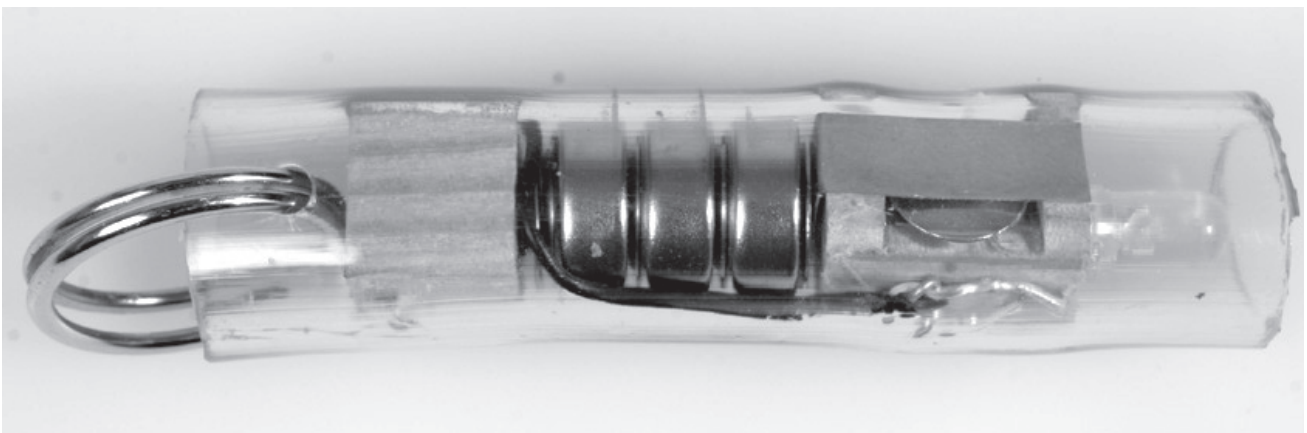


# OPITEC

## 1 0 6 . 2 4 5

### *Flexlight*



#### Parts list:

- |                                   |                   |
|-----------------------------------|-------------------|
| 1x Wood strip (1),                | 10 x 10 x 150 mm  |
| 1x LED (2) super bright           | ø 5 mm            |
| 1x Bronze strip (3),              | 0,2 x 5,5 x 50 mm |
| 1x Plastic tube, transparent (4), | 16/12 x 70 mm     |
| 3x Drawing pins (5),              |                   |
| 1x Wire (6),                      | 500 mm            |
| 1x Key ring (7),                  | ø 20 mm           |
| 3x Knopfzelle LR44 (8)            | 1,5V              |



