

universal battery® batteries featuring **Nano-Silica Construction** and **Nano Silica Collodial Electrolyte** are capable of up to 350 cycles at 100% depth of discharge. Nano-Silica has superior cycle life to Sealed Lead-Acid batteries. Compared to Gel batteries, Nano-Silica has better charge currents at 25% of capacity and higher discharge current up to C/2. A low Self-Discharge rate of 2% a month makes for a long shelf life.

Specifications:

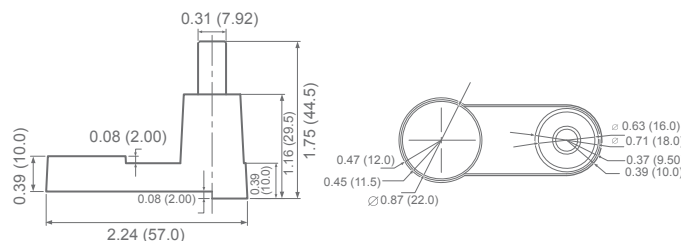
Nominal Voltage	12 Volts
Nominal Capacity	77° F (25° C)
20-hr. (3.75 A) (C/O 1.75V/Cell)	75.0 Ah
10-hr. (6.98 A) (C/O 1.75V/Cell)	69.8 Ah
5-hr. (12.8 A) (C/O 1.70V/Cell)	63.8 Ah
1-hr. (45.0 A) (C/O 1.70V/Cell)	45.0 Ah
Approximate Weight	48.5 lbs (22.0kgs)
Operational Temperature	
Charge	-4°F to 140°F (-20°C to 60°C)
Discharge	-4°F to 140°F (-20°C to 60°C)
Storage Temperature	-4°F to 140°F (-20°C to 60°C)
Charge Method (Constant Voltage)	
Cycle Use (Repeating Use)	
Initial Current	18.8 A or smaller
Control Voltage	14.40 - 15.00 V
Float Use	
Control Voltage	13.80 - 14.10 V
Self Discharge Rate	2% per month @ 25 C
Container Material	ABS (UL94-HB)



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

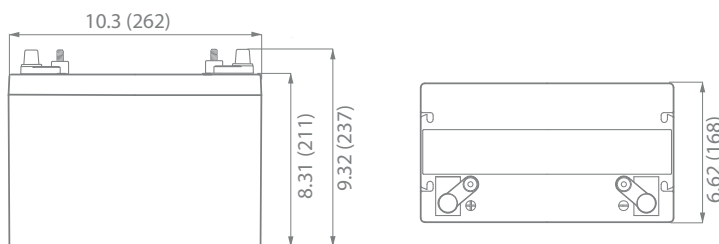
Terminals

Marine Combo Post



Physical Dimensions: in (mm)

Tolerances are: +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions.



L: 10.3 in (262 mm)
W: 6.62 in (168 mm)
H: 8.31 in (211 mm)
TH: 9.32 in (237 mm)

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

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

F.V. / Time	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	8 Hr	10 Hr	20 Hr
9.60V	255.6	186.5	131.3	79.9	41.4	24.7	17.8	13.8	11.4	8.0	7.3	3.9
10.2V	225.0	169.7	117.4	75.3	39.0	23.1	17.3	13.5	11.2	7.9	7.1	3.8
10.5 V	217.1	161.8	111.5	73.0	37.5	22.5	16.9	13.2	11.1	7.8	6.9	3.8
10.8V	208.2	153.0	103.6	71.1	36.5	22.0	16.5	13.0	10.8	7.6	6.9	3.8
11.1V	200.3	145.1	96.7	69.1	35.5	21.4	15.9	12.6	10.5	7.4	6.6	3.6

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

F.V. / Time	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	8 Hr	10 Hr	20 Hr
9.60V	2793	2039	1434	869	494	288	211	165	136	95	86	47
10.2V	2607	1941	1342	860	464	275	206	161	133	93	84	45
10.5 V	2532	1886	1290	899	450	268	201	158	132	93	83	45
10.8V	2500	1838	1241	852	437	263	197	154	129	91	82	45
11.1V	2454	1777	1184	846	432	262	195	154	129	90	80	43

