

# UPG Sealed Lead-Acid Battery

UPG No. 40648

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.

# UB12180

Maintenance-Free

## Specification

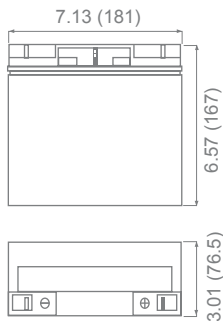
<b>Nominal Voltage</b>	12 volts		
<b>Nominal Capacity</b>	77° F (25° C)		
20-hr. (0.90A)	18.0 Ah		
10-hr. (1.67A)	16.7 Ah		
5-hr. (3.06A)	15.3 Ah		
1-hr. (10.8A)	10.8 Ah		
<b>Approximate Weight</b>	11.9 lbs (5.4 kgs)		
<b>Internal Resistance (approx.)</b>	18mΩ		
<b>Shelf Life</b> (% of normal capacity at 68° F (20° C)			
3 Months	6 Months	12 Months	
91%	83%	64%	
<b>Temperature Dependency of Capacity</b>	(20 hour rate)		
104° F (40° C)	77° F (25° C)	32° F (0° C)	5° F (-15° C)
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.

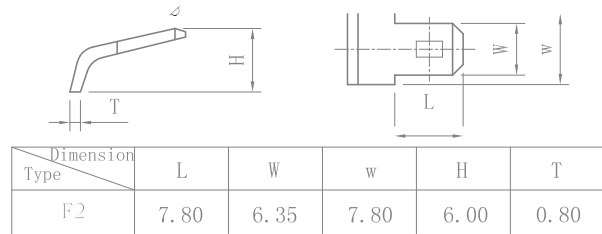
<b>Charge Method</b> (Constant Voltage)	
<b>Cycle Use</b> (Repeating Use)	
Initial Current	5.4 A or smaller
Control Voltage	14.6 - 14.8 V
<b>Float Use</b>	
Control Voltage	13.6 - 13.8 V

## Physical Dimensions: in (mm)

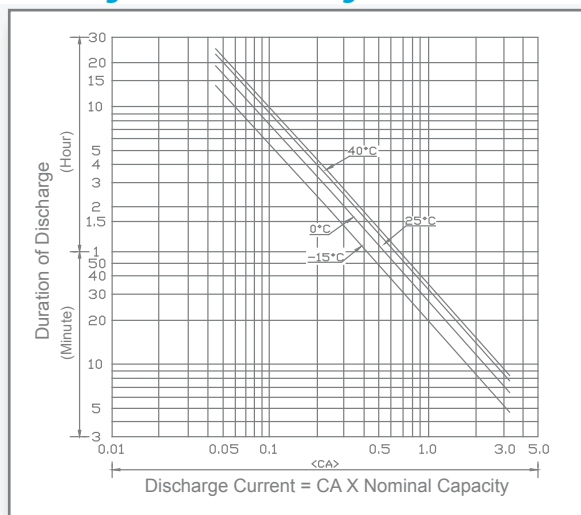


**L:** 7.13 in (181 mm)  
**W:** 3.01 in (76.5 mm)  
**H:** 6.57 in (167 mm)  
**TH:** 6.57 in (167 mm)  
 Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

