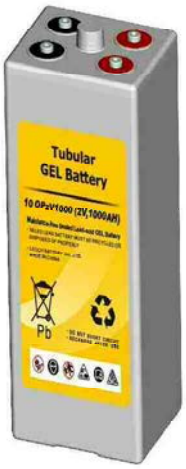
Tubular Gel Battery

10 OPzV1000 (2V1000AH)

Specification

Nomial Voltage	2V	
Capacity	1000.0Ah@10hr to 1.80V/cell	
Dimension	Length	233±2mm (9.17 inches)
	Width	210±3mm (8.27 inches)
	Container Height	646±3mm (25.4 inches)
	Total Height (with Terminal)	681±3mm (26.8 inches)
Approx Weight	Approx 78.5 kg (173.1lbs)	
Container Material	ABS	
Rated Capacity	1000 AH/100.0A	(10hr,1.80V/cell,20°C/68°F)
	865 A H/173A	(5hr,1.75V/cell,20°C/68°F)
	762 AH/254A	(3hr,1.75V/cell,20°C/68°F)
	568 AH/568A	(1hr,1.60V/cell,20°C/68°F)
Max. Discharge Current	8000A (5s)	
Internal Resistance	Approx 0.45mΩ	
Operating Temp.Range	Discharge : -20~55°C (-4~131°F) Charge : 0~40°C (32~104°F) Storage : -20~50°C (-4~122°F)	
Cycle Use	Initial Charging Current less than 250.0A. Voltage 2.40V~2.50V at 20°C(68°F)Temp. Coefficient -5mV/°C	
Standby Use	No limit on Initial Charging Current Voltage 2.25V~2.30V at 20°C(68°F)Temp. Coefficient -3mV/°C	
Self-discharge	<2% pre month @ 20°C(68°F)	



Applications

- *Solar energy, wind energy*
- *Electric power, nuclear power*
- *Communication*
- *Ship, maritime affairs*
- *UPS, medical facilities and emergency lighting*
- *Situation with high environmental protection and energy-saving*
- *Better safety performance and reliability*
- *Designed service life of 20 years*

Main Technical Advantages

- Plate: positive plate adopts tubular plate which can prevent active material falling, and adopts multi-component alloy frame. have fine corrosion-resisting performance and long service life. Negative plate adopts special radiated structure.
- Separator: adopt special micro-pore PVC-SiO_2 separator from Europe AMER-SIL Company, separator have big porosity and low resistance.
- Electrolyte: adopts Germany gas silicon dioxide, electrolyte in gel state in the battery without flowing, leakage and lamination can be avoided.
- Safety valve: adopt Germany technology, constant opening and closing, accumulator case expansion, damage and electrolyte dry up can be avoided.

Constant Current Discharge (Amperes) at 20 °C (68°F)

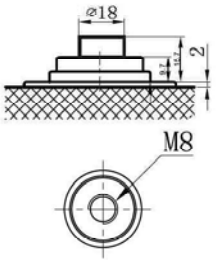
F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.85V/cell	682	648	558	445	295	228	157	110	93.7
1.80V/cell	839	784	650	502	324	249	169	118	100
1.75V/cell	992	877	693	522	333	254	173	119	102
1.70V/cell	1113	957	733	542	342	259	175	121	103
1.65V/cell	1196	1011	763	558	349	264	178	122	104
1.60V/cell	1251	1047	782	568	354	267	180	123	105

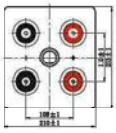
Constant Power Discharge (Watts) at 20 °C (68°F)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.85V/cell	1268	1217	1066	862	574	446	309	217	186
1.80V/cell	1532	1452	1230	964	627	483	332	232	199
1.75V/cell	1782	1603	1298	997	641	492	337	236	201
1.70V/cell	1964	1724	1360	1029	654	500	341	238	203
1.65V/cell	2071	1793	1400	1051	665	507	345	241	205
1.60V/cell	2126	1830	1421	1062	670	511	347	242	206

