

UV-Vis Spectrophotometer

Double monochromator system for high performance, low stray light

V-660



The V-660 is a double-beam spectrophotometer utilizing a double monochromator and a photomultiplier tube detector. The use of a double monochromator provides higher resolution with extremely low stray light (0.00008%) to assure more precise measurement over a wide photometric range. Extended photometric linearity up to 6 Abs enables measurement of highly absorbing samples and is also effective for filter measurements approaching 0 %T.

Two graphical user interfaces are available including a newly redesigned intelligent remote module (iRM) with a color LCD touch screen and Spectra Manager™ II software, the latest version of JASCO's innovative cross-platform spectroscopy software. Both of these control and analysis interfaces allow full system control and advanced data processing. Spectra Manager CFR is a 21 CFR part 11 compliant version of software and is available as an option.

- **IQ Accessory and IQ Start**

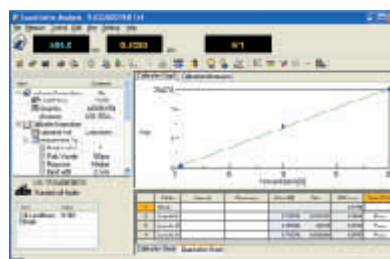
User-friendly features include the IQ Accessory function for automatic accessory recognition and IQ Start for immediate execution of registered control programs when conducting routine measurements.

- **Exceptional Stray Light Rejection**

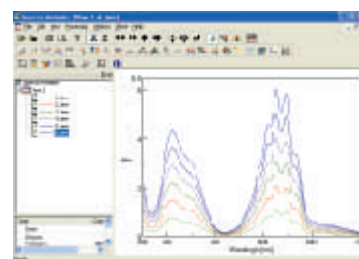
A true double monochromator reduces stray light below 0.00008%. The high stray light rejection makes this instrument an excellent choice for the measurement of high optical density samples up to 6 absorbance units.

- **Full Line of Accessories**

A full complement of accessories is available to optimize the V-660 for particular applications. Options include a wide variety of liquid cell holders, micro cell holders, flow cell units and accessories for solid samples. Advanced accessories such as automated cell changers, sippers and programmable temperature control systems are fully controlled by the iRM or Spectra Manager II.



Spectra Manager II (Spectra measurement)



Spectra Manager II (Spectra Analysis)



Hardware Specifications

Optical system	Double monochromator 600 lines/mm plane grating Czerny-Turner mount Double-beam
Light source	Deuterium lamp: 187 to 350 nm Halogen lamp: 330 to 900 nm
Light source exchange wavelength	User-selectable in the range of 330 to 350 nm
Detector	Photomultiplier tube
Wavelength range	187 to 900 nm
Wavelength accuracy	±0.1 nm (using a spectral bandwidth of 0.5 nm; wavelength: 656.1 nm; stabilized room temperature)
Wavelength repeatability	±0.05 nm
Slew speed	12,000 nm/min
Spectral bandwidth	0.1, 0.2, 0.5, 1, 2, 5, 10 nm L2, L5, L10 nm (low stray-light mode) M1, M2 nm (micro-cell mode)
Photometric range	0 to 10000 %T -2 to 6 Abs
Photometric accuracy	±0.002 Abs (0 to 0.5 Abs) ±0.003 Abs (0.5 to 1 Abs) ±0.3 %T (Tested with NIST SRM 930D)
Photometric repeatability	±0.001 Abs (0 to 0.5 Abs) ±0.001 Abs (0.5 to 1 Abs)

Stray light	1 % (198 nm KCL 12 g/L aqueous solution) 0.00008 % (220 nm NaI 10 g/L aqueous solution) 0.00008 % (340 nm NaNO ₂ 50 g/L aqueous solution) 0.00008 % (370 nm NaNO ₂ 50 g/L aqueous solution) (spectral band width: L2 nm, 10 mm cell)
Baseline stability	±0.0003 Abs/hour (Value obtained greater than two hours after turning on the light source; stabilized room temperature; wavelength: 250 nm; response: slow; spectral bandwidth: 2 nm)
Baseline flatness	±0.0005 Abs (Value obtained after instrument baseline correction with a temperature variation of less than 5°C, wavelength range: 200 to 850 nm; response: medium; spectral bandwidth: 2 nm; scanning speed: 400 nm/min [based on JAIMA Standard JAIMAS-0001])
RMS noise	0.00005 Abs (0 Abs; wavelength: 500 nm; measurement time: 60 sec.; response: medium; bandwidth: 2 nm)
Power requirements	145 VA
Dimensions and weight	460(L) 602(W) 270(H) mm (excluding accessories) 29 kg

