

Firmenanschrift aufbewahren - Nicht geeignet für Kinder unter 3 Jahren! - Verschluckbare Kleinteile! Keep the address of the company - Not suitable for children under 3 years! - Contains small parts! Veuillez conserver l'adresse - Ne convient pas pour les enfants de moins de trois ans! - Contient de petites pièces pouvant être absorbées! Adres bewaren - Niet geschikt voor kinderen beneden 3 jaar! - Kleine onderdelen Kunnen worden ingeslikt!

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No. 78889



Parts list			
Number	Component	Value / Description	
1	Circuit board (PCB) 63 mm	fitted with Qx5252	
3	LEDs	white	
1	LED	green	
3	Slide switches	Toggle switch, 2 pole	
1	Resistor	100 ohm	
1	Inductor	56 µH	
1	Inductor	220 µH	
1	Simple battery holder	Size "AA", UM-3X1	
1	NiMH battery	600 mAh, 1.2 V	
1	Circular solar panel	50 mA @ 2V	
3	Separators made from plastic		
1	Cable	red	
1	Cable	black	

We recommend:

Supervision of the assembly and the soldering process by an adult! (Supervise all soldering sites at all times!)

Jam-jar lamp,
solar-powered, assembly kit



What else is required:

Jam-jar or preservative jar, lid diameter at least 85 mm
Metal drill bit 5 mm
Hand counterbore
Glue gun with adhesive cartridges
Soldering iron
Solder

Assembly kit for solar-powered jam-jar lamp

General: This soldering assembly kit should provide an easy introduction to the basics of soldering. It is perfectly suited for teaching how to solder in schools and workshops. As well as this, the jam-jar assembly kit can be used at summer camps, on summer courses and for other activities to help teach kids how to solder.

Features of the solar-powered jam-jar lamp assembly kit

If the circuit board is already soldered and installed in the jam-jar, it can be used outside as a solar lamp or a solar powered garden decoration.

The energy of the sun is captured by the solar panel and stored in the battery. As soon as it gets dark and as long as the battery has been able to store energy over the course of the day, the 3 LEDs should be able to illuminate automatically. The jar shines from within and illuminates its surroundings. With the addition of some decorative materials such as a coloured or patterned serviette, every jam-jar can be decorated uniquely. Whether you paint the glass, attach paper cuttings in a collage or stick on glitter, sequins or seashells - your creativity should know no bounds!

The jam-jar lamp can be switched between summer and winter settings in order to guarantee the longest possible illumination period. In summer, the lamp functions for 5 hours at a time.

Safety Instructions

- Keep this set of instructions in a safe place so that it can be consulted again in the future if needed! It contains important information!
- If the battery is defective, only replace it with a new battery of the same value. (600mAh/1.2V)
- This assembly set is solely intended to be powered using batteries. **NEVER connect the assembly kit to a mains voltage of 230 V! This could seriously pose a danger to your life and cause death or severe injuries!**
- During soldering, the soldering iron, solder and the component parts which are being soldered are extremely hot. Please be especially careful with them!
- Always use a soldering pad when soldering! This prevents the component parts and circuit board from sliding around.
- In order to keep the soldering iron secure during assembly, we recommend using a soldering iron stand.

Instructions for protecting the environment

General: Please bring the circuit board to a certified waste disposal site when it ceases to function. This ensures that the circuit board is disposed of according to legal guidelines. You can actively ensure that the environment is protected by following the regulations in place.

Battery regulations: Dearest Customer, you have purchased a product from us which requires batteries. While the battery life is indeed very long, the battery must eventually be disposed of at some point. Old batteries DO NOT belong in the domestic waste. Consumers are legally obliged to bring batteries to an appropriate collection point for disposal. Old batteries contain valuable raw materials which can be recycled. You can also send your used batteries to: SOL-EXPERT group, Mehlisstrasse 19, 88225 Baidt.

