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!

SOL-EXPERT group, C.Repky - Mehlisstrasse 19 - D-88255 Baindt
Tel.: +49 (0)7502 - 94115-0 - Fax: +49 (0)7502 - 94115-99
info@sol-expert-group.de - **www.sol-expert-group.de**

MADE IN EUROPE

10+

RoHS

Return the device to a certified provider at the end of its useful life!

SOL-EXPERT group

No. 76336

4 037373 763368

QR Codes

Hier geht es zur Anleitung:
https://www.sol-expert-group.de/Rund-ums-Loeten/Pfiffige-Loetbausaetze/Loetbausatz-Herz-mit-Blinkfunktion-und-Dauerleuchten::1263.html?language=de

Click here for the instructions:
https://www.sol-expert-group.de/All-about-soldering/Smart-kits-for-soldering/Solder-kit-heart-with-flashing-function-and-permanent-light::1263.html?language=en

Cliquez ici pour les instructions:
https://www.sol-expert-group.de/Autour-de-la-soudure/Kits-astucieux-pour-la-soudure/Coeur-de-kit-de-soudure-avec-fonction-clignotante-et-lumiere-permanente::1263.html?language=fr

Klik hier voor de instructies:
https://www.sol-expert-group.de/Rond-solderen/Clever-kits-voor-het-solderen/Soldeerkit-hart-met-knipperende-functie-en-permanent-licht::1263.html?language=nl

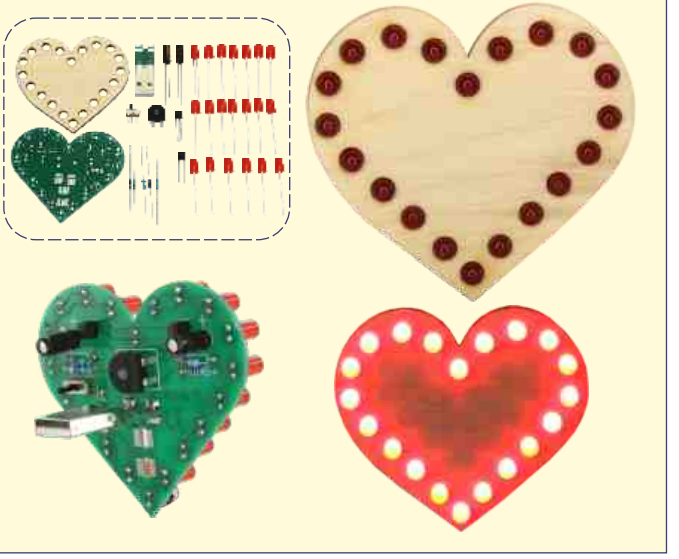
Parts list **Check and sort out parts**

Qty.	Part	Value/Description
1	Circuit board	76320
20	LED 5 mm	Colour red
2	Resistor (R5/R6)	3K9 Ohm
2	Resistor (R1/R4)	56 Ohm
1	Resistor (R7)	620 Ohm
2	Capacitor (C1/(C2)	47 uF/10V
2	Transistor (T1/T2)	BC547B
1	Switch (SW1)	SS12D01
1	Pot (R2)	100K ohm
1	USB connector	installed
1	Front panel	1-pc.

You will also need:

Soldering iron, solder, wire cutters, tweezers, power bank or USB port

Heart with blinking or steady lights soldering kit, powered via power bank or USB port



The 'Blinking Heart' soldering kit

The 'Blinking Heart' soldering kit is excellent to practice soldering on a circuit board. Over 30 parts are soldered onto the circuit board step by step according to the instructions. Once the kit is assembled the heart can be operated in steady or blinking mode.
In blinking mode you can then also adjust the blink speed via the potentiometer. So you can send messages, e.g. slow blinking: I love you - rapid blinking: I really love you!

Recommendation for children and teenagers: Assembly and soldering should be supervised by an adult.

Decorate the included plywood front any way you'd like and install if desired. Dimensions: 70 x 70 mm, over 30 parts.
The 'Blinking Heart' electronics building kit is powered via power bank or via USB port. This eliminates costly batteries.

IMPORTANT SAFETY NOTES

- Keep this manual for future reference! It contains important information.
- This kit is intended for USB power only. **Never connect the kit to 230 V mains voltage! Acute danger to life!**
- The soldering iron, solder and the parts being soldered become very hot. Be very careful!
- Always use a mat when soldering! This prevents parts and the circuit board from slipping.
- We recommend using a soldering iron holder to set the soldering iron down safely during use.

