

**Specification**

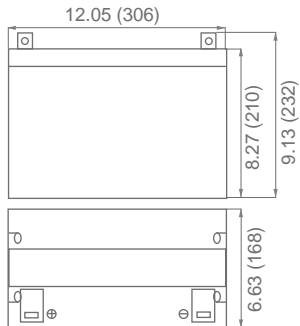
<b>Nominal Voltage</b>	12 volts		
<b>Nominal Capacity</b>	77° F (25° C)		
20-hr. (4.50A)	90.0 Ah		
10-hr. (8.37A)	83.7 Ah		
5-hr. (15.3A)	76.5 Ah		
1-hr. (54.0A)	54.0 Ah		
<b>Approximate Weight</b>	58.4 lbs (26.5 kgs)		
<b>Internal Resistance (approx.)</b>	7mΩ		
<b>Shelf Life</b> (% of normal capacity 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.

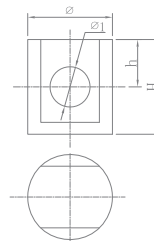
<b>Charge Method</b> (Constant Voltage)		
<b>Cycle Use</b> (Repeating Use)		
Initial Current	18.0 A or smaller	
Control Voltage	14.2 - 14.4 V	
<b>Float Use</b>		
Control Voltage	13.2 - 13.4 V	

**Physical Dimensions: in (mm)**



**L:** 12.05 in (306 mm)  
**W:** 6.63 in (168 mm)  
**H:** 8.27 in (210 mm)  
**TH:** 9.13 in (232 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) Offset Z**

Dimension Type	ø	ø1	H	h
Z1	17.0	8.0	21.5	9.0

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

F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.75V	477	352	282	237	182	151	128	111	80
1.70V	520	370	293	244	185	153	130	112	81
1.65V	543	388	305	250	190	156	132	114	82
1.60V	563	395	310	254	193	157	133	115	83

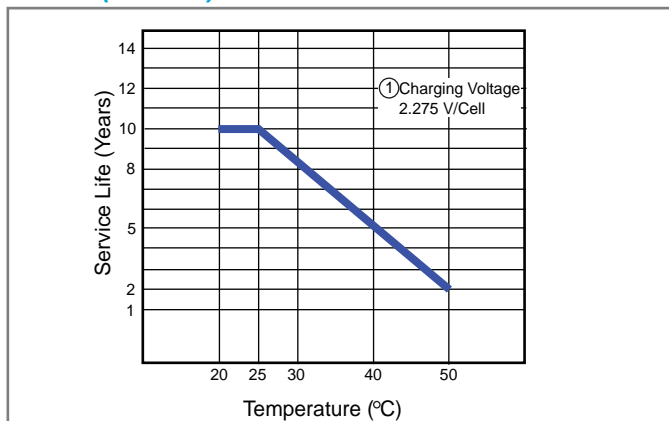
**Constant Current Discharge Characteristics Unit:W (25°C, 77°F)**

F.V/Time	5MIN	10MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	7HR	8HR	10HR	20HR	24HR
1.90V	149	104	70.3	41.2	26.6	19.3	15.4	13.0	11.1	9.7	8.7	7.3	4.0	3.3
1.85V	190	125	82.0	47.8	29.3	21.3	16.8	14.2	12.0	10.6	9.4	7.8	4.2	3.5
1.80V	228	138	89.7	51.2	30.9	22.7	17.9	15.0	12.7	11.2	9.9	8.2	4.4	3.7
1.75V	259	150	95	54.0	32.0	23.3	18.4	15.4	13.1	11.5	10.2	8.3	4.5	3.7