Assembly instructions:

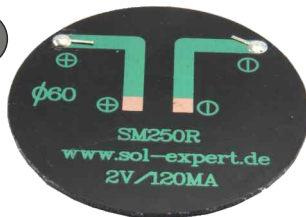


1 Remove label from the jar



2 Solder solar cell

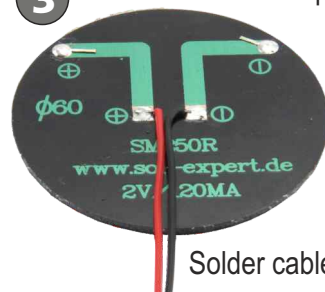
1



2



3

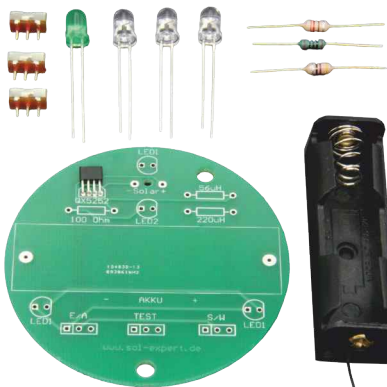


Contacts pre-solder

Solder cable

3 Solder circuit board

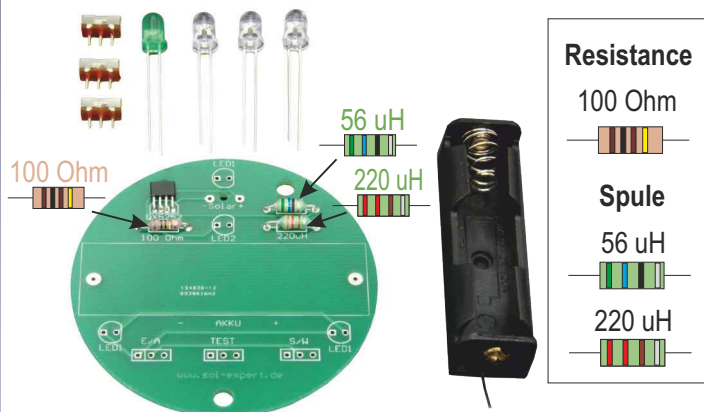
The smaller IC (Qx5252) has already been soldered!



A

Solder on the two inductors and resistor, take care when soldering the resistor!

B



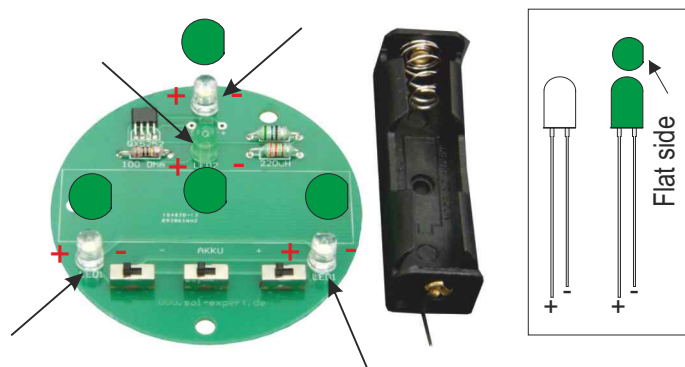
Solder the three switches:



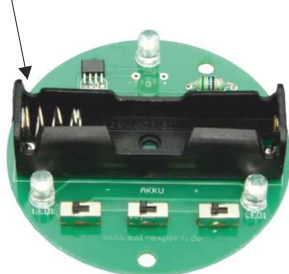
C

Solder on the three white LEDs and the green LED! Ensure the polarity is correct; the flat side to the right:

D



Solder on the battery holder!
Ensure the polarity is correct;
the battery holder spring
to the left:

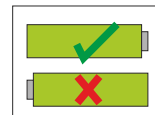


E

Insert the battery;
ensure the polarity
is correct with
the positive
pole to the right:



F



4 Installing the circuit board in the lid

Draw three hole
positions for
the separators:



G



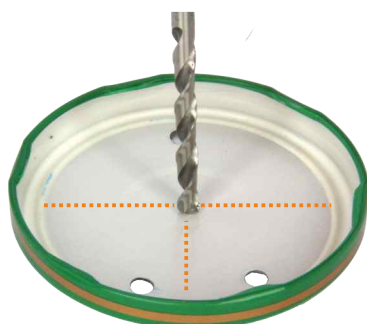
Drill three holes for the separator:



H

Metal drill bit 5 mm

Drill a hole through which the cable can be fed,
exactly in the centre of the lid:



I

Metal drill bit 5 mm

Deburr the four holes on the outside:



J

Hand counterbore

Deburr the four holes from the inside:



K

Hand counterbore

Install the separator in the lid:



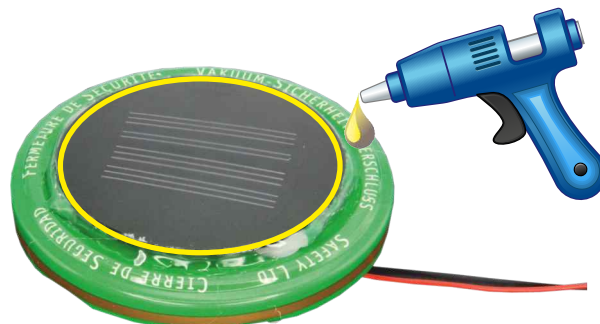
L

Feed the solar cell cable through the lid:



M

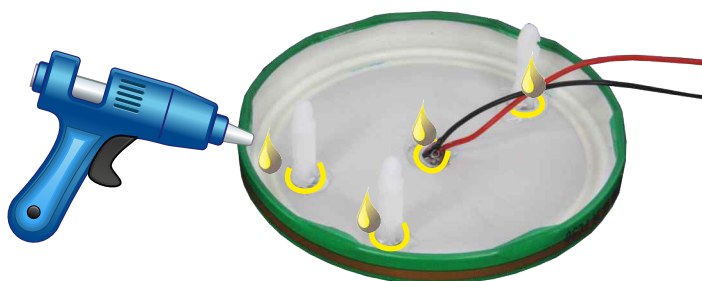
Glue the solar cell with hot glue so that it
is sealed and waterproof:



N

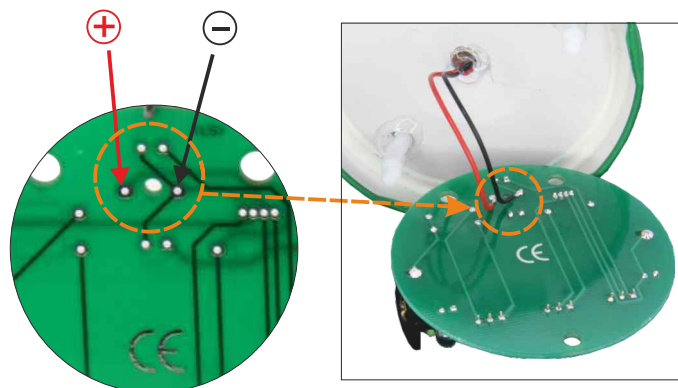
Seal the 3 separators and 1 x cable lead with hot glue from the inside:

O



Solder the solar cell cable solidly onto the circuit board (Ready to control now again all soldering!)

P



Place the circuit board in the separator!



Test mode



Tip from Prof. Smart!



Q

In test mode, you can check if the solar panel functions correctly. The solar panel is directed towards the sun, and if the green LED begins to light up, then everything has been connected correctly. If the green LED does not react to the sunlight, it must be checked if the solar panel was correctly soldered. For normal operation, the test switch must be reset.

Settings:

	Switch setting test mode
	Switch setting full power
	Switch setting winter mode
	Switch setting battery recharge

After assembly or during periods of bad weather, the battery may not always be sufficiently charged. The LEDs do not illuminate individually. Choose the switch setting 'battery recharge' and place the lamp in the sun. Automatic switching on is deactivated and the battery charges. If the battery is fully charged, it will switch back to normal mode.

Example Lighting:

