

# UPG Sealed Lead-Acid Battery

UPG No. 46025

STAY POWERED®

Absorbent 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>	11.4 lbs (5 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.

## Charge Method (Constant Voltage)

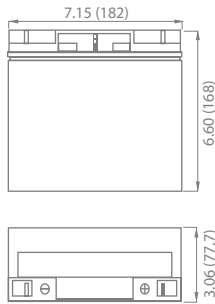
## Cycle Use (Repeating Use)

Initial Current	5.4 A or smaller
Control Voltage	14.6 - 14.8 V

## Float Use

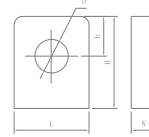
Control Voltage	13.6 - 13.8 V
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## Physical Dimensions: in (mm)



**L:** 7.15 in (182 mm)  
**W:** 3.06 in (77.7 mm)  
**H:** 6.60 in (168 mm)  
**TH:** 6.60 in (168 mm)  
 Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

## Terminals



Dimension Type	L	W	H	h	ø
T4	12.0	3.0	12.5	5.0	5.5

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

F.V/Time	5MIN	15MIN	30MIN	60MIN	2HR	3HR	5HR	8HR	10HR	20HR
1.60V	64.8	31.5	21.0	11.0	6.30	5.00	3.20	2.10	1.70	0.97
1.67V	59.4	30.0	20.2	10.8	6.25	4.95	3.18	2.05	1.67	0.96
1.70V	54.0	28.9	19.8	10.5	6.05	4.89	3.12	2.05	1.66	0.95
1.75V	53.0	28.0	18.3	10.3	5.98	4.70	3.05	2.03	1.65	0.93
1.80V	52.0	28.5	17.7	9.8	5.90	4.61	3.01	1.97	1.60	0.92

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

F.V/Time	5MIN	15MIN	30MIN	60MIN	2HR	3HR	5HR	8HR	10HR	20HR
1.60V	730	368	225	124.5	76.00	55.00	38.00	26.00	20.00	11.30
1.67V	680	345	219	120.0	73.00	54.40	37.50	25.80	19.70	11.20
1.70V	630	336	217	117.0	72.50	52.40	36.85	25.60	19.40	11.10
1.75V	600	325	216	115.0	71.60	51.20	36.50	25.20	19.00	11.00
1.80V	588	314	215	110.5	70.00	50.50	35.40	24.80	18.50	10.80

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UPG is ISO 9001 Certified.

Made in Vietnam

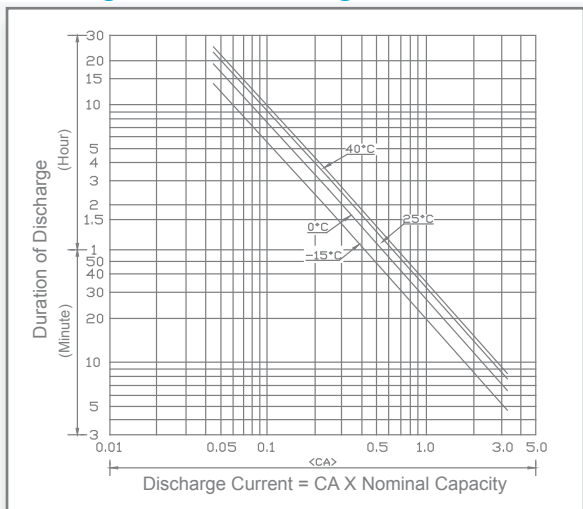
All specifications are subject to change without notice.

