

Sooriyan Pool and Spa Ionizer

by Hilltop Solar



If you're reading this, then you've made the right choice to save money on pool chemicals and electricity. Thank you for purchasing the premium solar ionizer unit from www.solarionizer.com

IMPORTANT INFORMATION ABOUT SOORIYAN SOLAR POOL AND SPA IONIZER UNITS

- Solar Ionizer unit will be damaged if unit is not in water when exposed to sunlight.
 - **Ionization LED light:**
 - **Models – SNB1—XXXXX – LED ON when out of water.**
 - **Models—SNB2—XXXXX—LED On when in water.**
 - Can be used in a chlorine and salt pool (above-ground or inground)
 - Not compatible with pools that use biguanide.
 - **NEVER** clean the copper anode. Sooriyan solar ionizer is maintenance free.
 - If solar ionizer unit is damaged during shipping, please contact customer service at: customerservice@solarionizer.com
 - Sooriyan Solar Ionizer units are assembled and tested in USA. To activate the unit place unit in a pool and/or spa.
-

Why Sooriyan Solar Pool and Spa Ionizer?

After several years of pool ownership we wanted a product that simplified pool maintenance, saved money in chemicals & electricity and had an indicator that showed if the unit was working.

Sooriyan solar ionizer is the **ONLY** unit in market with an ionization LED and incorporates numerous enhancements that were discovered during the last 36 months of ACTUAL testing in a pool in USA.



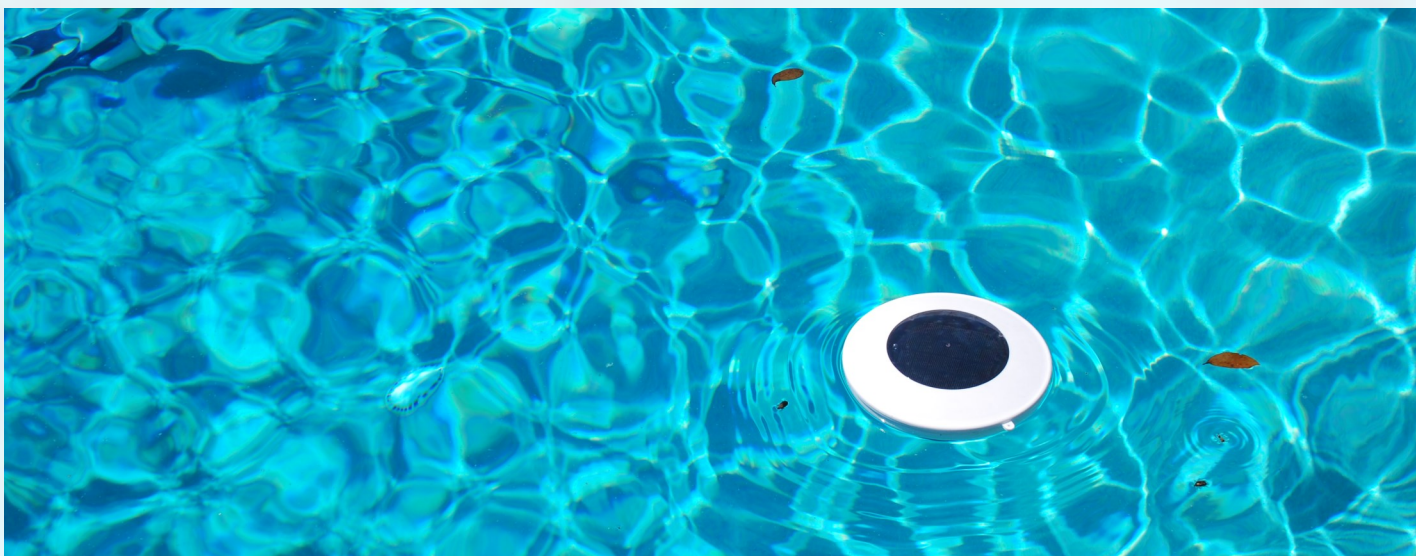
Ionization LED

How Solar Ionizers work

An ion is an atom, or a group of atoms that possess an electrical charge (“+” or “-“). Ions exist everywhere and a pool or spa is full of ions. It was discovered long ago that copper ions perform as an algaecide, where it prevents algae growth, while silver ions act as a bactericide, where they destroy bacteria.

Solar pool and spa ionizer is a device that generates metal ions from the anode using electricity generated from the sun. Copper and/or silver ions in the anode are energized with a low voltage direct current supplied by the solar panel that causes the positively charged atom(s) of copper and silver to be introduced into the body of water. These ions float until they encounter a negatively charged microorganism to which they attach and rapidly destroys it.

This process results is less use of chemicals to disinfect the water, reduce pool pump runtimes that saves electricity.



Zero Chlorine Solar ionized pool water

Pool Chemistry: Chlorine— 0 ppm, PH — 7.2, Alkalinity— 110 ppm

SOORIYAN SOLAR IONIZER ADVANTAGES

	Sooriyan Solar Ionized	Chlorine water	Salt water
Evaporated by Sunlight	No	Yes	Yes
Frequent replenishment of chemicals	No	Yes (Chlorine)	Yes—(Salt)
Chemical Free	Yes	No	No
Saves Electricity	Yes	No	No
Shelf Life	Unlimited	Limited	Limited
Maintenance free	Yes	No	No



Solar Ionizer Specifications

Solar Panel Type	Highly efficient mono-crystalline solar panel made out of highest grade silicon
Solar Panel Specifications (DC)	Voltage: 6.0 V to 7.5 V Current: 220 to 285 Milli-amps Wattage: 2.1 watts (Optimum)
Moisture proofing	Unit contains desiccants to absorb moisture that may appear during normal operations and dissipates as temperatures rise during the day.
Case type	Weather resistant Anti-UV case
Sealing type	Ultrasonic welding
Anode	1.0 Lbs or 454 gram copper alloy anode - Size: Metric 6 & Metric 8 Threads.
Anode Composition	Copper, Silver, Oxygen and other beneficial minerals.
Unit Effectiveness	Up to 35,000 in optimal conditions*. Shaded or screened pools may require two units. <i>Optimal conditions: 8+ hours of direct sunlight in 70+ degree weather, and optimal pool chemistry of 7.2 7.6 PH and 80-120ppm alkalinity.</i>
Ionization Light	<i>LED light on when unit is out of water indicates unit is fully functional with no short circuits. Light is off in water to maximize current flow for ionization.</i>
Coil	<i>Stainless steel cathode .</i>
Basket	<i>Nylon anode debris basket .</i>
Bolt	<i>Nylon wing screw. Size: Metric — 8</i>
Operating Environment	<i>Fahrenheit: 45 to 140 degrees - Celsius: 2 to 60 degrees.</i>

LED indicator (Blue) will not illuminate if problem is detected within the sealed unit or if the anode (copper) and cathode (coil) are touching or if there's a short circuit.



Free Chlorine	1 to 3 ppm
PH Level	7.1 to 7.7
Alkalinity	80 to 120
Water Hardness	400 to 500 ppm
IMPORTANT	
<ul style="list-style-type: none"> • High chlorine level reduces effectiveness of copper and silver ions. • High PH and Alkalinity: <ul style="list-style-type: none"> ⇒ Significantly affects the effectiveness of copper ions. ⇒ No effect on silver ions. 	

- Unit is only to be used in a pool and/or spa that uses chlorine or salt system and **not compatible with pools that use biguanide.**
- **Do not use** pool shock in solar ionized water. Shocking the pool destroys beneficial mineral ions.
- Pool water clarifiers may be used at reduced levels to remedy cloudy water.
- For “green” pools or spa’s, the problem needs to be remedied before placing unit in water.

PLEASE GO TO WWW.SOLARIONIZER.COM TO OBTAIN ANSWERS TO FREQUENTLY ASKED QUESTIONS.

To achieve optimum results with a Sooriyan Solar Ionizer unit, we highly recommend the digital water tester (below) by AquaChek.

Numbers don't lie!

Checking water chemistry is paramount to a clean, clear, healthy pool or spa.



Save money on Electricity

When Sooriyan Solar Ionizer units are used, pool pump may be operated in block hours to save money on electricity costs. Pump runtimes may be reduced based on individual pool requirements and external factors such as water temperature, air temperature, rainfall, pool usage etc. Below noted is an example, that has worked well in tropical environments:

Cooler Months	Run pump 10.5 hours a week	Run pump during warmest part of day for 1.5 hours.
Warmer months	Run pump 6 hours per day.	Morning: 10 am to 1 pm

COPPER TEST IN POOL AND SPA WATER

Testing for copper in pool and spa water is important to ensure there's sufficient level for disinfection and to remove unit if there's too much copper. In a pool of 22,000 gallons, to build up adequate level of copper It may take approximately 6 to 8 weeks and less time in a spa. There are additional factors such as temperature, amount of sunlight, humidity and rainfall that may shorten or lengthen this time frame.



Copper test strips are inaccurate and provides unreliable information.

Professional water testing at a state certified facility yields the most accurate results and is **highly recommended**. We offer this service for a nominal fee. Please contact us at customerservice@solarionizer.com.

To visually verify is a solar ionizer is functional without a water test, we have found the following to be helpful:

- A blueish tint on bottom of ionizer basket after a few days, is validation that ionization is taking place.
- Visually inspect the pool for algae and if you don't see any in pool and/or spa, it is an indication that copper and silver ions are helping to sanitize the water.

Sooriyan solar pool and spa ionizer will work in a pool with shade and/or reduced sunlight. Pools that have a lot of shade or in a screened area may require multiple units.



Sooriyan Solar pool and spa Ionizers are **maintenance free** and no cleaning of anode or cathode is required. Unit's working, if LED is illuminated (Yes, it's that easy!)

If LED is "OFF", check for short circuits between anode and coil. For more information, please visit www.solarionizer.com or contact us at customerservice@solarionizer.com

BEST PRACTICE



- If asked at an establishment that sells pool chemicals about Solar pool ionizer(s), advice provided may not be accurate and/or contradictory.
- Our testing in a tropical environment over 36 months has yielded, the use of Solar pool ionizer(s) reduced our pool maintenance costs by 81% and electricity usage by over 63%.
**Individual results may vary based on geographic location, temperature, cost of electricity etc.*
- Water chemistry determines effectiveness. Ensure pool and/or spa water chemistry is within specified range(s).
- Use of metal removers will eliminate the beneficial mineral ions generated by the Solar Ionizer.
- Solar Pool Ionizer is NOT designed to be used with Baquacil, Soft Swim branded products or other products with similar “biguanide” chemistry.
- Pool chemistry is paramount for optimum performance. If pool has gone “green” then then must be first remedied before adding the solar ionizer to pool or spa.
- Do not use pool shock in solar ionized water. Shocking the pool destroys beneficial mineral ions. Pool water clarifiers may be used at reduced levels to remedy cloudy water.
- Remove Solar Ionizer from pool or spa if environment below minimum operating temperature.