

# Light Box & Optical Set - 'Hodson'



**HL2060-001 'Hodson' Light Box & Full Kit of Parts**

## Description:

The Light Box & Optical set was designed back in 1971 and has undergone several improvements since that time. The excellent tooling for the shapes and the moulding technique ensure flat, accurate and water clear products.

An excellent experiment manual covering all basic experiments is provided with each kit.

For many years, several companies around the world have copied our product, but the original Australian product is still the best quality and the best value for money.

A spare lamp is provided with each kit and all replacement parts are individually available. Spare outer housings also available (see PA section of listing)

The light box is available also with set of 3x slits only (no kit of parts). See HL2060-020

Length: 175mm	Width: 90mm	Height: 90mm	Weight: 0.24kg
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**INDUSTRIAL EQUIPMENT & CONTROL PTY.LTD.**

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### Improvements from Earlier Models:

- The sliding collimating lens no longer uses a screw knob and there is nothing for the students to undo. The friction slider is convenient and robust.
- The colour filters are now moulded from high temperature poly carbonate.
- The colour 'cards' are now moulded plates of colour.
- The new lamp is Quartz Halogen and the new socket cannot be twisted from the box by students.
- The new lamp is lower wattage and draws less current. Two Light Boxes can now be driven from one standard IEC power pack LB2633-001
- A new miniature transformer can be supplied inside the housing to permit the Light Box to be operated from 240V mains.
- The new lamp socket permits one Light Box to plug into another.
- The banana plugs on the cables are moulded on and are stackable. Cannot come loose or be removed.
- The sets of slits has been increased to a set of 3 to include a blank and a double slit.

### The 'Hodson' Light Box Kit Contains:

- 1x Light Box with adjustable collimating lens for the production of parallel beams and rays together with two swinging mirrors for colour blending.
- 1x Spare globe 12V.30W Quartz Halogen.
- 1x Set of 3 double ended slit formers to form rays through single, double, triple and 4 slits. Plus a wide slit for creating spectra and a blank to shut off the light.
- 1x Set of 8x colour filters: Red, Green, Blue, Yellow, Orange, Cyan, Magenta & Violet.
- 1x Set of colour plates: same colours as above, but non transparent.
- 1x Plain mirror on stand
- 2x Curved mirrors, parabolic and half round.
- 1x Rectangular acrylic block 75 x 50mm L x W
- 1x Half round acrylic block 75mm diam.
- 1x 45°x45°x90° acrylic prism
- 1x 60°x60°x60° acrylic prism
- 1x 60°x30°x90° acrylic prism
- 1x Bi-concave acrylic lens 7.5cm f/l
- 2x Bi-convex acrylic lenses. 7.5cm & 3.75cm f/l
- 1x Experiment book for optics.

Refer to the PA section of the product listing for all the spare parts information.



## Instructions:

### Recommended Power Supply:

For best results, a power source of 12 Volts at about 3 Amps (either AC or DC) is required to run the Light Box. Either an adjustable power supply or a simple transformer can be used.

### Connection:

Turn OFF the power supply and connect the 4mm banana plug connectors to the output terminals. If the output is DC, these may be marked Red or Black but, because the polarity is not important to the Light Box, the plugs can be inserted either way around.

If the power supply is adjustable, set the voltage selector to 12V and turn the power supply ON. The Light Box should immediately operate.

If two Light Boxes are used, the second unit can be plugged into the socket of the first one, but the power supply must be able to provide 5 to 6 amps to run both Light Boxes.

### Lamp Replacement:

Turn off the power supply and allow enough time for the lamp to cool down before touching it. By reaching through the openings at the side and rear of the Light Box, hold the lamp with fingers and pull firmly from its socket.

Insert the replacement lamp firmly into the socket while being careful not to bend the metal pins. It can be inserted either way around. After fitting the new lamp, use a tissue to wipe the glass clean of any finger prints or marks.

**NOTE:** Always use the correct lamp. The lamp **MUST HAVE** an AXIAL filament. A crossways or lateral filament cannot operate properly in the Light Box.

### Maintenance:

- Always check that the cable is in good condition and that electrical connections are clean and reliable.
- Occasionally inspect the lamp to be sure it is clean because any dirt or fingerprints will be burned permanently to the surface of the glass and will reduce the efficiency. If the lamp is very dirty, it may cause smoke as the lamp heats.
- Keep mirrors clean and avoid scratching or damaging the kit components.



**Optional: HL2060-020**

The 'Light box & Slits' kit is used when the filters, shapes and mirrors are not required.



**HL2060-020 Light Box & Slits Only**

Designed and manufactured in Australia

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