

J-1500

CD Spectrometer



Specifications

[Hardware]

Light source:	150 W air-cooled Xenon lamp or 450 W water-cooled Xenon lamp Option: 20 W halogen lamp
Detector:	Head-on photomultiplier tube PMT Option: photomultiplier tube for wavelength extension ExPMT, InGaAs detector
Monochromator:	Double-prism monochromator, Czerny-Turner mount
Modulator:	Photoelastic modulator
Measurement wavelength range:	163 to 950 nm 400 to 1250 nm (optional PMT detector) 800 to 1600 nm (optional 20 W halogen lamp + InGaAs detector)
Wavelength accuracy:	± 0.1 nm from 163 to 250 nm, ± 0.2 nm from 250 to 500 nm ± 0.5 nm from 500 to 800 nm, ± 1.5 nm from 800 to 1200 nm ± 2.0 nm from 1200 to 1600 nm
Wavelength repeatability:	± 0.05 nm from 163 to 500 nm, ± 0.1 nm from 500 to 800 nm ± 0.5 nm from 800 to 1600 nm
Spectral bandwidth:	0.01 to 16 nm
Slit width:	1 to 4000 μm
Digital Integration Time (D.I.T.):	0.1 msec. to 30 sec.
Scanning mode:	Continuous scan, Step scan, Auto response(D.I.T) scan
Scanning speed:	up to 10000 nm/min (when using continuous scan)
Photometric Mode:	CD, LD, ORD ^{*1} , FDCD ^{*1} , FDL ^{*1} , Transmittance, Absorbance, FL intensity ^{*1} , Anisotropy ^{*1} , DFP ^{*1} , HT voltage, DC voltage, External input (Temperature, PH, etc. are available)
CD full scale:	± 8000 mdeg
CD resolution:	0.00001 mdeg
Wavelength resolution:	0.025 nm (when using continuous scan)
Stray light:	Not more than 0.0003 % (200 nm)
RMS noise:	0.004 mdeg (185 nm, 150 W light source) 0.003 mdeg (185 nm, 450 W light source) 0.007 mdeg (200 nm, 150/450 W light source) 0.007 mdeg (500 nm, 150/450 W light source) (spectral bandwidth 1 nm, D.I.T. 8 sec)
Baseline stability:	0.02 mdeg/hr
LD measurement:	Full scale $\pm 1\Delta\text{OD}$ / Resolution 0.000001 ΔOD
UV measurement:	Single beam measurement / Photometric range: 0 to 5 Abs Photometric accuracy: ± 0.01 Abs (0 to 1 Abs, checked using NIST SRM 930 filter)
External input terminal:	Two channels (input range: -1 to 1 V DC)

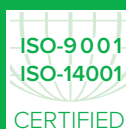
Mercury lamp	Used for the instrument inspection
Shutter	Located the light source unit
Standard cell holder:	CH-434 cylindrical/rectangular cell holder
	Available cells: Cylindrical cell: Optical pathlength 0.1 to 20 mm, O.D. 22 mm Rectangular cell: Optical pathlength 1 to 20 mm, optical pathwidth 10 mm
Sample chamber:	150 (W) × 310 (D) × 165 (H) mm, Exists the water inlet/outlet ports
Dimensions/Weight:	1055 (W) × 545 (D) × 390 (H) mm, 77 kg (150 W light source) 1135 (W) × 610 (D) × 420 (H) mm, 82 kg (450 W light source)
Power requirements:	AC 100 to 240 V, 50/60 Hz 360 VA (150 W light source) AC 100 to 240 V, 50/60 Hz 770 VA (450 W light source)
[Data processing]	
Software:	JASCO Spectra Manager Ver. 2.5 ^{*2}
Operating system:	Windows® 11 Pro
CD data processing:	CD K-K transform, HT-OD conversion, CPL calculation, G value calculation, Sample Information edition, ORD-E Data correction, Optical constant calculation, Error bar view, r-P transform, pH axis transform
Standard program:	Spectra Measurement, Time Course Measurement, Interval Scan Measurement, Data Monitor, Reaction Rate Calculation, Validation, JASCO Canvas, Spectra Analysis, Interval Data Analysis, MCD Hysteresis Analysis, ORDE-521 Data Correction Time Course Measurement (by using cell changer) ^{*3} , Variable Temperature Measurement ^{*3} , Temperature Interval Scan Measurement ^{*3} , Temperature/Wavelength Scan Measurement ^{*3} , Automatic Titration Measurement ^{*3} , Automatic Titration Scan Measurement ^{*3} , Ex/Em Spectra Measurement ^{*3} , MCD Hysteresis Measurement ^{*3} , Stopped-Flow Measurement (non-CFR only) ^{*3}
Optional program:	qHOS program, BeStSel program, Denaturation analysis (includes Thermal denaturation multi analysis), Analog output module (non-CFR only), Macro command (non-CFR only)
[Installation requirement]	
Operation temperature/humidity:	15 to 30 °C, less than 85 %
Nitrogen gas purging:	Light source unit, monochromator unit, and sample chamber 2 L/min (more than 185 nm) 5 L/min (more than 180 nm) 15 L/min (more than 175 nm) More than 15 L/min (more than 170 nm)
Cooling water for light source:	2 L/min, pressure 0.5 to 2.0 kg/cm ² (450 W light source only)

*1 Dedicated accessories are required.

*2 JASCO can provide Spectra Manager Ver. 2.5 CFR which is compliant with FDA 21 CFR PART 11

*3 These programs are provided with dedicated accessories.

The contents of this material are for reference and illustrative purposes only. Information, descriptions, and specifications in this publication are subject to change without notice. JASCO assumes no responsibility and will not be liable for any errors or omissions contained herein or for incidental, consequential damages or losses in connection with the furnishing, performance or use of this material.



Products described herein are designed and manufactured by ISO-9001 and ISO-14001 certified JASCO Corporation



JASCO CORPORATION

2967-5, Ishikawa-machi, Hachioji-shi, Tokyo 192-8537 Japan

Tel: +81-42-649-5177 Fax: +81-42-646-4515

Web: www.jasco-global.com