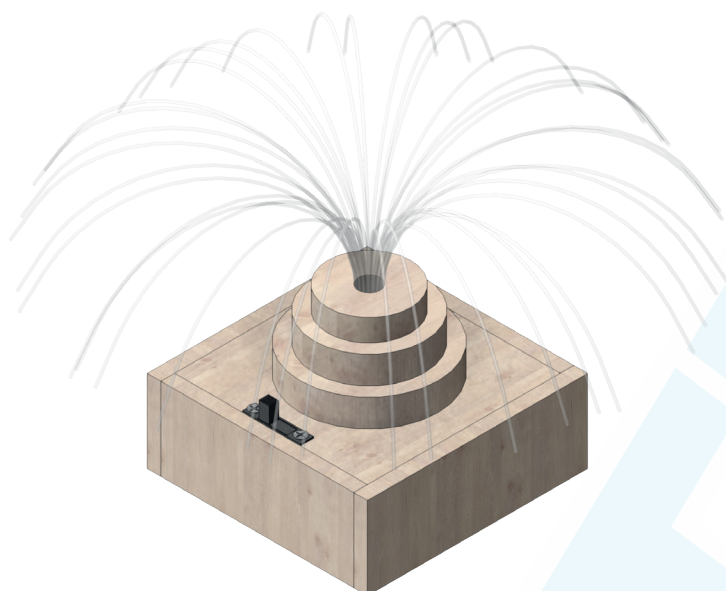
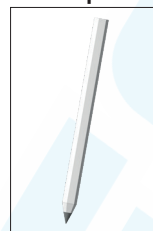


127.566

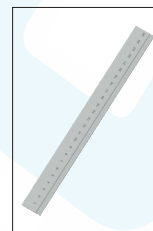
Rainbow Fibre-Optic Lamp



Tools required:



Pencil



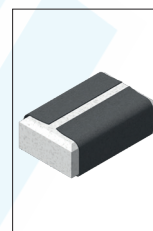
Ruler



Scissors



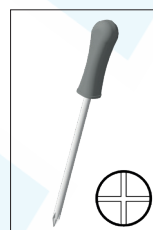
Jig saw



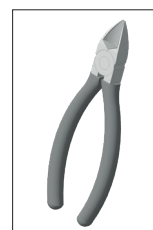
Sandpaper



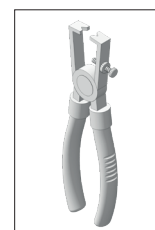
Wood glue



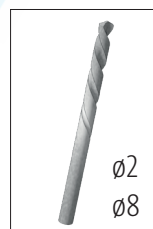
Screwdriver



Side cutter



Wire stripper



Drill



Soldering iron

NOTE:

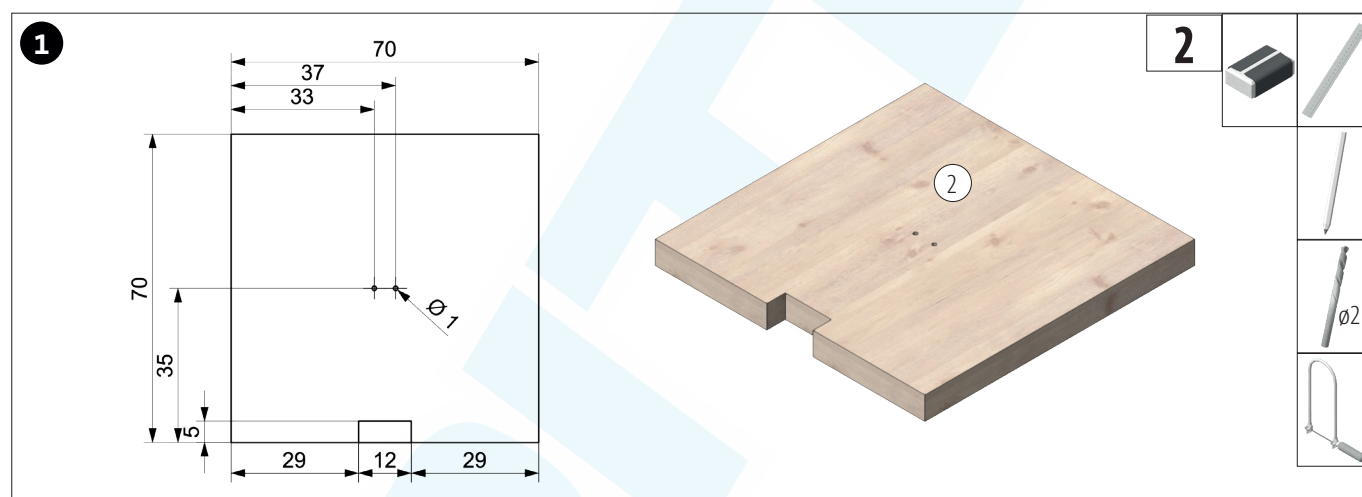
The OPITEC range of projects is not intended as play toys for young children. They are teaching aids for young people learning the skills of Craft, Design and Technology. These projects should only be undertaken and tested with the guidance of a fully qualified adult. The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Danger of suffocation! Not suitable for children under 36 months. Choking hazard!

