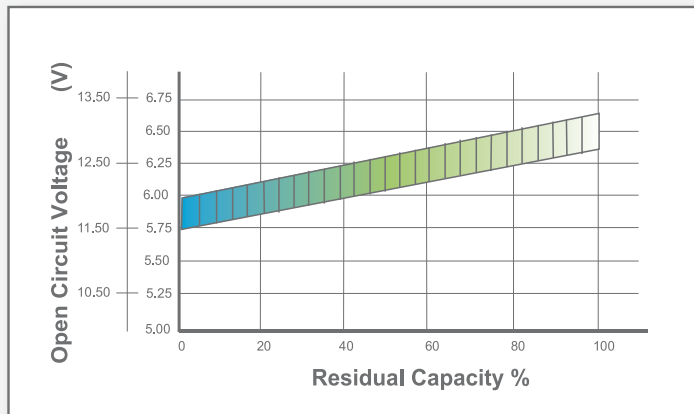
## Shelf Life & Storage



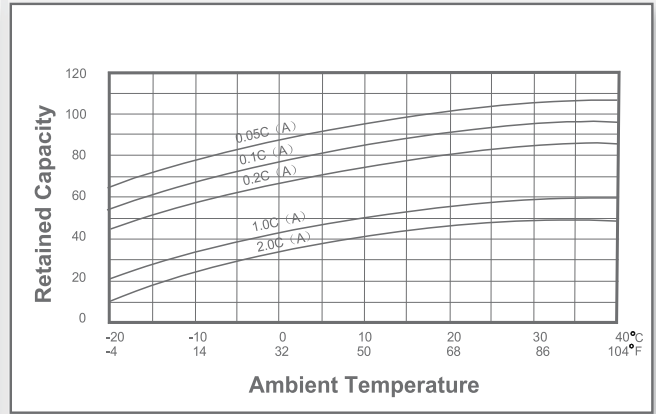
## Cycle Life vs. Depth of Discharge



## 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	Discharge Current(A)		
	Temperature	Set Point	Allowable Range					
Cycle Use	25°C(77°F)	2.45	2.43-2.47	0.30C	1.75	1.70		
Standby	25°C(77°F)	2.28	2.27-2.30		1.60	1.30		
					0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C



Let UPG Power Your Life.

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