ENVIRONMENTAL NOTES

Generally: Please return the circuit board to a certified provider at the end of its useful life. These will then ensure it is disposed of in compliance with directives. This is good for the environment and an important part of actively protecting the environment.

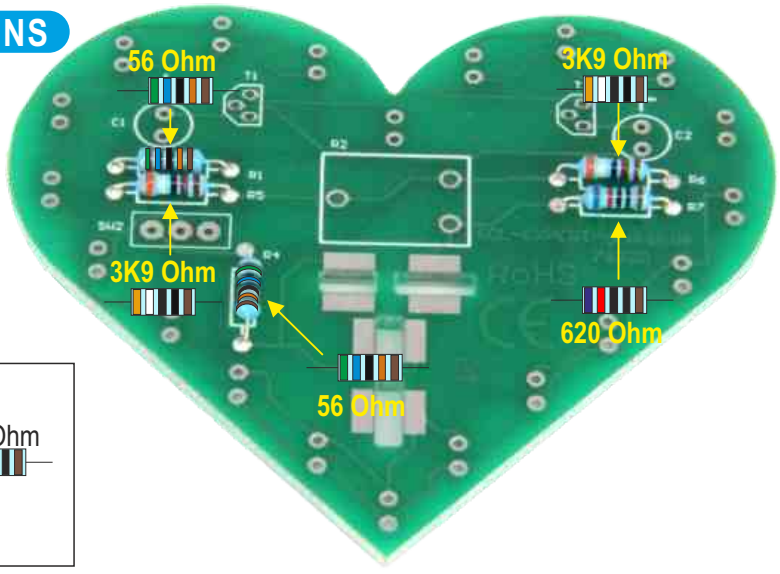
ASSEMBLY INSTRUCTIONS

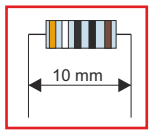
A Circuit board direction for soldering: 'RoHS' must be visible, then the board is on the correct side.

Solder 5 resistors into place, paying attention to the resistances. The resistor polarity is not important!

Parts needed

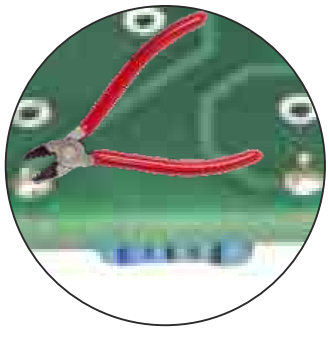
2 x 3K9 Ohm
1 x 620 Ohm
2 x 56 Ohm





Bend the resistor wires so they slide easily between the lands!

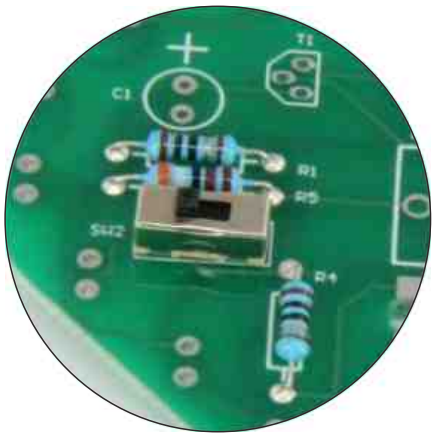
B **Trim excess wires.**



After soldering, use wire cutters to trim the excess wires at the back to approx. 2 mm.

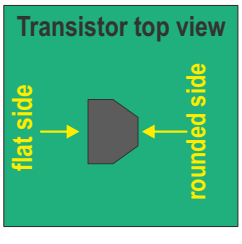
C **Solder switch in place**
Trim excess wires.

Parts needed

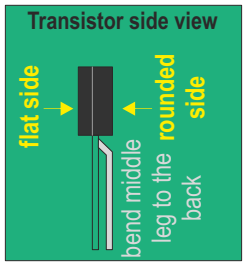


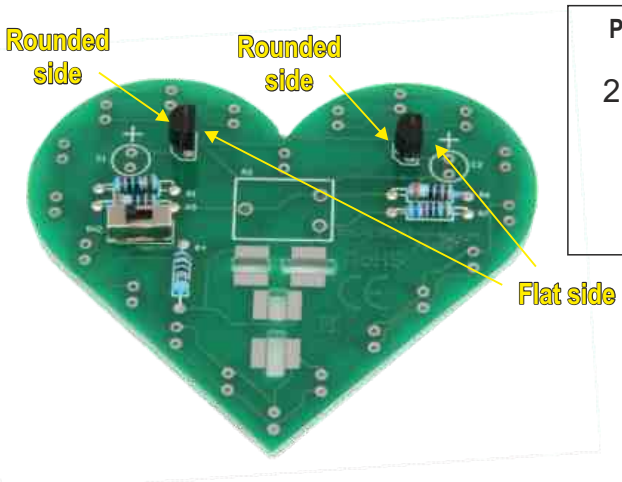
D **Solder 2 transistors in place.** Pay attention to the direction (1)! Bend the middle leg of the transistor slightly to the back (2).

