

## UV/VIS Spectrophotometer



The new JASCO Model V-530 Spectrophotometer is the most versatile, economical and reliable instrument in the general purpose UV/Visible class. Like the more sophisticated V-series instruments, the V-530 is based on more than 25 years of Jasco experience with advanced optics and state-of-the-art computer technology as well as inputs from thousands of users worldwide. The V-530 proves a highly accurate and reliable instrument able to fit a variety of applications from routine analysis through advanced research.

The V-530 can be configured for individual needs offering control by either a Windows® based PC or by the simplified intelligent Remote Module (iRM) both via the standard RS-232C interface. The low cost iRM offers easy data acquisition and processing using a large backlit touch-screen LCD display designed for quick, simplified routine applications. The V-530 can be quickly upgraded to full PC control by connecting the RS-232C cable to the standard interface provided on all PC's. The new JASCO Spectra Manager is the same 32-bit Windows program provided with all higher end JASCO spectroscopy products. Spectra Manager provides the operator with a wide range of tools to enable flexible data acquisition modes, complete data processing, custom printing and instrument validation. Because Spectra Manager is common for all JASCO spectroscopy products, data files from Fluorescence, FTIR, CD and other instruments can be easily imported for comparison, display and printing.

### Features

#### Simplicity and ease of use

Both the iRM and PC software are written in an intuitive manner allowing even first time users to measure with confidence.

#### Compact design

The optical bench of the V-530 is a compact 484 (W) x 477 (D) x 205 (H) mm saving space in the crowded modern laboratory.

#### Excellent optical performance

Double beam technology and high-quality concave grating result in excellent spectroscopic performance. Reducing stray light to 0.04% enables highly precise measurement in a wide photometric range.

#### High speed scanning

Bright optics and fast response detectors allow the V-530 to scan at speeds up to 4000 nm/min. without tracking error.

#### Versatility

A full complement of sampling accessories such as cell holders, flow cells, temperature controllers and software packages such as Kinetic and Protein-nucleic acid analysis are available to optimize the V-530 for specific applications.

#### Validation

For laboratories concerned about GMP/GLP compliance, the V-530 offers an optional validation software package to ensure instrument and data integrity.

## SPECIFICATIONS

### Hardware specifications

|                              |   |
|------------------------------|---|
| Optical system:              | Double beam, single monochromator with a 1200 grooves/mm concave grating and modified Rowland mount   |
| Spectral bandwidth:          | 2 nm  |
| Wavelength range:            | 190 - 1100 nm   |
| Light sources:               | Deuterium lamp for UV range (190 - 350 nm), Halogen lamp for VIS range (330 - 1100 nm)  |
| Light source switching:      | Selectable within a range of 330 to 350 nm  |
| Wavelength repeatability:    | ± 0.1 nm  |
| wavelength accuracy:         | ± 0.5 nm  |
| Photometric modes:           | Abs, %T, %R   |
| Photometric range:           | -2 - 3 Abs  |
| Photometric reproducibility: | ± 0.001 Abs (0 - 0.5 Abs)<br>± 0.002 Abs (0.5 - 1 Abs)<br>± 0.15 %T   |
| Photometric accuracy:        | ± 0.002 Abs (0 - 0.5 Abs)<br>± 0.004 Abs (0.5 - 1 Abs)<br>± 0.3 %T  |
| Stray light:                 | (Above figures obtained using NIST SRM 930D)<br>0.04 %T<br>both at 220 nm with NaI 10 g/l solution and at 340 nm with NaNO <sub>2</sub> 50 g/l solution |
| Wavelength scan speed:       | 4000, 2000, 1000, 400, 200, 100, 40 nm/min  |
| Wavelength slew speed:       | 8000 nm/min   |
| Sampling interval:           | 0.1, 0.2, 0.5, 1, 2 nm/data (spectral scan mode)<br>0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10 sec/data (time scan mode)  |
| Baseline stability:          | ± 0.001 Abs/hour<br>Response: Slow (250 nm, lamp on longer than 60 min, temperature variation ± 5°C)  |
| Baseline flatness:           | ± 0.001 Abs<br>within 200 - 1000 nm range after baseline correction<br>Response: Medium   |
| Response:                    | Scan speed: 100 nm/min<br>Quick, Fast, Medium, Slow   |
| Detector:                    | Silicon photo-diode (S1337)   |
| output port:                 | RS-232C interface   |
| Power requirement:           | 130W  |
| Dimensions:                  | 484 (W) x 477 (D) x 205 (H) mm  |
| Net weight:                  | approx. 16 kg   |

## STANDARD ACCESSORIES

|                      |        |  |
|----------------------|--------|--|
| V-530 basic unit     |        |  |
| - Spectrophotometer  | 1 set  |  |
| - AC power cable     | 1 pc.  |  |
| - RS-232C cable      | 1 pc.  |  |
| - Spare fuses        | 2 pcs. |  |
| - Hexagonal wrench   | 1 pc.  |  |
| - Instruction manual | 1 copy |  |

## ORDERING INFORMATION

| Code No.   | Description                                 |
|------------|---|
| 6736-J004A | V-530 UV/VIS Spectrophotometer (basic unit) |
| 4880-0464J | VWS-580 Spectra Manager software            |
| 6736-J003A | IRM-559 intelligent Remote Module           |



