

## Spectrofluorometer



Designed for both routine and research applications the FP-6200 combines a highly sensitive spectrometer with a range of accessories and application specific software to provide a flexible solution to meet a range of applications. Researchers have the choice of JASCO's unique cross-technique PC-based Windows® software Spectra Manager™ for more demanding experimentation. Routine users will appreciate the simple touch screen LCD display of the iRM (intelligent Remote Module) which provides an alternative instrument control interface with the ability to display graphics and output reports.

### Features

#### High quality optical system

The compact optical design of the FP-6200 employs high quality components designed around a DC powered 150W Xenon lamp which is contained within a sealed housing. The lamp output is monitored and maximum stability is ensured by the use of a reference silicon photodiode which monitors the source output and automatically compensates for any minor variation in lamp intensity. The FP-6200 provides excellent sensitivity with a S:N specification of 450:1. The spectrometer consists of excitation and emission holographic monochromators optimized for the UV. Scanning speeds are step variable from 60 nm/min to 4000 nm/min with a slewing speed of 30,000 nm/min. Variable spectral bandwidths of 5, 10, and 20 nm are available on both excitation and emission monochromators. The wavelength range provided by the FP-6200 is 220 nm to 730 nm which can be further extended from 200 nm to 800 nm (Excitation) 200 to 900 nm (Emission) with the WRE-362 optional red sensitive PMT.

#### System versatility and flexibility

The FP-6200 can be used for a wide variety of fluorescence applications. Specific applications may require that specially designed accessories are placed within the instrument. The FP-6200 sample compartment employs pre-aligned mountings which enables various optional JASCO manufactured accessories as well as custom-made accessories to be quickly and easily mounted or demounted without the need for time consuming re-alignment.

#### High sensitivity

The FP-6200 is capable of making highly sensitive measurements with limited sample volumes. The signal-to-noise ratio of the instrument determined using the Raman band of water at 350 nm (excitation) with 10 nm ex/em spectral bandwidths is in excess of 450:1. In addition, instrumental parameters and accessories can be further optimized to make measurements with virtually any sample type.

#### Spectra Manager™ Suite

Spectra Manager™ is a fully-integrated 32-bit PC software package that can be used to control the FP-6200. Spectra Manager™ provides a wide range of advanced features and functions that allow precise measurement and detailed data analysis via a user-friendly operating environment. Spectra Manager™ is designed to be used with other JASCO spectroscopic products including FTIR, UV/VIS, CD spectrometers and Polarimeter. It allows data obtained from a variety of instruments to be viewed, analyzed, displayed and printed together for comparison and publication. The software is fully multi-tasking allowing accurate data acquisition even whilst simultaneously running other programs or when controlling other JASCO instruments. (Standard for only C/N: 6816-J005A model)

#### iRM (intelligent Remote Module)

The FP-6200 is equipped with an iRM (intelligent Remote Module) with an LCD monitor (320 x 240 pixels) that allows simple and easy control of the instrument. A simple keypad and touch screen allow the user to easily operate any function. A convenient help key is also provided. Additional programs can also be added by simply inserting an optional program card into the slot on the iRM. (Standard for only C/N: 6816-J002A model)

#### GLP/GMP compliance

The FP-6200 was designed to meet the requirements of GLP/GMP compliance using optional validation tools and software. The FP-6200 validation program is based upon JAIMAS to provide the following tests: wavelength accuracy, wavelength repeatability, resolution, stray light, detection limit and Photometric stability.

#### Compact size

The FP-6200 is housed in a compact and rugged case measuring only 420(W) x 480(D) x 260(H) mm.

## SPECIFICATIONS

### Specifications of FP-6200

#### Hardware specifications

Light source:	Xe lamp with shielded lamp house, 150-watt
Detector:	Silicon photodiode for excitation monochromator Photomultiplier for emission monochromator
Photometric system:	Photometric ratio system using monochromatic light to monitor the intensity output of Xe source
Monochromators:	Holographic grating with 1200 grooves/mm modified Rowland mount
Wavelength range: (mechanical)	Zero order 200–1000nm for both excitation and emission monochromators
Wavelength range: (operative)	Zero order 220–730 nm with standard PM tube 200–900 nm with optional PM tube for emission monochromator 200–800 nm with optional PM tube for excitation monochromator
Wavelength accuracy:	+/- 3 nm (except zero order)
Spectral bandwidth:	5, 10, 20 nm on both excitation and emission monochromators