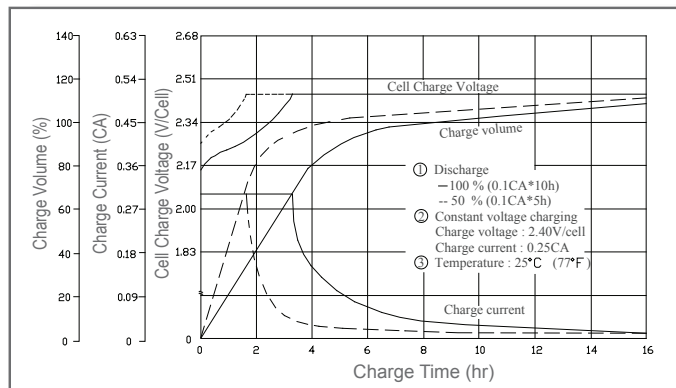
universal battery®

Nano-Silica Battery - Group 24

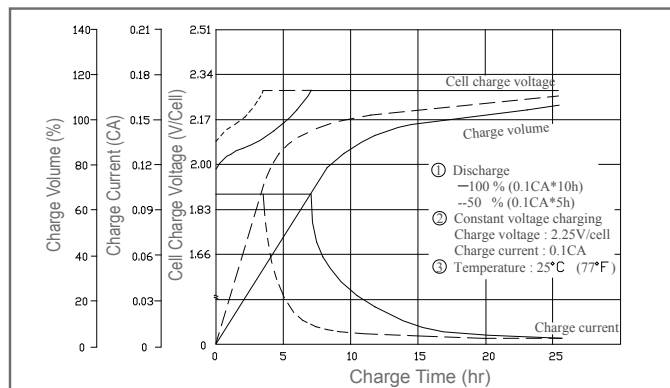
UB12750NS

Maintenance-Free

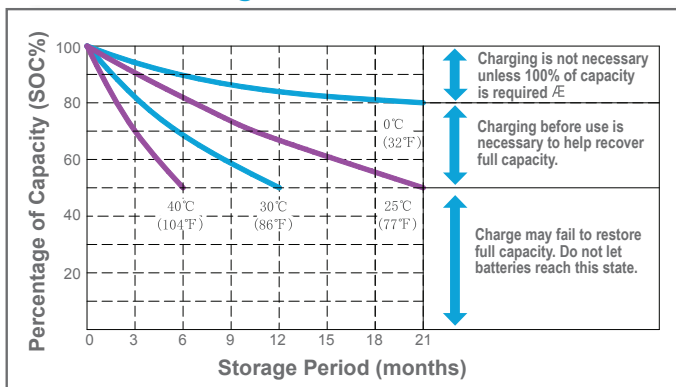
Battery Charging Characteristics for Cyclic Use



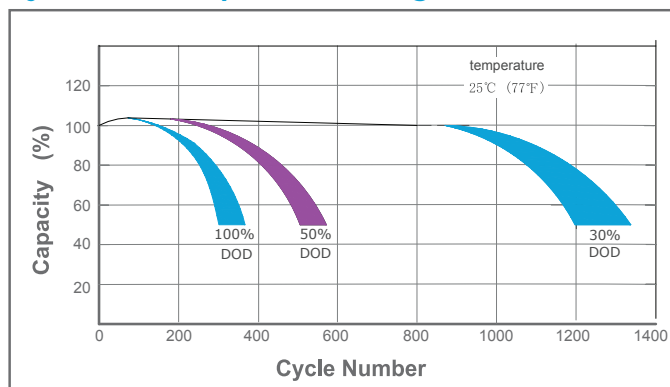
Battery Charging Characteristics for Standby Use



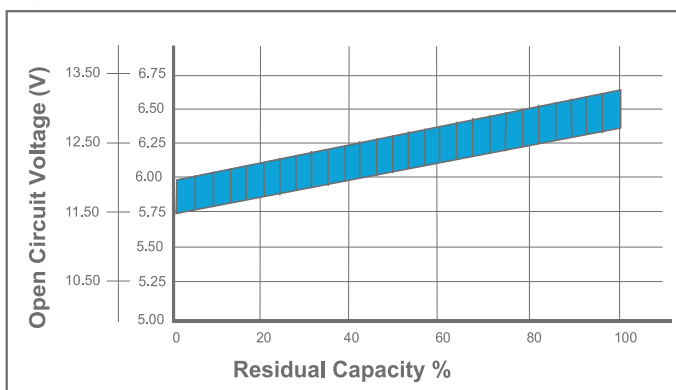
Shelf Life & Storage



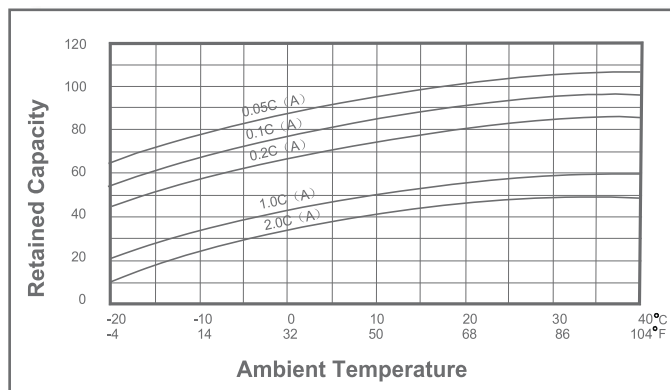
Cycle Life vs Depth of Discharge



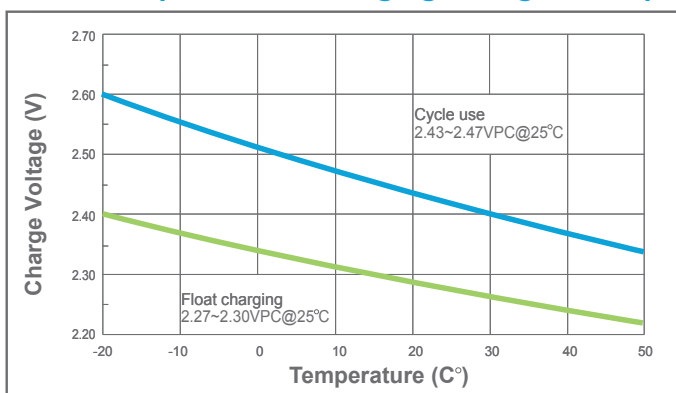
Open Circuit Voltage vs Residual Capacity



Effect of Temperature on Capacity



Relationship Between Charging Voltage & Temp.



Charge Current

Application	Charge Voltage(V/Cell)			Max.Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25°C (77°F)	2.45	2.40~2.50	0.25C
Standby	25°C (77°F)	2.33	2.30~2.35	

Final Discharge Voltage

Final Discharge Voltage V/Cell	1.75	1.70	1.60	1.30
Discharge Current (A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C