

### PRIM LIGHT & ADVANCED COMPACT VISIBLE SPECTROPHOTOMETER



PRIM Light & PRIM Advanced spectrophotometers are combining a high level of performance with an simple and intuitive manipulation. Compacts and light, these new spectrophotometers are ideal for standard applications in education or in laboratory.

A choice among 4 PRIM units

- **PRIM Light** : Basic internal software including standard spectrophotometric applications in absorbance, transmittance and single-standard concentration.
- **PRIM Advanced** : Advanced applications for absorbance, transmittance, multi-standards concentration, kinetics, multi-wavelengths and spectrum scanning.
- For low concentration samples, PRIM Light and PRIM Advanced are also available with 50 mm long cell holder.

ADVANTAGES



- **Internal applications** : All applications, basic or standard, are included and immediately available on each spectrophotometer.
- **50 methods memory** : All PRIM spectrophotometers can store up to 50 methods in their memory. Stored application can be recalled any time without reprogramming the method parameters. Before running the method, it is possible to check the stored parameters by pressing only one button from the navigator key.
- **Giant display** : 2 lines of 16 digits, back-lit and highly contrasted for best readability. Real-time and permanent display of wavelength and absorbance in any measurement mode.
- **1 button = 1 function** : Keyboard is clearly and simply organized and every button corresponds to one specific function. Operation is simpler, faster and tampering is avoided.
- **Safety - Low power voltage** : Mandatory in education for pupil protection, and increasingly recommended on every lab where a risk is existing due to water surroundings. Powered by low voltage, any electric shock is avoided.
- **Internal calibration filter** : In order to certify accurate and repeatable results, the spectrophotometer calibrates itself automatically on each start-up granted to its internal didymium filter ; a complete report is automatically printed on the external printer if connected.
- **Pre-adjusted halogen lamp** : Located at the rear side of the instrument, the lamp is pre-adjusted, it can be replaced quickly and easily without any tool.
- **Compact** : Light 2,5 kg and compact with only A4 size, PRIM can be handled easily.

## A WIDE CHOICE OF MEASURING MODES

- **Absorbance / % Transmittance** : Automatic wavelength selection from 330 to 900 nm, per steps of 1 nm, with the Absorbance value and the % of Transmittance monitored at real time.
- **Concentration calculation** : Concentration measurement of unknown samples. Spectrophotometer calibration using factor or standards (till 8) of known concentration.
- **Kinetics** : Analysis of Absorbance variation as a function of the time. Program to include lag time, reaction time. Automatic calculation of Absorbance variation during each segment of time or the total time programmed.
- **Spectrum scan\*** : A curve of Absorbance values as a function of the wavelength, with the detection of Absorbance maxima and minima. User-definable scan mode using the entire or partial visible range: 330 to 900 nm, per 1 nm steps, with automatic recording of the base line.
- **Multi-wavelengths mode** : Measure of ratio and difference of Absorbances at 2 wavelengths. Simultaneous display of calculation results as well as individual Absorbance values at each wavelength

\* On optional external printer.

## PRIM, A SPECTROPHOTOMETER SUITABLE FOR ALL KINDS OF APPLICATIONS

- **Education** : Designed for various vocational educations, from senior high school to university level. Resident measuring modes made it easy to teach the Beer-Lambert law : concentration, kinetics, colorimetry or spectrum measurement.
- **Laboratory** : Thanks to its wide choice of analytical modes, PRIM spectrophotometers can be used for most routine spectrophotometric laboratory applications.
- **Industry** : Its small size and ruggedness makes PRIM an ideal spectrophotometer for industrial surroundings. Employed for Quality Control, it can easily be placed at the delivery point as well as at all stages of the manufacturing chain.
- **Environment** : Delivered standard with Absorbance and Concentration measuring modes, the PRIM cell-holder can be replaced with the optional 16 mm-tube holder to run classical COD tests. For weak Absorbance samples, PRIM 50 mm, having a standard 50 mm cell-holder, offers enhanced sensitivity.
- **Clinical Biology** : PRIM 500, a special version equipped with auto-aspiration system, micro flow-cell, thermocontrolled cell-holder (37°C) is suitable for biochemical assays. (Separate brochure available upon request)
- **Accessories** : • A complete range of accessories : printer, tube-holder, auto-aspiration system, manual aspiration system, thermo-cuvette-holder are available on option.
- **Ordering Information** :
  - 70CI0377 PRIM Light 10 mm cell
  - 70CI0430 PRIM Light 50 mm cell
  - 70CI0381 PRIM Advanced 10 mm cell
  - 70CI0432 PRIM Advanced 50 mm cell
- **Standard delivery** : • PRIM spectrophotometer, 115/230V - 50/60Hz transformer, box of 100 plastic cuvettes (PRIM 10 mm), operation manual.

## TECHNICAL SPECIFICATIONS

|                   |  |
|-------------------|--|
| Spectral range    | 330-900 nm   |
| Bandwidth         | 10 nm  |
| Accuracy          | +/- 1.5 %  |
| Repeatability     | +/- 1 nm   |
| Photometric range | -0.3 Abs<br>0 -200 %T  |
| Accuracy          | +/- 2 %  |
| Drift             | < 0.03 A/h @ 500 nm  |
| Stray light       | 0.5 %T @ 340 & 400 nm  |
| Display           | Alphanumeric LCD back-lit<br>2 lines height 8 mm 16 characters |
| Zero              | Automatic  |
| Light sources     | Halogen  |
| Detector          | Silicon diode  |
| Interface         | Serial RS232C  |
| Cell holder       | 1 cuvette 10 mmv   |
| Power             | 115/230V - 50/60Hz   |
| H x w x d         | 180 x 280 x 220 mm   |
| Weight            | 2.5 kg   |

## SOFTWARE EQUIPEMENT

| PRIM                                | Light | Advanced |
|-------------------------------------|-------|----------|
| Absorbance                          | YES   | YES      |
| % Transmisslon                      | YES   | YES      |
| Concentration With factor           | YES   | YES      |
| Concentration With 1 standard       | YES   | YES      |
| Concentration With 1 to 8 standards | NO    | YES      |
| Kinetics                            | NO    | YES      |
| Multi-wavelengths                   | NO    | YES      |
| Spectrum scanning                   | NO    | YES      |
| Peaks and valleys detection         | NO    | YES      |
| Multi-language                      | YES   | YES      |
| Automatic stand-by                  | YES   | YES      |