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8453 UV-Vis

Specifications for the Agilent 8453 UV-Visible Spectrophotometer

Optical Specifications

Wavelength range	190 – 1100 nm	
Slit width	1 nm	
EP resolution test	> 1.6	spectrum of a 0.02% v/v solution of toluene in hexane, ratio abs. at 269 nm/ 266 nm
Stray light	<0.03% <0.05% <1%	at 340 nm (NaNO ₂ , ASTM) at 220 nm (NaI, ASTM) at 198 nm (KCl, EP)
Wavelength accuracy	<±0.5 nm <±0.2 nm	(NIST 2034)* at 486.0 and 656.1 nm
Wavelength reproducibility	<±0.02 nm	ten consecutive scans (NIST 2034)
Photometric accuracy	<±0.005 A <±0.01 A	at 1 A (NIST 930e) potassium dichromate, EP method
Photometric noise	<0.0002 A	sixty 0.5-s scans at 0 A, 500 nm, rms
Photometric stability	<0.001 A/h	at 0 A, 340 nm, after 1 hour warm-up, measured over 1 hour, every 5 seconds, Constant ambient temperature
Baseline flatness	<0.001 A	0.5-second blank, 0.5-second scan, rms
Typical scan time	1.5 second	full range

Physical Dimensions

Height x width x depth	185 x 344 x 560 mm (7.3 x 13.5 x 22.0 inches)
Weight	16.5 kg (36.3 lb)

Power Requirements

Line voltage	90–264 V AC
Line frequency	47–63 Hz
Power consumption	70 VA typical

Environmental Conditions

Operating temperature	0 to 50 °C (32 to 122 °F)
Non-operating temperature	-40 to 70 °C (-4 to 158 °F)
Humidity	<95% at 25 to 40 °C (77 to 104 °F)

- The methods used are application relevant, for example, the wavelength accuracy specification is given for the complete wavelength range and not just for a single wavelength.

Computer Requirements (for ChemStation software)

Processor	1 GHz 32-bit (x86) or 64-bit (x64)
RAM	At least 1 GB
Peripherals	CD-ROM disk drive
Hard disk drive	At least 40 GB of free capacity
Operating system	Microsoft Windows XP or VISTA
Monitor	Super VGA or Ultra VGA 17 inch color with resolution at least 800x600 pixel
Video	256 colors and 1 MB video RAM, small fonts are recommended
Interface	LAN

The ChemStation software has been tested on HP PCs that conform to the above specifications. Although the software is designed to be compatible with other PC hardware, Agilent Technologies will not necessarily accept responsibility for defects reported on such hardware.

Printers: The ChemStation software operates with any Microsoft Windows compatible printer directly connected to the computer or serial interface or a Microsoft Windows compatible printer connected through a Local Area Network (LAN). The recommended printers are the HP Jet printer family (for lower-volume applications) or the HP Laser printer family. The color print capability is supported on the appropriate models. Dot

matrix printers, plotters and color printers should not be used if printing performance is a system requirement. Printer performance enhancement hardware should operate correctly with the system but is neither supported nor recommended.



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