Part List	Quantity	Dimensions (mm)	Description	Part no.
Wooden strip	2	250x30x5	Base	1
Plywood	1	70x70x6	Base	2
Micro slide switch	1	19x6	Switch	3
Tapping screw	2		Switch mounting	4
Rainbow LED	1	ø5	Lighting	5
Resistance 47 Ohm	1		Resistor	6
Jumper wire, red	1	500	Wiring	7
Jumper wire, black	1	500	Wiring	8
Thumbtack	2		cable mounting	9
Flat Receptacle	2		Battery connection	10

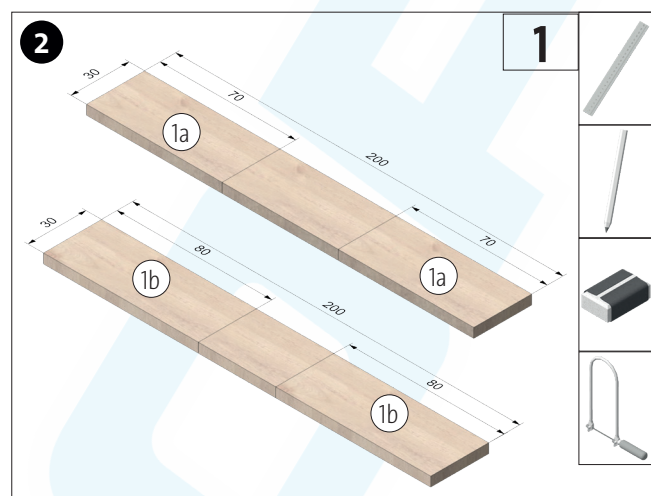
Assembly instructions 127.566

Rainbow Fibre-Optic Lamp

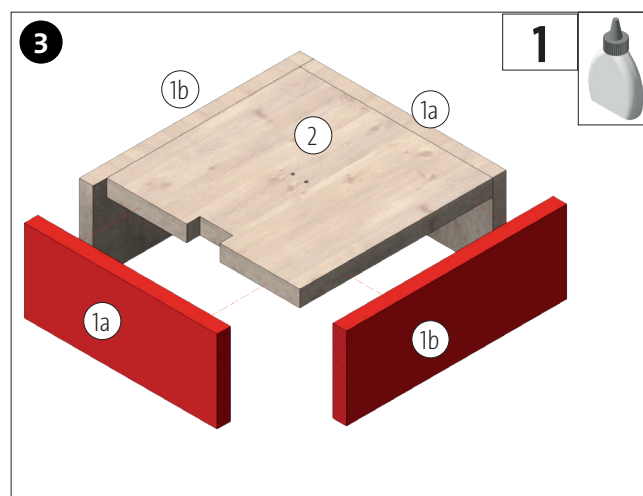
Part List	Quantity	Dimensions (mm)	Description	Part no.
Wooden wheel with holes	1	ø50x10	Base	11
Wooden wheel with holes	1	ø40x10	Base	12
Wooden wheel with holes	1	ø30x8	Base	13
Bead Thread	1	ø1mm x 10m	Fibres	14



