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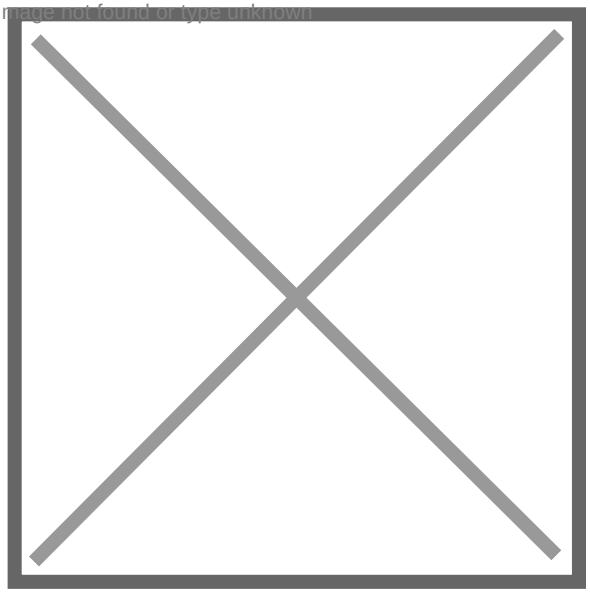
Product Name :

Planck's Constant Apparatus

Product Code :

SLE/PHY/47

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Description :

Planck's Constant Apparatus (Product Code: SLE/PHY/47) is a ready-built circuit used to measure the photoelectric effect and determine Planck's constant in physics laboratories. Inside are a caesium antimony photocathode, a DC supply with a 10-turn potentiometer for the retarding voltage and a 0–19.99 V LED display, while six narrow-band filters vary the light frequency. It is supplied by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, India.

Specifications

Parameter	Detail
Photocell	Caesium antimony cathode, spectral response range 185–650 nm
Stopping potential	DC, controlled by a 10-turn potentiometer
Voltage display	DC voltmeter with 0–19.99 V LED display
Filters	6 narrow-band filters, FWHM bandwidth 4–15 nm
Filter wavelengths	405 nm is among the listed wavelengths; ask us for the full set
Output socket	Female UHF socket for connection to a picoammeter
Lead included	4 mm to UHF lead for connecting the picoammeter
Power source	9 V PP3 battery
Dimensions	205 x 150 x 115 mm (W x H x D)
Product code	SLE/PHY/47
Supplied by	Jain Scientific Equipments Pvt Ltd (ScienceLab), Ambala, India

What Is the Planck's Constant Apparatus Used For?

Light of a known frequency, selected with one of the six filters, falls on the caesium antimony cathode and releases photoelectrons. Students raise the retarding voltage with the 10-turn potentiometer until the picoammeter reading falls to zero and note this stopping potential on the digital display. Repeating with each filter gives a set of stopping potentials that, plotted against frequency, form a straight line whose gradient is h/e.

Because the circuit is ready-built and battery-powered, set-up time is short, which makes it a practical photoelectric effect kit for senior secondary and undergraduate courses in India. The photocurrent is tiny, so the apparatus is ideally used with a picoammeter, connected through the supplied 4 mm to UHF lead.

What to Specify When Ordering

- Whether you need a picoammeter, which the apparatus is designed to work with but which is not listed as included.
- Confirmation of the six filter wavelengths on your quotation.
- Spare 9 V PP3 batteries
-

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