#### Recommended tools:

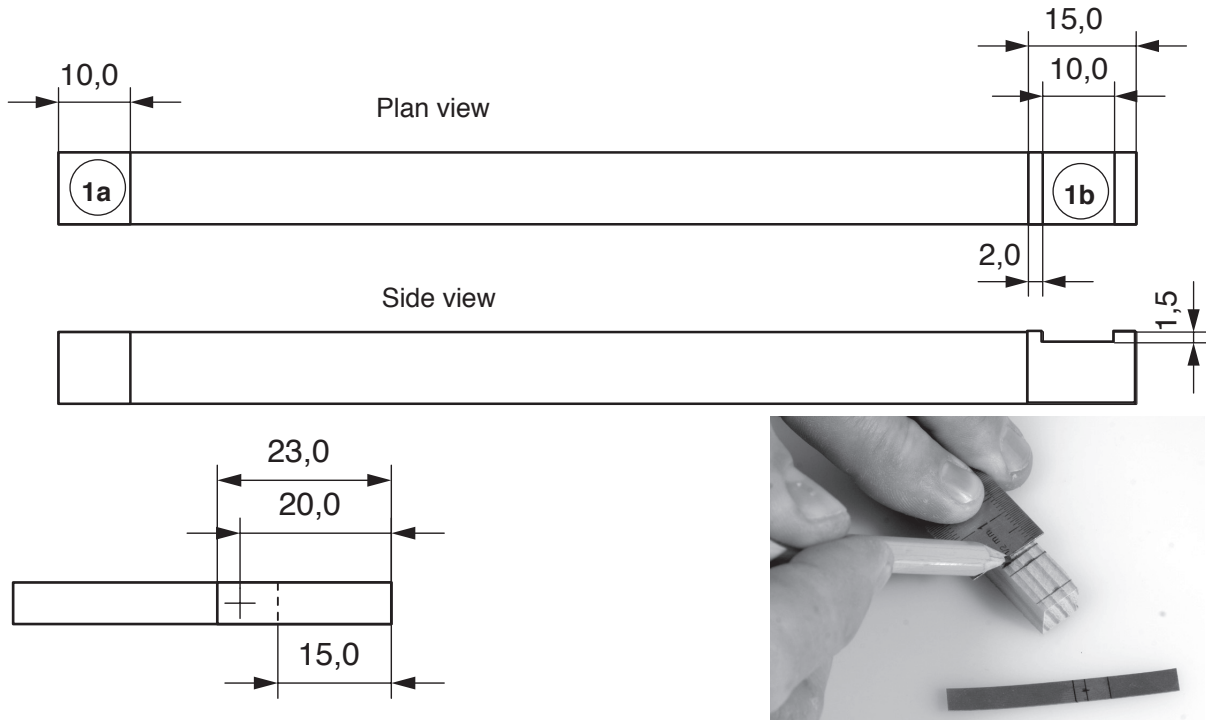
Modelling scissors  
Saws  
Combination pliers  
Hole pliers  
Needle files

#### 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 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!

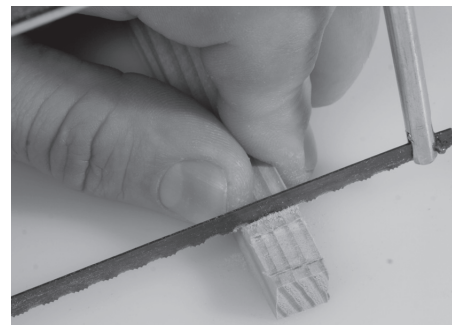
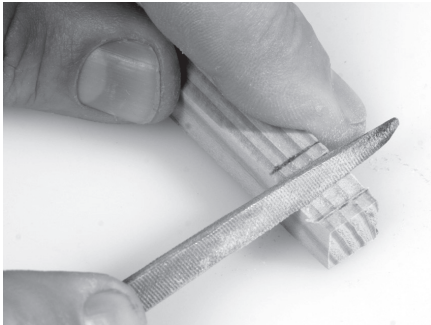
## Instructions:

1. Mark out the measurements as shown on the wood strip (1) 10 x 10 x 150mm and the bronze strip (3) 0.2 x 5.5 x 50 mm(dia.: 1).



2. Make the notch 1.5-2mm with a needle file in the wood strip 1b (See photo: 2)

3. Then saw the wood piece (1b) with notch (15mm )off (See photo: 3)



4. Place the wood strip (1b) upright the 3mm distance to the notch is at the top Then file a 2mm deep slot with a triangular file. (See photo: 4)

5. Use a hole maker ( Bradawl ) to make the hole in the bronze strip (3.) To make it easier lay the bronze strip on the wood to make the hole (See photo: 5)



6. Bend the bronze strip with pliers or in a vice along the broken line
7. Cut the strip with metal snips.
8. Remove all sharp edges with a file