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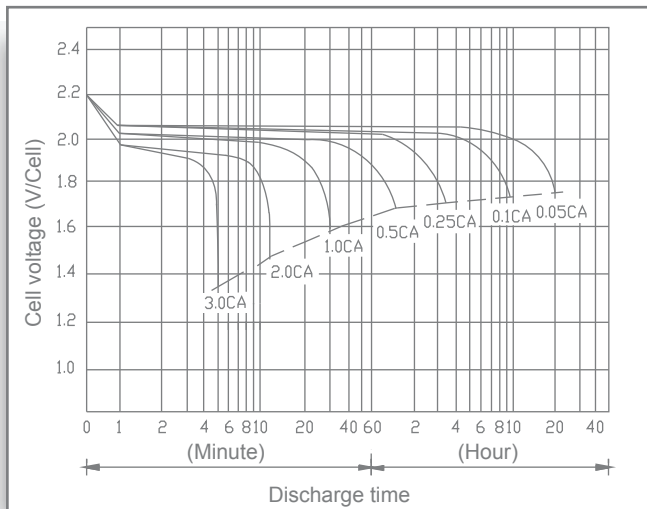
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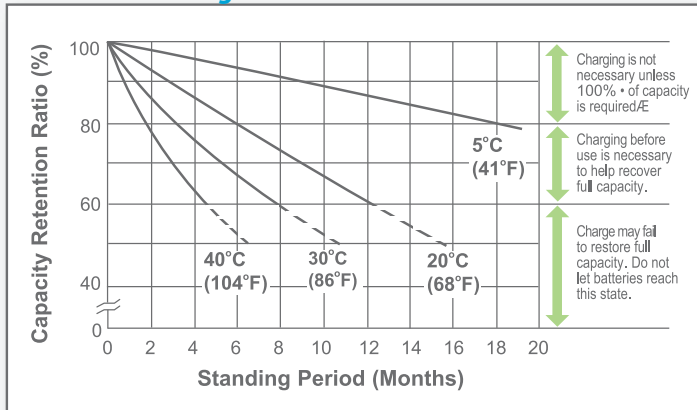
### Discharge Time vs. Discharge Current



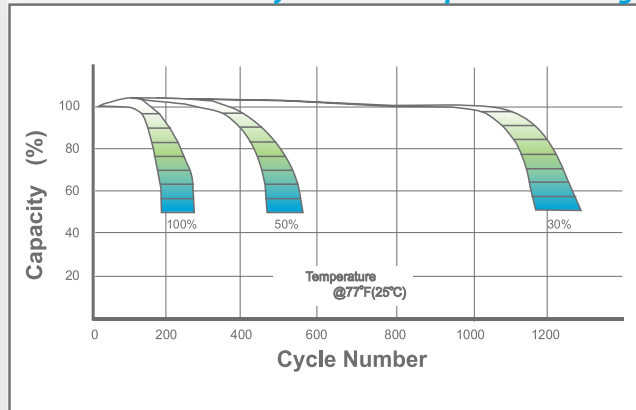
### Discharge Characteristics



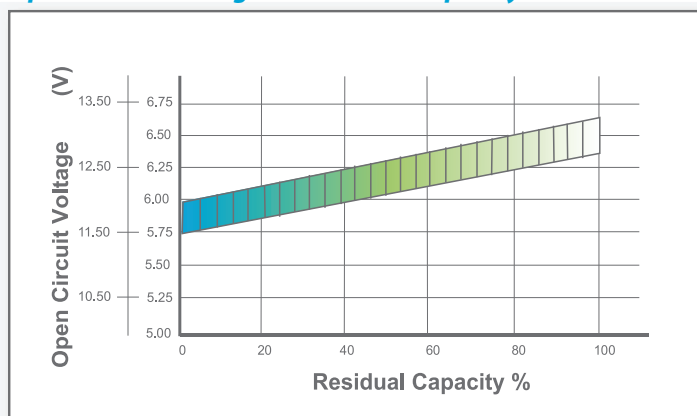
### Shelf Life & Storage



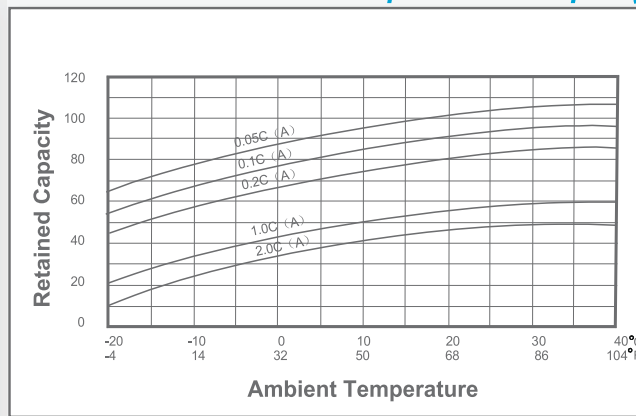
### Cycle Life vs Depth of Discharge



### 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			
Cycle Use	25°C(77°F)	2.45	2.40~2.47	1.75	0.2C>(A)
Standby	25°C(77°F)	2.30	2.27~2.30	1.70	0.2C<(A)<0.5C
				1.60	0.5C<(A)<1.0C
				1.30	(A)>1.0C