1 Transistor top view



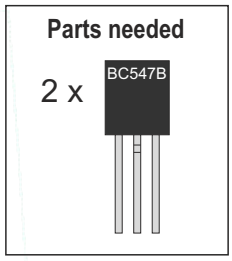
2 Transistor side view





Parts needed

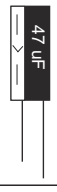
2 x BC547B



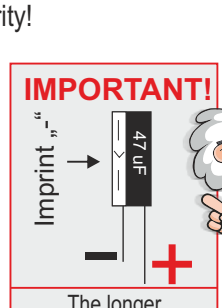
E **Solder 2 capacitors in place.**
Pay attention to the polarity!

Parts needed

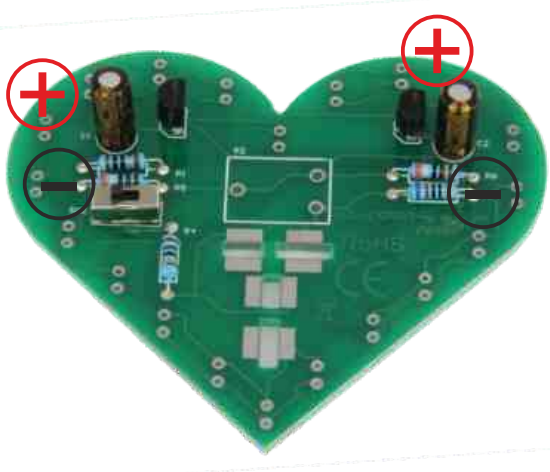
2 x 47 uF



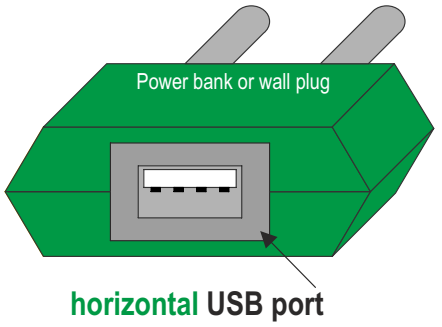
IMPORTANT!



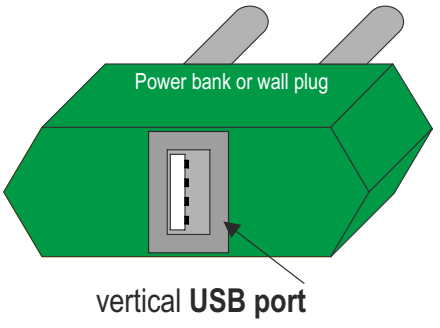
The longer leg is „+“



F **Before installing the USB connector you will need to determine if the USB port on the power bank or the USB adapter you will be using to power the heart is horizontal or vertical.**

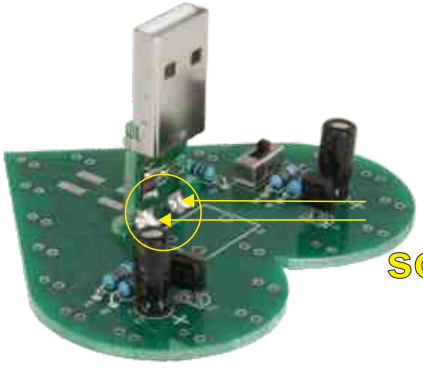


USB connector position for horizontal USB port:

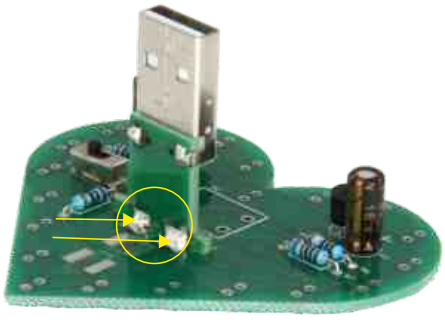


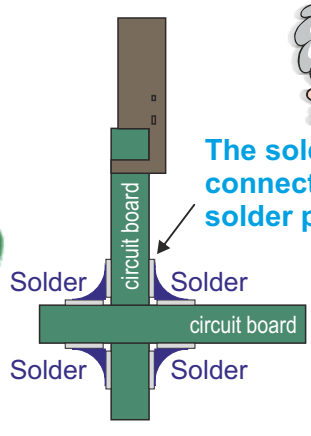
USB connector position for vertical USB port:

G **After choosing the correct position you can solder the USB connector in place.** First slightly solder in one area, adjust the USB connector (if crooked), then solder on the other 3 areas. Once all 4 points have been soldered, the USB will then be firmly attached.