Wavelength scan speed:	60, 125, 250, 500, 1000, 4000, 8000 nm/min for both excitation and emission monochromators
Slew speed:	30,000 nm/min
Response:	0.02, 0.05, 0.1, 0.25, 0.5, 1, 2, 4, 8 sec (Quantitative analysis, Fixed wavelength measurement) 0.02, 0.05, 0.1, 0.25, 0.5, 1, 2, 4, 8 sec and auto-response (Time course measurement) Fast, Medium, Slow, Auto (Wavelength scan measurement)
Sensitivity:	Signal to noise ratio 450:1 or higher, Raman band of water peak-to-peak using SBW 10 nm on both EX and EM monochromators, 2 second response at 350 nm excitation wavelength.
Gain:	High, Medium, Low (approx. x100, x10, x1) Single cell holder (standard)
Sample compartment:	
Photometric stability:	+/- 1%/hr
Output port:	RS-232C interface
Power requirement:	100, 115, 200, 220, 230, 240V, 400VA
Dimensions:	420(W) X 480(D) X 260(H) mm
Net weight:	approx. 34 kg

## STANDARD ACCESSORIES

AC power cable	1 pc.
RS-232C cable	1 pc.
Spare fuses	2 pcs.
Wrench	1 pc.
Fluorescence cell, 10 mm path.	1 pc.
Test tube holder	1 pc.
Instruction Manual	1 set
Spectra Manager™ software package <sup>1)</sup>	1 set
iRM-402 Intelligent Remote Module <sup>2)</sup>	1 set

<sup>1)</sup> Only C/N: 6816-J002A model

<sup>2)</sup> Only C/N: 6816-J005A model

## OPTIONAL ACCESSORIES

Code No.	Description
<b>Optional Validation Tools</b>	
4880-0360A	FWVD-781 Validation program for Spectra Manager
4880-0455A	FVDP-564 Validation card for iRM
xxxx-xxxx	Validation tool kit

<b>Optional Software for Spectra Manager</b>	
4880-0482B	FWDM-782 Melting software
4880-0483B	FWCA-783 Dual wavelength time scan software
4880-0484B	FWIS-784 Interval scan software
4880-0485B	FWIT-785 Temperature interval scan software
4880-0716A	FWMCR-786 Macro command software

<b>Optional Card for iRM</b>	
4880-0451A	FRAM-560 Parameter memory card
4880-0452A	FRAM-561 Data memory card
4880-0456A	FKAP-565 Kinetics analysis card
4880-0453A	FUCP-562 User calculation card
4880-0454A	FMCC-563 Macro command card

<b>Fluorescence Cells</b>	
1103-0081	FP-1004 Standard fluorescence cell
1103-0180	FP-1003 Non-fluorescence rectangular cell

<b>Optional Accessories for Bio-Applications</b>	
6808-J021A	FMH-110 Micro cell holder
6808-J022A	FMM-100 Micro quartz cell for FMH-110
6746-J003A	STR-312 Water thermostatable cell holder with stirrer
6746-J004A	ETC-272 Peltier thermostatted single cell holder with stirrer (Water-cooled)
6746-J001A	FCT-152 Water thermostatable automatic 4-position turret cell changer
xxxx-xxxx	CSP-622 Sample holder lid with syringe port

<b>Optional Accessories for Environmental or Routine Applications</b>	
6746-J002A	SHP-292 Peristaltic sipper
6808-J024A	FHM-400 High sensitivity cell holder
6746-J005A	MFC-132 HPLC flow cell accessory, 15µl
6774-J001A	ASU-605 Autosampler

<b>Other Optional Accessories</b>	
6808-J025A	FSA-400 30° incident angle cell holder
6808-J023A	FDA-430 Solid sample holder
6746-J007A	EFA-382 Epifluorescence attachment
6808-J020A	FUV-420 Accessory for UV/Vis. measurement
6808-J019A	FDP-203 Polarizer and analyzer accessory (for UV/Vis. range)
6808-J029A	FDP-213 Polarizer and analyzer accessory (for Vis. range)
6746-J009A	WRE-362 PM tube for longer wavelength range
6746-J008A	ROU-332 Analog output I/F (factory option)

● Specifications are subject to change without notice.

## ORDERING INFORMATION

Code No.	Description
6816-J002A	FP-6200 Spectrofluorometer (with Spectra Manager™)
6816-J005A	FP-6200 Spectrofluorometer (with iRM)



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