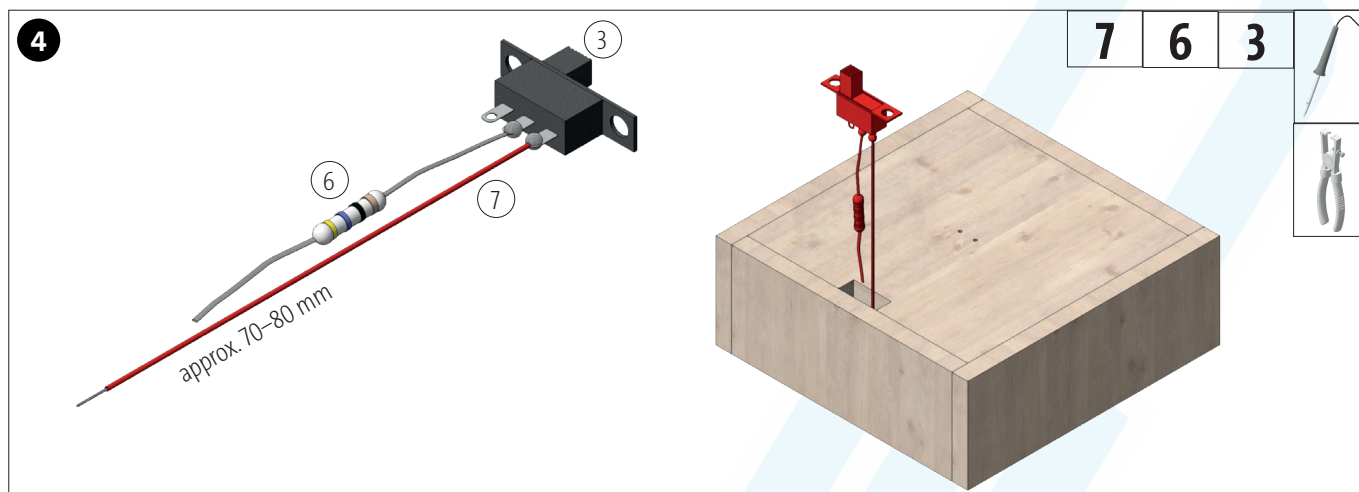
Transfer the position of the switch (3) and the Rainbow LED (5) onto the plywood (2) according to the dimensions. Cut out the recess using a jigsaw. Drill holes with a diameter of 2 mm. Clean the saw cuts.



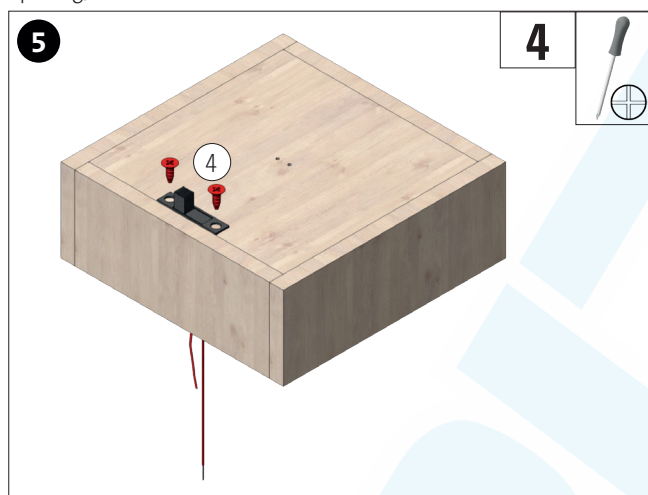
Cut the two wooden strips (1) to size and clean up the saw cuts.



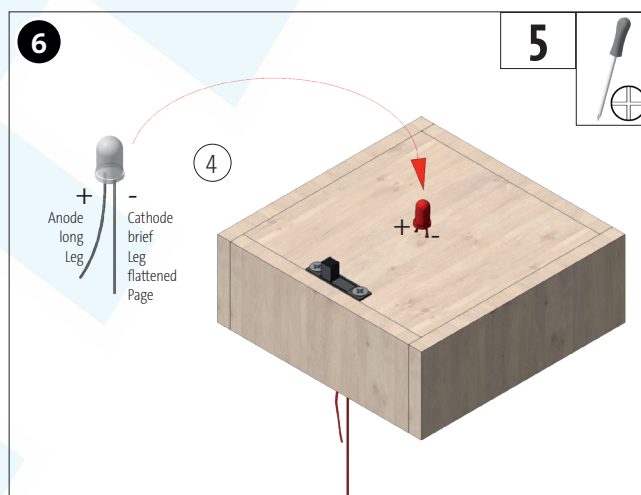
For the lamp base, glue the frame parts (1a+1b) around the cover plate (2) as shown in the illustration. Allow glue to dry well.