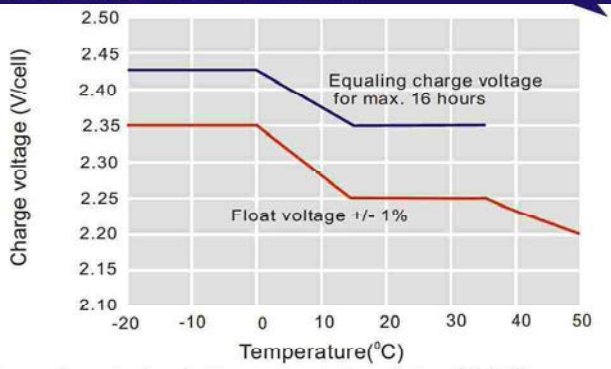
Dimensions

Terminal



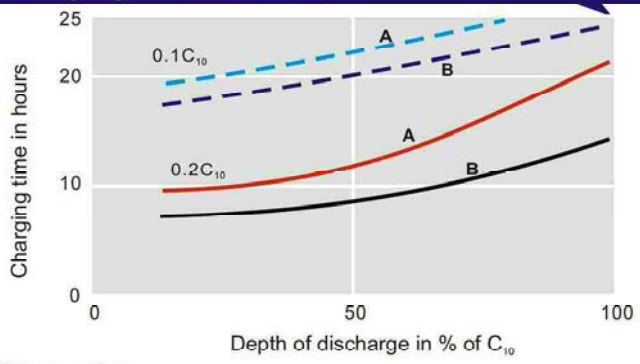


Discharge Characteristics



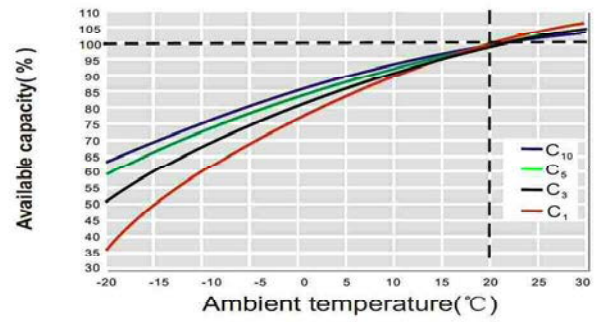
For continuous charging we recommend a voltage of 2.25V.
The charging voltage must be compensated to the curve for
a continuously different battery ambient temperature.

Charging Characteristics

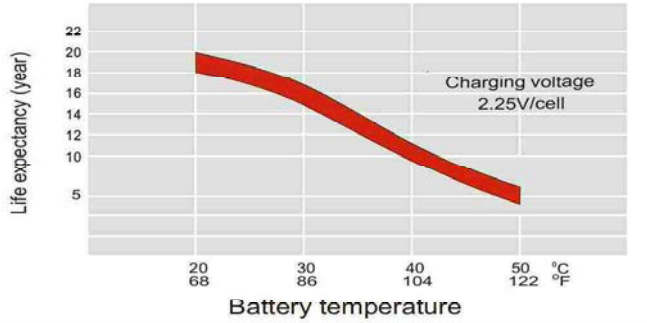


Charge voltage:
A—2.25 V/cell B— 2.40 V/cell
State of charge 100 % State of charge 90 %

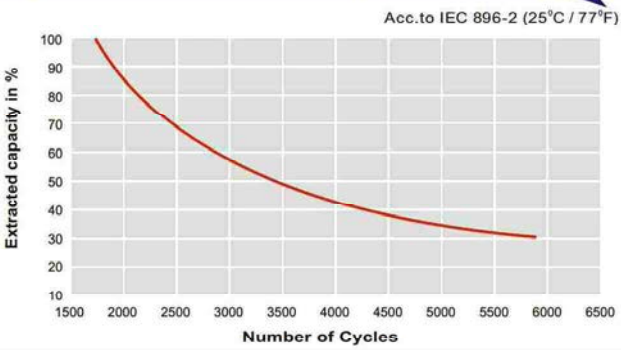
Temperature Effects in Relation to Battery Capacity



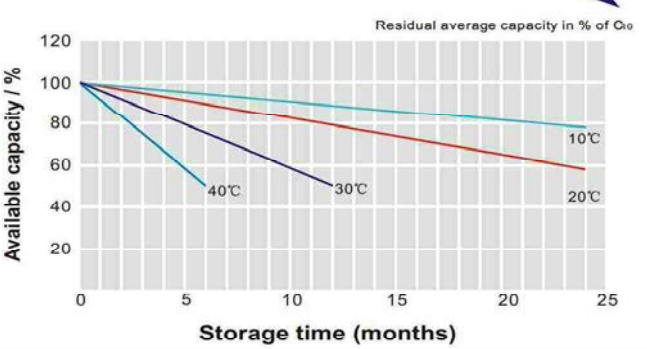
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



General Relation of Capacity VS. Storage Time



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