Spectra Manager II

Computer Requirements	Windows XP (Service Pack 2)
Recommended system (minimum specifications)	Intel Pentium 4 (or similar); 2.0 GHz; 512 MB RAM; 10 GB HDD
Measurement modes	Quantitative Analysis Wavelength scan (Abs, %T, %R, Sample, Reference) Time scan (Abs, %T, %R, Sample, Reference) Fixed wavelength (Up to 8 wavelengths) Abs/%T monitor
Data processing	Peak picking, Peak height, Peak area, Peak width, Derivatives, Smoothing, Data truncation, Arithmetic, Baseline correction, Subtraction, Deconvolution, Vertical axis conversion, Horizontal axis conversion
Other standard functions	Validation Software, Enzyme activity calculation JASCO Canvas, Film thickness measurement, Color analysis
Optional	Spectra Manager CFR

iRM-700 Intelligent Remote Module

Display	320 x 240 pixel color LCD Touch sensitive screen
Measurement mode	Quantitative analysis Wavelength scan Time scan Fixed wavelength Abs/%T monitor
Data processing	Scale change, Zoom, Trace, Peak picking, Peak ratio, Ratio of 2 WL, Derivatives, Smoothing, Calculation, Overlay
Other standard	Instrument validation, Enzyme activity calculation
Data handling	Data format: JASCO format (.jws), text format (ASCII.txt) Auto print Auto save (to flash memory)
Printer	USB compatible printer (optional)
Card slot	Compact flash memory card/flash ATA card

Standard Composition (V-660 PC Type)

Description	Qty	Remarks
Holmium glass	1	Bi-functional Holmium glass holder/shielding plate
Time-delay fuse	2	
USB cable	1	
AC power cable	1	
Phillips screw driver	1	For adjustment of the light source mirror
Software installation CD	1	
Certificate of inspection	1	
Instruction manual	1 set	

Standard Composition (V-660 iRM Type)

Description	Qty	Remarks
Intelligent remote module (iRM)	1	
iRM touch pen	1	
Compact flash memory card	1	
Card adapter	1	
Holmium glass	1	Bi-functional Holmium glass holder/shielding plate
Time-delay fuse	2	
AC power cable	1	
Phillips screw driver	1	For adjustment of the light source mirror
Certificate of inspection	1	
Instruction manual	1 set	



● Specifications are subject to change without notice.

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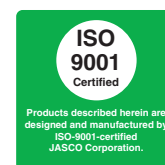
4-21, Sennin-cho 2-chome, Hachioji, Tokyo 193-0835, Japan
Tel: +81-426-66-1322 Fax: +81-426-65-6512 Internet: <http://www.jascoint.co.jp/english/index.html>
Australia, China, Hong Kong, India, Indonesia, Iran, Korea, Malaysia, New Zealand, Pakistan, Philippines, Russia, Singapore, South Africa, Taiwan, Thailand

JASCO INCORPORATED

8649 Commerce Drive, Easton, Maryland 21601-9903, U.S.A
Tel: +1-800-333-5272 Tel: +1-410-822-1220 Fax: +1-410-822-7526 Internet: <http://www.jascoinc.com>
Canada, Costa Rica, Mexico, Puerto Rico, Argentina, Brazil, Chile, Colombia, Paraguay, Peru, Uruguay

JASCO EUROPE s.r.l.

Via Confalonieri 25, 23894 Cremella (Lc), Italy
Tel: +39-039-956439 Fax: +39-039-958642 www.jasco-europe.com
JASCO Deutschland www.jasco.de, JASCO UK www.jasco.co.uk, JASCO France www.jascofrance.fr,
JASCO Benelux www.jasco.nl, JASCO Spain www.jasco-spain.com, JASCO Scandinavia www.jascoscandinavia.se
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JASCO Corporation
2967-5, Ishikawa-cho, Hachioji, Tokyo 193-8537, Japan
<http://www.jasco.co.jp>
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