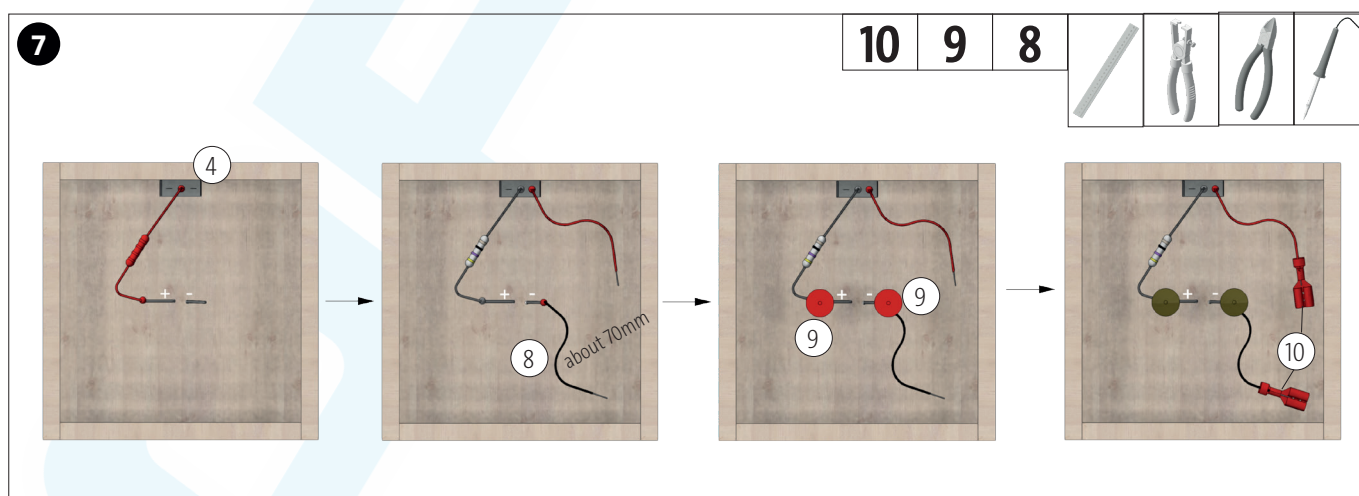
Attach the resistor (6) to the middle terminal of the switch (3) by twisting it in place or soldering it. Strip the insulation from both ends of a piece of red switch wire (7) approximately 70–80 mm long, and attach one end to the outer switch terminal. Then insert the switch (3) into the designated opening, as shown.



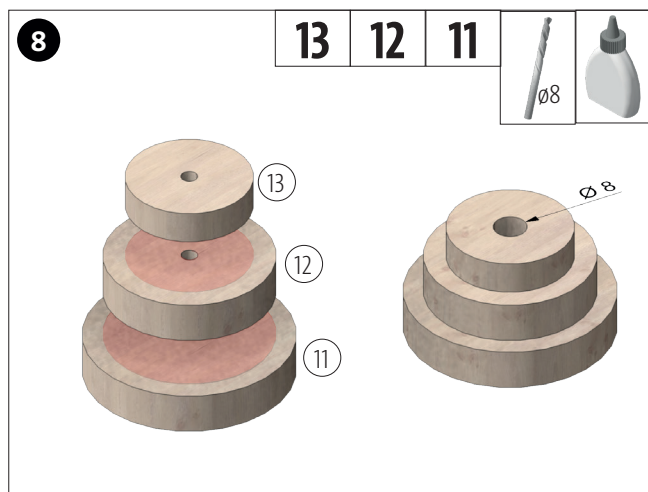
Secure the switch (3) with the two screws (4).



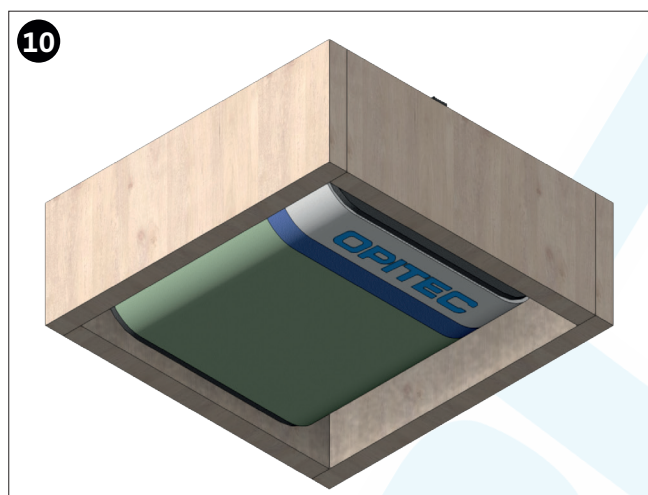
Insert the legs of the LED (5) into the holes provided. Please note the anode (+) and cathode (-)!



