

COLORIMETER - digital

Cat: CH1003-001 9V battery or 12V.AC/DC plug-pak

DESCRIPTION: The IEC Digital **COLORIMETER** is microprocessor controlled and designed for the classroom or laboratory. For simplicity of use and to avoid loss of parts, 4 coloured LED light sources covering red, yellow, green and blue bands of the spectrum are used and separate colour filters are avoided.. LED selection is manual so the student is involved in some decision making, but all functions of zero calibration, range changing and the controlling of LEDs are performed by the microprocessor.

If the inbuilt 9V battery is flat, the display shows 'bAt' and, as on many IEC designs, a normal 240/12V.AC or DC. plug pak can be used. If no button has been pressed for a period of 10 minutes, the instrument turns itself off to conserve battery power.

The set of Colorimeter parts is fitted into soft foam compartments. The set contains:

- 1x Colorimeter instrument with accuracy within +/- 2%.
- 1x Two piece tubular shroud to eliminate ambient light.
- 6x Small square standard cuvettes (plastic)
- 3x Standard glass test tubes 15-16mm diameter
- 1x 9V type 216 transistor battery
- 1x Instruction sheet including several experiments

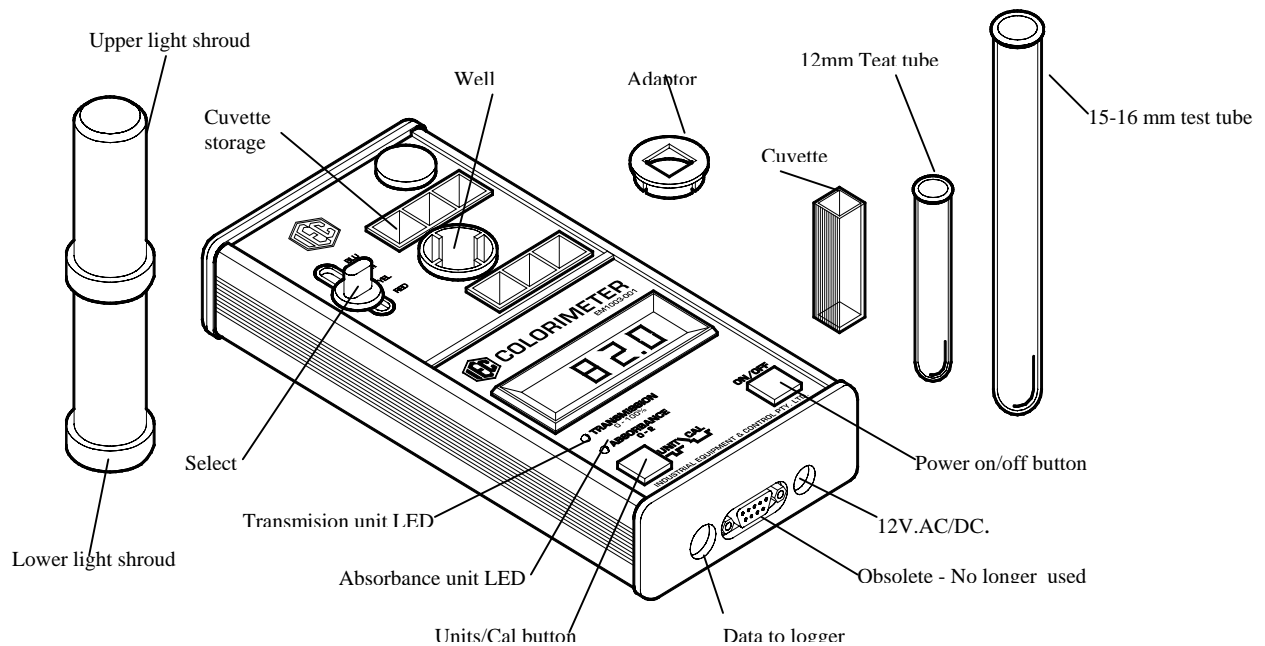
CH1003-001 colorimeter kit



Physical size: 285x210x63mm LxWxH (outer pack)

Weight: 0.7 kg

The illustration below shows the general arrangement of the IEC Colorimeter.



The front panel provides a large LCD digital display and two press buttons. Right hand button is power ON/OFF and the left hand button is for changing the desired unit from 'Transmission' to 'Absorbance' and a longer press performs the zero and 100% 'Calibration' of Transmission and 0 to 2.3 of Absorbance. A mini LED indicates which Unit is selected.

The socket that takes the sample is moulded as part of the top panel to prevent any ingress of liquid inside the instrument. If a test tube breaks and the solution is lost, it can be drained out of the socket and the system rinsed with water without any liquid entering the instrument.

The compact size makes it easy to handle both in the laboratory or out in the field. Because many samples are of a solvent nature, it is important that glass containers can be used for the samples. The IEC Colorimeter can take the standard small square plastic cuvette, a mini 10mm diameter glass test tube, a standard 12mm diameter glass test tube or a standard 15-16mm glass test tube.

For convenience, the instrument has receptacles to carry up to 6 small square cuvettes so they need not be placed unstable on the bench. The cuvettes would probably be used as:

- Reference distilled water sample
- Sample solution of known concentration #1
- Sample solution of known concentration #2
- One or more solutions of unknown concentration

NOTE: IEC provides a second information file providing more information and experiments.

Designed and manufactured in Australia