OPITEC

113.831

LED-Light "Vario"

Required Tools:
pencil, ruler
fretsaw or fine saw
stripper
drill: ø 5/ 6mm
engineer's file
warding file
adhesive tape or insulating tape
all purpose glue

Notes for disposal of batteries:

You are legally obligated to return used batteries . You may return batteries after use to the distributor or to any intended treatment facility (e.g. public waste, management authorities or any distributors) free of charge.

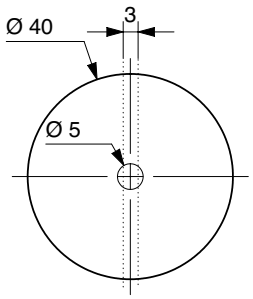
Crossed dustbin:
Batteries must not be disposed of with household waste
Pb:
Battery contains more than 0.004 mass percent of lead
Cd:
Battery contains more than 0.002 mass percent of cadmium
Hg:
Battery contains more than 0.0005 mass percent of mercury

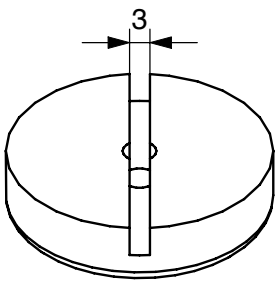
Please Note!
The Opitec Range of projects is not intended as play toys for young children. They are teaching aids for young people learning the skills of craft, design and technology. These projects should only be undertaken and operated with the guidance of a fully qualified adult. The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Danger of suffocation!

Contents List				
	Qty	Size (mm)	Designation	Part-N°.
wooden square with drill	1	50x50x50	base frame	1
wooden wheel	1	ø40	cover	2
acrylic glass	1	80x60x3	motif/ character	3
Light Emitting Diode, super	1	ø 5	lighting	4
jumper wire	1	500	cabling	5
battery holder	1		power source	6
button cell	1	3 V	power source	7
micro slide holder	1		switch	8
resistor 47 Ohm	1	yellow.purple,black	reisistor	9

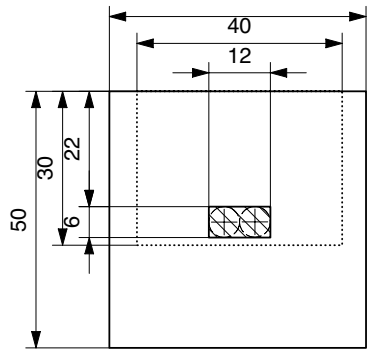
Instructions

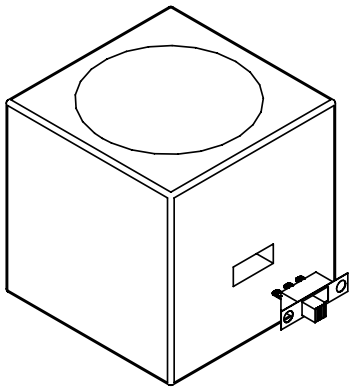
1. Mark the centre on the wooden wheel (2) and drill a 5mm hole in it. Mark a 3mm slot centrically on the upper side (non chamfered side) as shown. Saw out the slot 3mm deep by using a fine saw and remove the waste with a file.

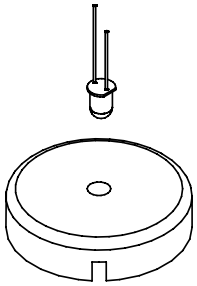




Note:
Keep the 3mm slot as accurate as possible so that the acrylic design stands vertically.

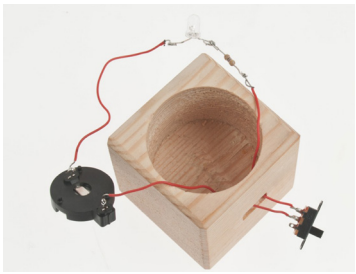


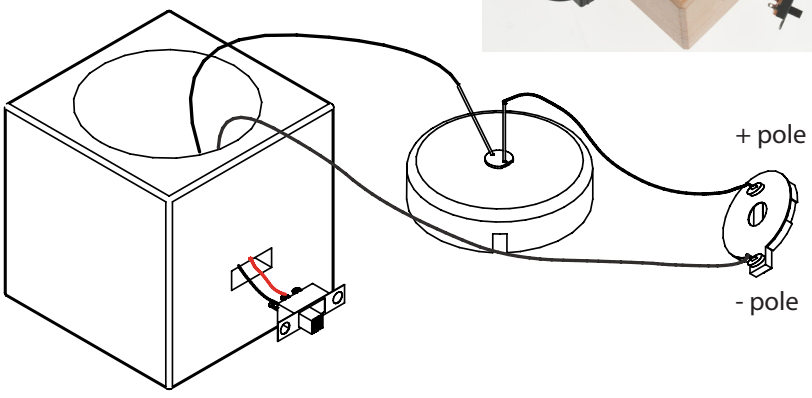




2. Transfer the recess for the switch to the wooden cube (1) according to dimension (see illustration). Then drill through the marking with a ø6mm drill. Use the warding file to work out the rectangular recess (12 x 6mm). Insert the light-emitting diode (4) in the hole of the wooden wheel as shown. Moreover insert the switch (8) in the recess in the wooden cube (1).

3. Cut an approx. 80mm long piece of the jumper wire (5) and remove insulation on both sides (10mm). Connect one end to the external connection of the switch (8) and the other end to a leg of the resistor (9). Connect the second leg of the resistor (9) to the anode (long connecting wire) of the light-emitting diode (4). Then cut an approx. 100mm long piece of the jumper wire (5) and remove insulation on both sides (10mm). Connect one end to the middle connection of the switch (8) and connect the other end to the + pole of the battery holder (6). Moreover cut an approx. 60-70mm long piece of the jumper wire (5) and remove insulation on both sides (10mm). Connect one end to the - pole of the battery holder (6) and connect the other one to the cathode (short lead wire/ flattened side) of the LED (4). All connections can also be soldered.



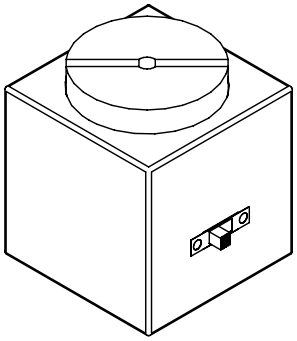


Note:
When wiring, ensure that all connected wires are in good contact with each other. To avoid short circuits, isolate the connection with adhesive film or insulation tape.

Instructions

4. Insert the button cell (7) into the battery holder. Switch on the switch and check the function. Insert the wiring in the hole of the wooden cube (1) and place the cover with the light-emitting diode (4).

Note:
Note: If the switch doesn't hold in the recess, you'll glue it with all-purpose glue.



5. Select a motif of the stencils (A - D) or transfer your own motif to the acrylic glass and saw it out. Clean the saw cuts. Pull off the protective film and place the motif in the recess. Switch on the LED.

Done!