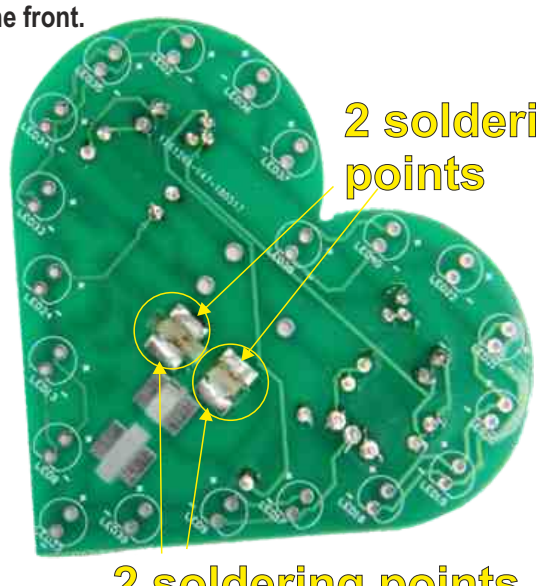


4 soldering points





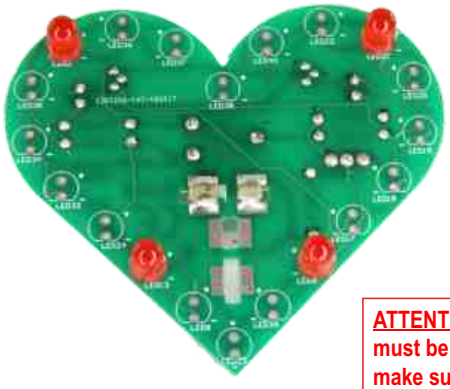
H **Turn over the circuit board and solder the other 4 points on the front.**

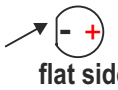


I **Solder potentiometer in place.**

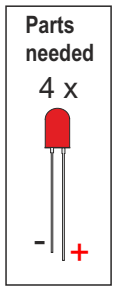
Part needed

J **Turn the circuit board over and solder 4 LEDs in place from the front. (LED 2 / LED 21 / LED 13 / LED 9)** Pay attention to the polarity - polarity shown on the circuit board! The longer leg on the LED is always POSITIVE!



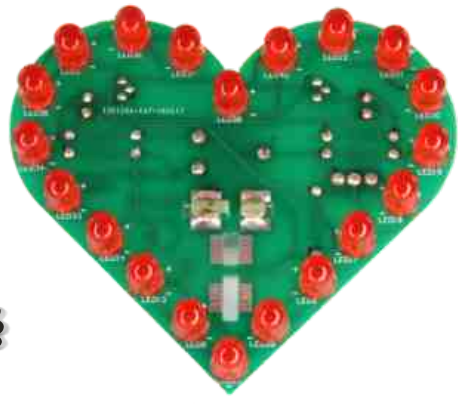


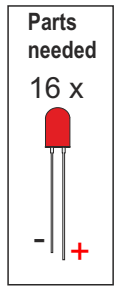
flat side = short wire



ATTENTION: the soldered on LEDs must be flat on the board. When soldering, make sure the legs do not short-circuit! A short-circuit is caused by e.g. accidentally soldering together 2 wires with solder.

K **Solder remaining 16 LEDs in place.** Pay attention to the polarity!





VISUAL INSPECTION:

Lean back in your chair and take a mental break. Once you feel relaxed, read through the assembly instructions again from the start, checking if you did everything as instructed. Pay particular attention to short-circuits and the resistances, etc. Take your time and once you have checked all items, plug the USB connector into a power bank or a USB port.

Some power banks have a power button which needs to be pushed for the circuit board to work.

L **Slide the front panel over the LEDs, using a little pressure. If necessary, adjust the LEDs!**

Once plugged in, all LEDs should now flicker. Depending on the setting they will either be steady or blink. You can use a small screwdriver to adjust the speed on the potentiometer.

TROUBLESHOOTING:

No LEDs on:
- Check all soldering points
- Did you push the power button on the power bank to switch it on?
- Check the transistors for short-circuits
- Is the power bank charged?

Specific LED does not light up:
- Check the soldering points for the LED