

Consol Solar Jar (CSJ) Technical Specifications

Suntoy was approached by **Consol Glass** to design a solar light in the lid of a one-litre classic preserve jar. Design considerations included durable electronics, rechargeable batteries, LED lights and a solar panel. Suntoy designed a unique on-off switch that has no moving parts and is waterproof - the first light switch of its kind registered with patent authorities. The **Consol Solar Jar** is primarily a reading light and portable lantern. It is ideal for communities living without electricity and off-grid. It also inspires creative table décor as a **Theatre in a Jar**. On a clear sunny day, a full charging offers six to twelve hours of light. On an overcast day, a full charging offers approximately one to three hours of light. An idea that sparked illuminated activations truly is **bottled sunshine**. The principle is simple and seductively clever: it stores energy during the day and releases light at night. It's a fun and sustainable alternative light supply that makes it easy to go green!

Description	A battery-powered lantern charged by an integrated solar panel. A solar-powered, portable glass lantern with carrying handle. For functional and decorative use.
Specifications	1 x circular solar PV panel, *3V 135mA From the outside and the users perspective the two are identical. 2 x 1.2V 600mAh AAA NiMH batteries 4 x high-bright LEDs Fitted onto PC board and LED board, which fits into the lid of the 1litre glass jar. Rubber seal ensures no moisture or liquid can enter the bottle (lid adequately screwed onto bottle) Unique magnetic switch: no moving parts = no wear and tear *(The CSJ1 had a 4V 100mA panel with conventional electronic components. The new improved CSJ2 has a microprocessor and a 3V 135mA solar panel resulting in a 30% faster solar charge time.)
Operation	Swivel rectangular wire clip with small circular magnet so that magnet rests on the solar panel. With one hand, hold wire mechanism by circular hooks of handle. Use other hand to rotate bottle until white indicator dot on panel lines up with magnet. Then flip magnet to turn light off and on.
Battery Protection Feature	The light will turn off automatically when battery low voltage is reached. This protects the battery and thus extends battery life.
Power Output	Equivalent to 1/2 candle-power on spread, but far brighter as LEDs are directional light sources. 120mW power output 15Lm light output Efficiency >80%
Uses	Rural lighting for off-grid dwellings Use for reading, cooking, general social activities Reduces fire hazard associated with candles and paraffin lamps Camping and outdoors Events and decorations Path and passageways Night-light and studying light
Charging	Unit should be positioned on north side of dwelling to receive maximum amount

	<p>of sunlight (in South Africa)</p> <p>1 hour direct sunlight = 1 hour of light</p> <p>Average 6-9 hours of run time per day</p> <p>± 2 hours of run time from charge on rainy, overcast day</p> <p>Designed to comfortably read an A4 page in complete darkness</p>
Guarantee Period	<p>Each unit has a unique serial number determining date of manufacture.</p> <p>Unit is guaranteed for 1 year from date of manufacture on a swop-out basis at a Consol Xprs shop (electronic components). Ts & Cs apply.</p>
Life Cycle	<p>The unit's lifetime depends on the battery life.</p> <p>The batteries are rated to give 500 cycles (full charge-discharge) or 18 months of continuous use.</p> <p>If the units are only partially discharged every day, the life expectancy can go up to ± 4 years.</p>
Storage	<p>The units can be stored between -20 and +35 degrees Celsius for prolonged periods of time.</p> <p>To protect battery life and ensure always-available charge, it is recommended to expose the units to 4 hours of direct sunlight every 4 months.</p> <p>Where possible, do not store in a dark place (e.g. a cupboard) for extended periods of time, as this will result in the batteries discharging.</p> <p>Always charge the unit before storing.</p>
Recycling	<p>The Consol glass jars are 100% recyclable.</p> <p>The electronics should be disposed of at an E-Waste recycling facility.</p>
BEE Compliancy	<p>This product line has created 55 full-time jobs for previously unskilled and unemployed men and women. They have all received training and are fully capable of manufacturing this product. The majority of our staff is from Alexandra and Soweto.</p>
Design and Manufacture	<p>In South Africa</p>