

# Intelligent UV/Vis Detector

## UV-2075/2070



The JASCO Models UV-2075 and UV-2070 are the most compact, full featured UV/Visible detectors that have ever been offered. Occupying only 15 cm of bench space the UV-2075/2070 have versatile capabilities to cover the most complex needs of the modern analytical laboratory. To ensure the most sensitive and stable HPLC detection these detectors utilize a Czerny-Turner mount monochromator covering a wide wavelength range from 190 to 900 nm with deuterium and halogen lamps (Model UV-2070) and from 190 to 600 nm with deuterium lamp (Model UV-2075). The excellent optical characteristics and full programmability of the UV-2075/2070 combined in a compact package is truly a new benchmark in HPLC detection.

The UV-2075/2070 can easily be interfaced with the JASCO HPLC system using the new 32 bit HSS-2000 HPLC System software for Windows2000. The HSS-2000 package offers full automation of the JASCO HPLC system including the UV-2075/2070 and other components.

- **Compact UV/VIS Detector**

The small 15 cm wide and 15 cm high detector occupies minimal laboratory space and the lightweight 10 kg housing allows it to be easily moved from place to place.

- **Wide wavelength range**

The UV-2075 utilizes a Deuterium lamp to cover the range of 190 nm ~ 600 nm. For enhanced performance in the visible range the UV-2070 has both Deuterium and Halogen sources covering the range of 190 nm ~ 900 nm.

- **High sensitivity and extreme stability**

The advanced high throughput optical design results in low baseline noise level with minimal drift enabling accurate peak detection for even the highest sensitivity analyses. The tapered cell design eliminates baseline variation due to the change in the refractive index of the eluent.

- **Full intelligent functions**

Front panel programming allows up to 10 program files with up to 64 steps/file. Time programmable parameters include Wavelength, Range, Autozero, Response and Spectral scanning. Self-diagnostics functions are provided for start up hardware checks as well as monitoring for solvent leakage, lamp-off, etc. during operation. To extend lamp life, a timer is provided to shut off the lamp after completing the run.

- **A variety of flow cells**

Various cassette type flow cells are available including Micro, Preparative, Ultra High pressure for SFC and/or LC-MS, PTFE for biochemical samples, and Inert flow cell for biochemical samples or ion chromatography.

- **On-the-fly spectral scanning**

The fast scanning speed of the UV-2075/2070 allows measurement of the UV spectrum as fast as one second allowing on-the-fly spectral scanning. UV spectra can be obtained without stopping the pump or bypassing the flow. Up to 10 Spectra and a baseline can be stored in the on-board memory allowing scans to be acquired at every peak during a typical chromatographic run.

## SPECIFICATIONS

### Optical system

Monochromator: Czerny-Turner mount  
 Spectral bandwidths: 8 nm  
 Wavelength accuracy:  $\pm 1$  nm  
 Wavelength reproducibility:  $\pm 0.1$  nm  
 Light source  
 UV-2070: Deuterium lamp 190 - 370 nm,  
 Halogen lamp 371 - 900 nm  
 UV-2075: Deuterium lamp 190 - 600 nm  
 UV-2070: 190 - 900 nm  
 UV-2075: 190 - 600 nm

### Wavelength range

### Photometric system

Photometric method: Dual beam photometry  
 Noise level:  $\pm 0.3 \times 10^{-5}$  ABU (at 250 nm, with empty cell, response: STD)  
 Drift:  $1 \times 10^{-4}$  ABU/h (at 250 nm, with empty cell and in constant temperature)  
 Photometric range: 0.0005, 0.001, 0.0025, 0.005, 0.01, 0.02, 0.04, 0.08, 0.16, 0.32, 0.64, 1.28, 2.56 ABU/10mV, S (short)  
 Auto zero: Provided (with base line function)  
 Response: 3 steps (FAST, STD and SLOW)