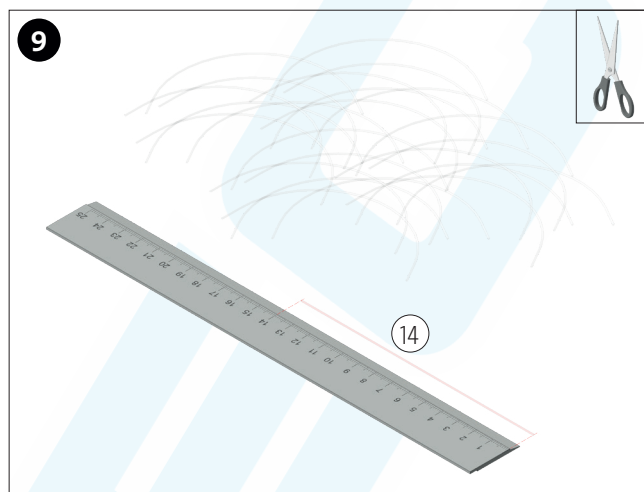
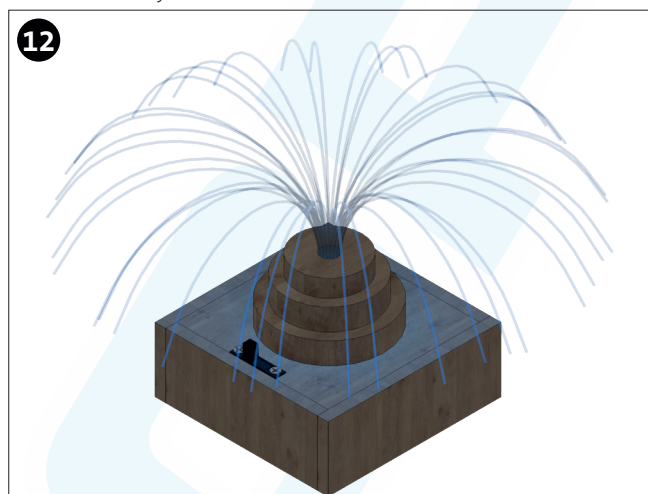
Connect the resistor to the anode (+) of the LED. Cut a piece of the black control wire (8) approximately 70 mm long and strip the insulation from both ends. Connect one end to the cathode (-) of the LED. Secure the cable connections to the base plate using the drawing pins (9), as shown. Connect the two flat-pin sockets (10) to the free ends of the cables.



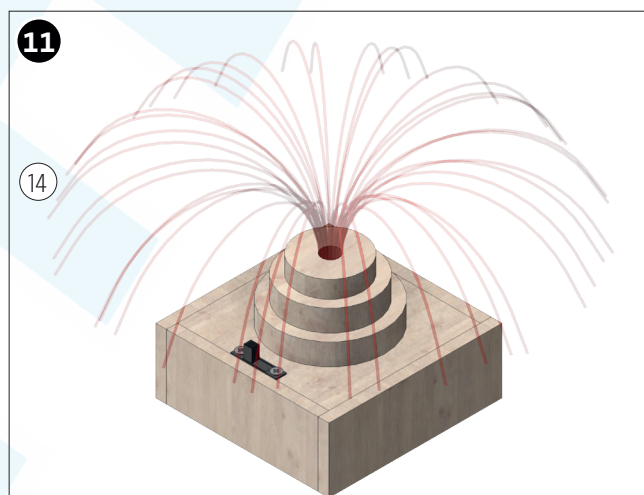
Glue the wooden wheels (11, 12, 13) together as shown, ensuring that the holes line up. Once the glue has dried, drill out the centre hole to 8 mm in diameter.



Take a 4.5-volt flat battery and connect the flat plug sleeves to the battery terminals. (Red cable +, black cable -) Check that it works and insert the battery into the holder.



Cut approximately 34–40 pieces, each 140 mm long, from the beading wire (14).



Insert the pieces of beading wire (14) all the way down into the hole and fan them out.

Turn the switch on. Done!

The light transmission through the fibres is best appreciated in a dark place!