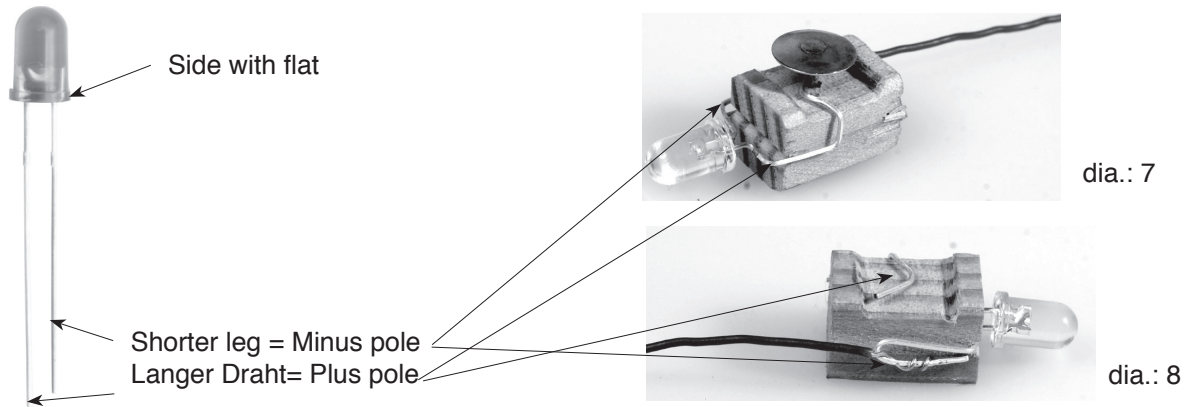
## Instructions:

### 9. Identifying the polarity of the LED

The LED (2) has a long leg and a shorter leg. The longer leg is the +Pole and the shorter leg is the minus – Pole (Also look for the flattened side on the diode housing – photo:7)

Bend the legs to the left and right of the diode

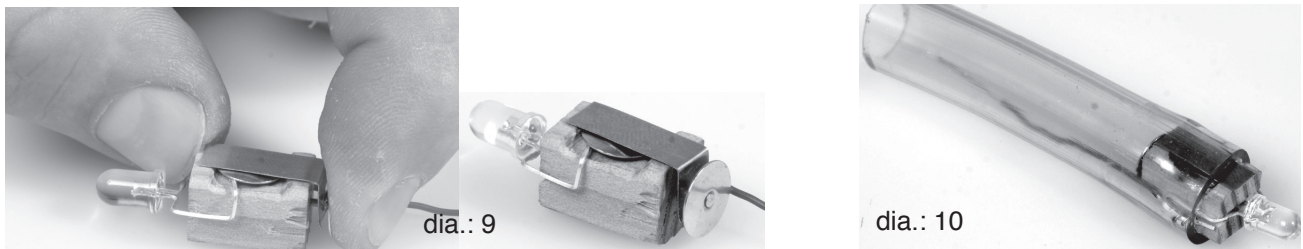
Bend the plus pole again so that it lies in the notch in the wood and can be trapped by a drawing pin (photo:7 ) and the other minus leg lies alongside the block (See photo: 8)



Cut a 7cm long piece (6) from the cable and remove the insulation from 1 cm at the end  
Wind the bare wire around the minus pole leg of the LED ( photo:8 )

### 10. Fix the bronze strip with a drawing pin as shown in photo: 9.

**Note!** The distance between the drawing pin in the slot and the bronze strip should be as small as possible. It is



possible to adjust this gap by placing small bronze strip snippets under the drawing pin

### 11. Insert the LED mount and wire into the plastic tube, so that the LED is itself in the tube.

**Note!** If its too difficult to place the LED / mount in the tube, carefully file off the corners of the wood  
However make sure that not too much material is removed – as it must fit tightly inside the tube and not slide about

### 12. From the pine strip (1) saw off the 10mm piece (1a). Make a hole in the end as shown in photo 11. Finally round off



the edges so that it will slide in the tube

### 13. Use a hole punch to make holes in the tube for the key ring (photo: 12)

### 14. Wind the free of the wire around a drawing pin and insert into the wooden block (See photo:13)

### 15. Insert all 3 button batteries with the plus pole (Flat face) in the tube. Finally insert the wood block and drawing pin so the head of the pin locates against the batteries. Try the switch by squeezing the tube

### 16. The last step is to insert the key ring through the end of the tube.