### Flow through cell

Mounting: Front loading cassette type with bulkhead union  
 Flow cell: Tapered cell (17  $\mu$ l)  
 Path length: 10 mm  
 Optional flow through cells: Preparative flow cell, 20  $\mu$ l, 1 mm path, Micro flow cell, 1  $\mu$ l, 5 mm path, High pressure flow cell, 4  $\mu$ l, 5 mm path PTFE flow cell, 30  $\mu$ l, Inert flow cell, 17  $\mu$ l

### Materials:

All materials in contact with solvent are fused silica, PTFE and stainless steel

### Signal input/output

Output to recorder: 10 mV/full scale  
 Output to integrator: 1 V/AU, 0.2 V/0.2AU, 1 V/2AU  
 Others: Marker output/input, Autozero input, LC-NET output/input, Program reset/run, Leak out

### Self-diagnostics

For starting up: ROM (memory), RAM (memory), DC power, C-MOS RAM (memory backed-up by battery), Grating driver/mechanism, Light source, Radiation intensity of the light source  
 Lamp, Leak in cell, Grating driver  
 During operation: Lamp, Leak in cell, Grating driver  
 Programming: 64 steps, 10 files, up to 999.9 minutes in 0.1 min increments for Wavelength, Range, Auto Zero, Response, Time programming for spectral measurement

### Spectral scanning

UV-2070: Possible in the range of 200 - 900 nm  
 UV-2075: Possible in the range of 200 - 600 nm

### Spectral memory:

11 memories available for spectra (1 for baseline), possible to process differential spectra with spectral memory function.

### Auto lamp off:

Settable from 0.1 - 99.9 hours in 0.1 hour increments

### Others

Dimensions: 150 (W) x 470 (D) x 150 (H) mm  
 Weight: Approx. 10 kg  
 Power Input voltage: AC100 - 240 V  $\pm 10\%$  50/60 Hz  
 Power consumption  
 UV-2070: 190 VA  
 UV-2075: 145 VA

## STANDARD ACCESSORIES

Spare fuses (F3.15A or T1.6A) 2 pcs  
 Power cable 1 pc

## OPTIONAL ACCESSORIES

6687-H106C Standard flow cell unit  
 6687-H413A PTFE flow cell unit  
 6687-H415A Bioinert flow cell unit  
 6687-H411A Preparative flow cell unit  
 6687-H412A Micro flow cell unit  
 6687-H414A High pressure flow cell unit (gasket: Au, window: sapphire)  
 6687-H418A High pressure flow cell unit (gasket: Pb, window: quartz)  
 6738-H496A Holmium glass cell unit for checking wavelength accuracy

## ORDERING INFORMATION

6824-J002A	Model UV-2070	UV/VIS Detector
6825-J002A	Model UV-2075	UV/VIS Detector
6826-J002A	Model UV-2077	Multi-wavelength UV/VIS Detector
6832-J002A	Model MD-2015	Diode Array Detector
6831-J002A	Model MD-2010	Diode Array Detector
6829-J003A	Model FP-2020	Fluorescence Detector
6833-J002A	Model RI-2031	Refractive Index detector
6838-J002A	Model CD-2095	Circular Dichroism Detector
6837-J002A	Model OR-2090	Chiral Detector
6836-J002A	Model CL-2027	Chemiluminescence Detector
6818-J002A	Model PU-2080	HPLC Pump
6823-J003A	Model PU-2089	Quaternary HPLC Pump
6820-J002A	Model PU-2085	Semi-micro HPLC Pump
6821-J002A	Model PU-2086	Semi-preparative HPLC Pump
6822-J002A	Model PU-2087	Preparative HPLC Pump
6819-J002A	Model PU-2080i	Bio-inert HPLC Pump
6823-J004A	Model PU-2089i	Bio-inert Quaternary HPLC Pump
6828-J008A	Model AS-2059	Autosampler
6827-J005A	Model AS-2055	Autosampler
6827-J006A	Model AS-2057	Autosampler
6834-J002A	Model CO-2060	Column Oven
6835-J002A	Model CO-2065	Column Oven



● Specifications are subject to change without notice.



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