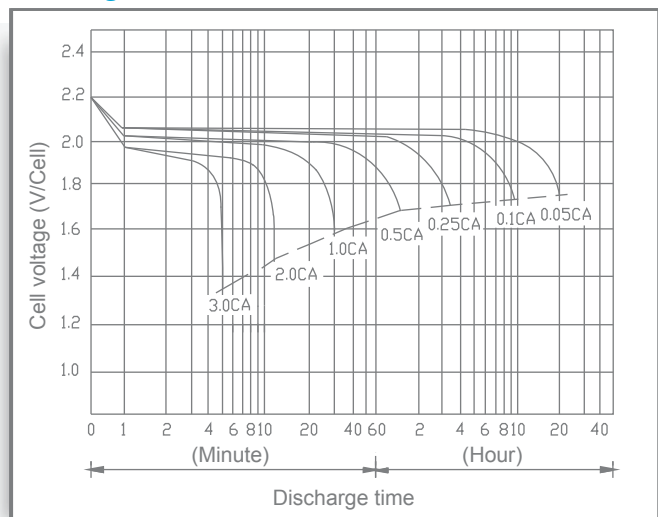
## Terminals



## Discharge Time vs. Discharge Current



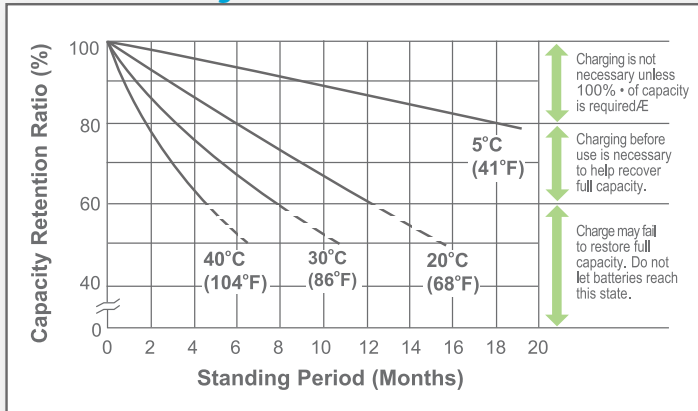
## Discharge Characteristics



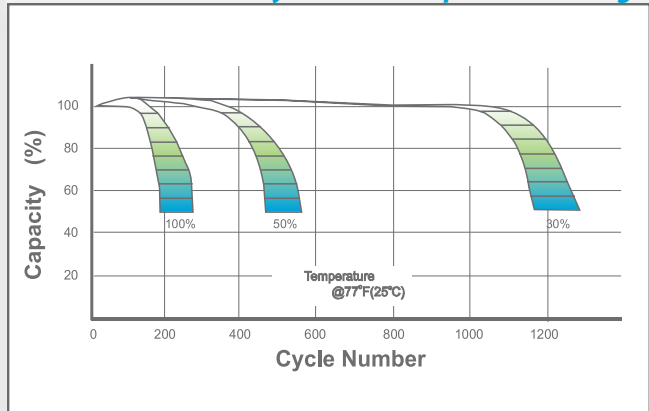
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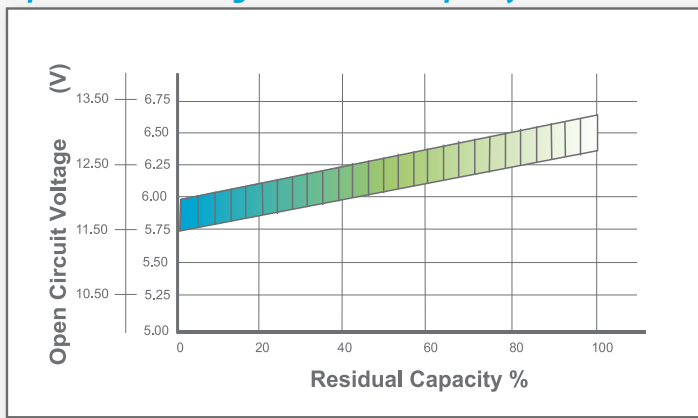
## Shelf Life & Storage



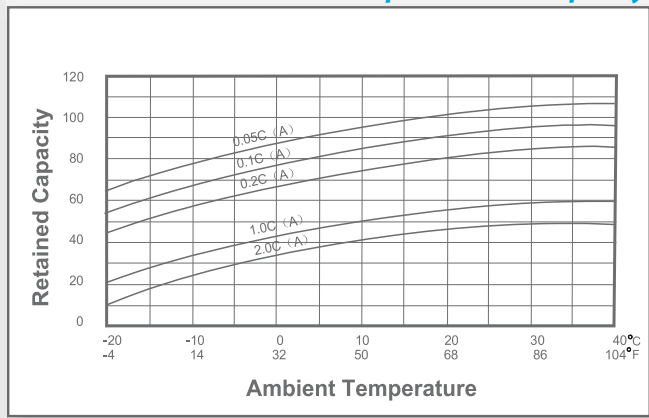
## Cycle Life vs Depth of Discharge



## 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 Current(A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C
Standby	25°C(77°F)	2.30	2.27~2.30						