

UV Exposure Boxes for PCBs

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Electronics & Prototyping

A UV exposure box produces even ultraviolet light to expose photosensitive PCB laminate or dry film resist, transferring the circuit pattern from a transparency before etching. Consistent exposure time and light spread make reliable boards every time.

Key Features

- UV tube or LED arrays for even coverage
- Timer controls from seconds to minutes
- Vacuum or glass lids hold artwork flat
- Board sizes up to A5 or A4
- Safe interlocks on many models

Typical Uses in the Workshop

- Expose toner-transferred or photographic artwork
- Make single and double-sided PCBs
- Repeatable exposures for class batches
- Expose solder masks and photosensitive masks

Safe Operation

1. Print the artwork at 1:1 on transparency
2. Sandwich board and artwork under the glass
3. Set the timer for the exposure test result
4. Expose without moving the sandwich
5. Develop according to the resist instructions

SAFETY NOTES

- UV light is harmful - never look directly at the tubes
- Keep the lid closed while the box is on
- Use the interlock if fitted
- Position away from eyes and skin
- Switch off before opening

Maintenance & Consumables

- Wipe the glass clean of fingerprints
- Check UV tubes fade after long use
- Clean the timer and surface
- Check the vacuum or weight seals
- Store transparencies flat and dust-free

Specification & Buying Notes

A box with a timer, even UV LED array and glass platen gives the most consistent results. Verify the exposure area covers the largest PCB made. Spare UV tubes should be available.