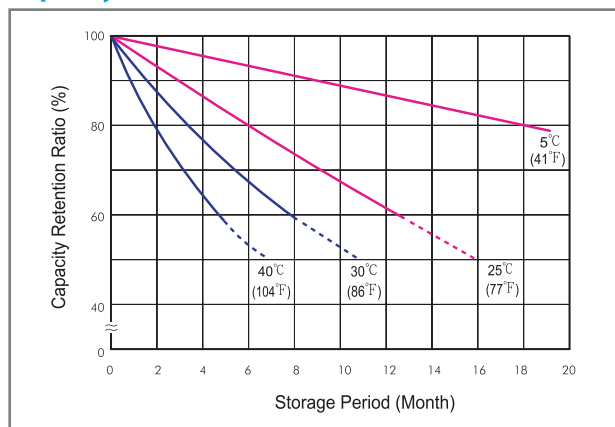


ISO 9001

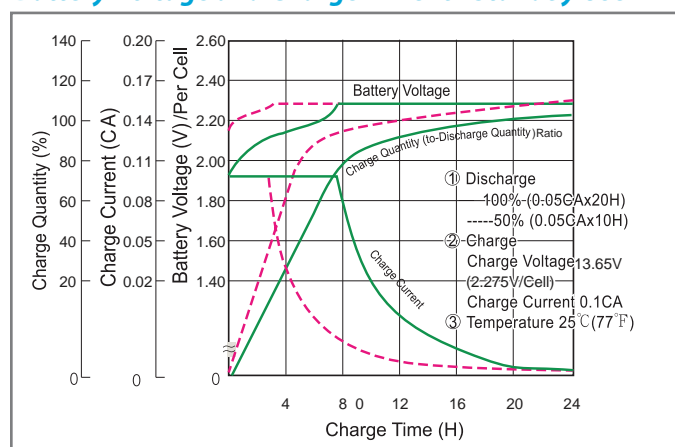
### Trickle (or Float) Service Life



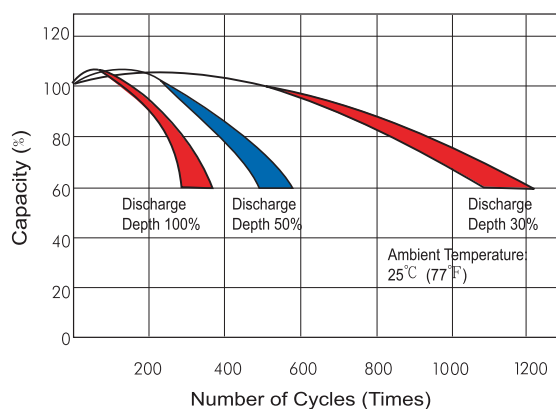
### Capacity Retention Characteristic



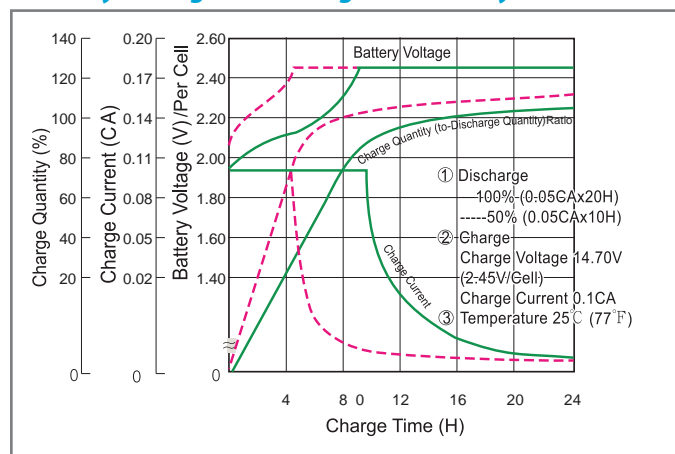
### Battery Voltage and Charge Time for Standby Use



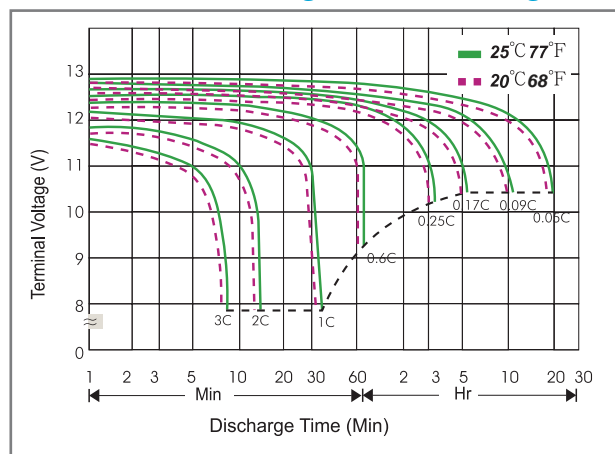
### Cycle Service Life



### Battery Voltage and Charge Time for Cycle Use



### Terminal Voltage (V) and Discharge Time



### Charge Current & Final Discharge Voltage

Application	Charge Voltage(V/Cell)			Max.Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25°C(77°F)	2.38	2.37~2.40	0.20C
Standby	25°C(77°F)	2.22	2.20~2.23	

Final Discharge Voltage V/Cell	1.75	1.70	1.65	1.60
Discharge Current(A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C