

## Introducing the 6850

The new 6850 introduces the first double beam spectrophotometer with a variable spectral bandwidth into the Jenway range. The highly stable optics and two detectors measure the sample and reference simultaneously optimising measurement accuracy. The 6850 has measurement modes for photometrics, concentration, multi-wavelength, spectrum scanning, kinetics, quantitation, DNA and protein analysis. Up to 10 wavelengths can be measured in the multi-wavelength measurement mode and quantitation curves can be created by measuring up to 10 standards at 3 different wavelengths.

#### **Key Features**

- Double beam spectrophotometer with highly stable optics
- Integrated user interface for local control
- Variable spectral bandwidth 0.5, 1, 2, 4 and 5nm
- Conforms to European Pharmacopeia requirements
- Jenway Prism PC software included as standard
- Extensive range of accessories available



### Improved Optics

Model 6850 covers the UV/visible wavelength range from 190 to 1100nm, with a variable spectral bandwidth, ranging from 5nm down to 0.5nm, using tungsten halogen and deuterium light sources. The range of bandwidths available allows a balance between resolution, accuracy and data precision to be maximised depending on the application; therefore providing a flexible platform to conform to multiple regulatory agencies for a variety of applications, all with one spectrophotometer.

Model 6850 had three scan speeds available enabling scan speeds of 100 to 2000nm/min to be achieved. With wavelength scan intervals of 0.1, 0.2, 0.5, 1, 2 or 5nm the 6850 can be configured to meet your exact requirements.

#### Instrument Design

Model 6850 has an integrated user interface providing local control of the spectrophotometer. With no PC required this saves expense and valuable bench space. The large graphical display is easy to read and enables more information to be displayed including spectrum and kinetics curves. The user interface can be navigated using soft key navigation, arrow keys or shortcut keys.

This spectrophotometer utilises a research grade monochromator for excellent energy throughput and a silicone photodiode detector. All of this comes packaged in a small footprint double beam spectrophotometer whilst still offering a large sample chamber that enables an 8 position cuvette changer to be fitted.



### Prism Key Features

- All spectrophotometer functions can be controlled by PC
- · Additional functionality
- Increased results storage
- Extensive post-measurement tools
- Easy to export data
- Windows compatible

#### Introducing Jenway Prism PC Software

Jenway Prism PC software is supplied as standard and offers additional functionality, extensive post-measurement tools, unlimited results saving and easy export of data.

The Prism PC software can be used to fully control the functionality of the spectrophotometer. The measurement modes available in Prism mirror those of the instrument with measurement modes for photometrics, concentration, multi-wavelength, spectrum scanning, kinetics, quantitation, DNA and protein analysis.

Prism has pre-loaded methods for DNA analysis including 260/280 and 260/230 ratios with 320nm correction. Up to 20 wavelengths can be measured simultaneously in the multi-wavelength measurement mode and quantitation curves can be created by measuring up to 200 standards.



To further compliment the 6850 Jenway offer an extensive range of easy to fit accessories. To enhance productivity and increase throughput rates there is an automatic 8 cell changer. **Part code:** 685 401. For medical and biochemical application where sample volumes are strictly limited a micro-cuvette holder is available. **Part code:** 685 304

For applications where sample temperature is critical, a water heated cuvette holder is available for 10x10mm cuvettes. **Part code: 685 131**. Please note that a water bath and circulator are also required but not supplied.

For applications requiring additional sensitivity where longer path length cuvettes may be required; Jenway offer an adjustable path length cuvette holder which can accept cuvettes with 10, 20, 30, 40, 50 and 100mm path lengths. **Part code: 685 005**. Please note that the 6850 has a single 10x10mm cuvette holder fitted in

the reference position therefore it may be necessary to purchase two adjustable path length cuvette holders, one for the sample position and one for the reference position.



# Ordering Information

| Product Code | Description                                       |
|--------------|---|
| 685-SC       | 6850 double beam spectrophotometer                |
| 685 204      | 10x10mm path length cuvette holder                |
| 685 131      | Water heated 10x10mm single cell holder           |
| 685 005      | 10 to 100mm adjustable path length cuvette holder |
| 685 304      | Micro-cuvette holder                              |
| 685 401      | 8 position automatic cell changer                 |
| 685 401      | 8 position automatic cell changer                 |

The 6850 is supplied fitted with a single 10x10mm cuvette holder in the sample and reference position, instruction manual, power cables, PC software on CD ROM with USB connection cable and dongle, 2 x quartz cuvettes, 4 x glass cuvettes and FREE dust cover.

## **Technical Specification**

Resolution

Wavelength range 190 to 1100nm

Wavelength resolution 0.1nm

Wavelength accuracy ± 0.3nm (at 0.5 and 1nm bandwidth) ± 0.5nm (at 2, 4 and 5nm bandwidth)

Wavelength reproducibility ±0.2nm

Spectral bandwidth Variable 0.5, 1, 2, 4, 5nm Photometric range -0.3 to 3.0A 0 to 200%T

Photometric accuracy  $\pm 0.002 \text{A} (0\text{-}0.5 \text{A})$   $\pm 0.3\% \text{T} (0\text{-}100\% \text{T})$ Photometric reproducibility  $\pm 0.001 \text{ Abs} (0 \text{ to } 0.5 \text{ Abs})$   $\pm 0.002 \text{ Abs} (0.5 \text{ to } 1.0 \text{ Abs})$ 

> 0.15%T (0-100%T) 0.01%T, 0.0001A

Stray light <0.05%T at 220 and 360nm

Noise 0.0005A

Stability ± 0.001A/h at 500nm after 15 min warm up

Multi-wavelength Up to 10 wavelengths, up to 20 wavelengths with PC software

Calculations Ratio, difference, formulae with factors Spectrum range Any range between 190 and 1100nm

 Scan speed
 100 to 2000nm/min

 Scan interval
 0.1, 0.2, 0.5, 1, 2 or 5nm

Analysis Auto peaks and valleys, zoom, Addition, subtraction, peak ratios, smoothing, area under curve,

wavelength table, derivatives, overlay with PC software

Kinetics Up to 12 hours with time intervals of 0.1, 0.2, 0.5, 1, 2, 5, 10 or 30 seconds

Analysis Slope and formula of line of best fit between any two points

Quantitation points Up to 3 wavelengths

Quantitation Calibration Blank with up to 10 standards or factor

Concentration range 0–99999

Calibration Blank with standards or factor

DNA Batio, concentration, A320 correction.

Light source Tungsten halogen and Deuterium lamps

Lamp changeover 325 to 370nm selectable
Outputs USB and parallel

Operating system: Windows 2000, XP, Vista, Windows 7

 Electrical supply
 120VA, 220/110V, 50/60Hz

 Size (w x d x h)
 600 x 450 x 200mm

Weight 22kg



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