The ALBA Linear Light Sensor

The ALBA Linear Light sensor measures light intensity in the range $0 - 1.\text{mW/cm}^2$. For the Chemistry Applications the mW/cm² have been converted into lux. It should be noted that if you use the Investigator then it is possible to calibrate the light sensor in percent i.e. put your thumb over the sensor for one fixed point and call this 0% and point it at the window and call this 100%. Working in percent rather than S.I. units may be more suitable for younger pupils.

Inverse Square Law Kit

The kit comprises of:

Black plastic guide with mounted ruler. Lamp holder with 12V, 2.2W bulb Black card

The lamp holder should be placed immediately at the end of the black guide and should remain in that position throughout the experiment.

Note that if the front edge of the light sensor is lined up with the 10cm mark on the ruler then the distance from the centre of the bulb to the front face of the photodiode in the case is 10±0.2cm.

The experiment may be carried out under normal lighting conditions. However it is best if the light sensor does not point directly at a window or other strong light source.

The Experiment Notes and Teachers' Notes that are supplied with the Light Intensity Application offer guidance in the carrying out of the experiment.

Note that the black card has been supplied to put over the ruler before each reading is taken. This is essential to cut out reflection from the black plastic ruler. It is interesting to see the effect of repeating the experiment without the card.

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