## OPTIONAL ACCESSORIES

| Code No.                                     | Description   |
|--|---|
| <b>Validation Software</b>                   |   |
| 4880-0466C                                   | VWVD-582 Validation software for Spectra Manager                |
| 4880-0255F                                   | VDP-564 Validation card for IRM-559                             |
| <b>Optional Software for Spectra Manager</b> |   |
| 4880-0474D                                   | VWLS-591 Long time scan measurement software                    |
| 4880-0468C                                   | VWPK-584 Parallel kinetics software                             |
| 4880-0469B                                   | VWDM-585 DNA melting software                                   |
| 4880-0472B                                   | VWPN-588 Protein Nucleic acid quantitative software             |
| 4880-0478B                                   | VWIS-595 Interval scan software                                 |
| 4880-0479A                                   | VWIT-596 Temperature interval scan software                     |
| 4880-0473A                                   | VWGA-589 Band gap measurement software                          |
| 4880-0467C                                   | VWMC-583 Multi component analysis software                      |
| 4880-0470C                                   | VWFT-586 Film thickness software                                |
| 4880-0465E                                   | VWTS-581 Color analysis software                                |
| 4880-0476A                                   | VWAC-593 ASTM color analysis software                           |
| 4880-0475A                                   | VWSC-592 Saybolt color software                                 |
| 4880-0471A                                   | VWDT-587 Visible/Solar light transmit/reflect software          |
| 4880-0477A                                   | VWPL-594 PLS method software                                    |
| 4880-0714A                                   | VWMC-622 Macro command  |
| <b>Optional ROM/RAM Card for IRM-559</b>     |   |
| 4880-0251A                                   | RAM-560 Parameter memory card                                   |
| 4880-0252A                                   | RAM-561 Data memory card  |
| 4880-0256C                                   | KAP-565 Kinetics analysis card                                  |
| 4880-0259D                                   | PNA-568 Protein nucleic acid quantitative analysis card         |
| 4880-0257B                                   | TSV-566 Color analysis card                                     |
| 4880-0258C                                   | FTM-567 Film thickness measurement card                         |
| 4880-0253C                                   | UCP-562 User calculation program card                           |
| 4880-0254B                                   | MCC-563 Macro command card                                      |
| <b>Cell Holders</b>                          |   |
| 6703-J112A                                   | USE-493 Single rectangular cell holder, standard                |
| 6156-J066A                                   | CYH-354 Cylindrical cell holder                                 |
| 6156-J060A                                   | LSE-331 Longpath rectangular cell holder                        |
| 6522-J025A                                   | EMC-418 Micro cell holder                                       |
| <b>Manual Cell Changers</b>                  |   |
| 6178-J053A                                   | SSE-343 6-position cell holder                                  |
| 6156-J052A                                   | FSE-332 4-position long path cell holder                        |
| 6156-J058A                                   | MHT-344 Water thermostatable 4-position turret cell holder      |
| 6708-J228A                                   | NCP-511 6-position automatic cell changer                       |
| <b>Automatic Cell Changers</b>               |   |
| 6708-J128A                                   | NCP-508 Water thermostatable 6-position automatic cell changer  |
| 6708-J018A                                   | PSC-498 Peltier thermostatted 6-position automatic cell changer |
| 6522-M039A                                   | STR-458 Water thermostatable single cell holder with stirrer    |
| <b>Thermostatable Single Cell Holders</b>    |   |
| 6708-J011A                                   | EHC-477 Peltier thermostatted single cell holder (Air-cooled)   |
| 6708-J025A                                   | ETC-505 Peltier thermostatted single cell holder (Water-cooled) |
| 6156-J070A                                   | HMC-358 Water thermostatable micro cell holder                  |
| <b>Sippers</b>                               |   |
| 6708-J129A                                   | NPF-509 Peristaltic sipper                                      |
| 6708-J012A                                   | PQF-478 Peristaltic sipper                                      |
| 6708-J015A                                   | LQF-481 Long light path peristaltic sipper                      |
| 6708-J013A                                   | QFS-479 Vacuum sipper (Tygon tubing)                            |
| 6708-J014A                                   | QFS-480 Vacuum sipper (Teflon tubing)                           |
| <b>Flow Cells</b>                            |   |
| 6156-J057A                                   | SFC-333 Flow cell unit  |
| 6156-J055A                                   | MFC-338 Micro flow cell unit                                    |
| 6156-J101A                                   | FIC-361 Micro flow cell unit for flow injection                 |
| <b>Autosampler</b>                           |   |
| 6774-J001A                                   | ASU-605 ASU-605 Auto sampler                                    |
| <b>Syringe Pump</b>                          |   |
| 6708-J051A                                   | NCS-609 Syringe pump  |
| <b>Accessories for Solid Samples</b>         |   |
| 6708-M101A                                   | FLH-466 Film holder   |
| 6708-M102A                                   | FLH-467 Film holder   |
| 6522-J036A                                   | RSH-452 Rotation sample holder                                  |
| 6748-J047A                                   | SLM-468S Single reflection attachment                           |

● Specifications are subject to change without notice.

**JASCO®**

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