

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

**Artisan Technology Group**
(217) 352-9330 | sales@artisantg.com | artisantg.com

**Full-service, independent repair center**
with experienced engineers and technicians on staff.

**We buy your excess, underutilized, and idle equipment**
along with credit for buybacks and trade-ins.

**Custom engineering**
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

**Expert team | Trust guarantee | 100% satisfaction**

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *ISS PC1* at our website: ***Click HERE***

# pc1™

PHOTON COUNTING
STEADY-STATE
SPECTROFLUORIMETER




## PC1 is a compact benchtop photon counting spectrofluorimeter for research applications demanding the highest sensitivity.

PC1 optical design and automatic instrument control are state-of-the-art for steady-state fluorescence measurements.

### Ready-to-Use & User-Friendly Software

PC1 includes *Vinci – Multidimensional Fluorescence Spectroscopy*, a powerful software package that provides several ready-to-use routines for reliable, user-friendly acquisition of complex fluorescence data:

- Spectra (excitation, emission, synchronous, time-resolved and polarization)
- Measurements at fixed wavelengths (intensity and polarization)
- Measurement of kinetics
- Time-resolved measurements (lifetimes and rotational correlation times)

### Fully Automated for Steady-State Applications

- Corrected excitation and emission spectra
- Polarization (anisotropy) measurements
- Slow and fast kinetics
- Synchronous luminescence spectra
- Intensity measurements at fixed wavelengths
- Dual-wavelength excitation (emission) ratiometric measurements

### User-Defined Acquisition Protocols

One-dimensional and multi-dimensional data acquisition with user-defined protocols. The user can select any of the following experimental combinations:

- **Fluorescence Intensity**
- **Polarization/Anisotropy**
- **Ratiometric Measurements**

VS

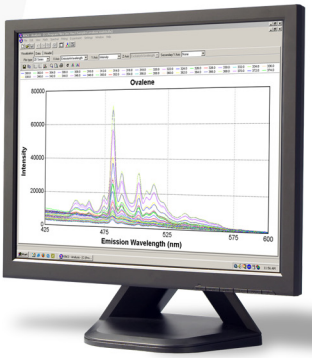
- **Excitation (Emission) Wavelength and/or any of the following:**
  - Emission (Excitation) Wavelength
  - Sample Concentration, pH, Pressure and Temperature

### Key Features

- A compact footprint and short optical pathlength for maximum sensitivity and efficient light coupling into the sample
- T-format and parallel beam design for fast and precise polarization measurements
- Full automation of instrument components including: cuvette holder, polarizers, shutters, filterwheel, monochromators and stirrers
- PC-controlled integration of temperature bath, titrator, stopped-flow apparatus and pressure pump
- Fast kinetic measurements with one millisecond resolution in photon counting mode
- 80 MHz pre-amplifier discriminators delivering linearity up to eight million counts per second on each channel
- Upgradable for time-resolved measurements with picosecond resolution

### Vinci, the Complete Software Solution for Steady-State and Time-Resolved Applications

*A powerful and flexible multidimensional fluorescence spectroscopy software with ready-to-use routines for data acquisition and analysis.*




ISS®
Innovations in Fluorescence

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com



# pc1™ Specifications

## Software Specifications

**Instrument Automation**
PC1 is the instrument of choice for steady-state research applications. All hardware components, including external devices, are automated and PC-controlled.

**Adaptive Measurements**
The operator has the option to choose between two Signal Quality Parameters: *Standard Deviation* and *Time*. Upon reaching either a pre-defined standard deviation or measurement time, the PC1 automatically continues the routine to the next data point.

**Instrument Diagnostic and Noise Detection**
Vinci includes routines for analyzing the instrument's performance, allowing the user to monitor data acquisition and noise level during the entire measurement. If sample saturation occurs the signal level is adjusted accordingly.

**User-friendly Acquisition**
A sequence of measurements is acquired through a one-time setup of the experiment file, allowing for the automatic acquisition of multiple data sets.

**Personalized Log-on**
With its unique system memory design, Vinci allows user-specific access. In multi-user environments each user may perform measurements with a personalized instrument configuration.

## Data Analysis

**User-Defined Data File Operations**
- Reformat
- Normalization
- Smoothing (average, Savitzky-Golay)
- Derivative (nth-order)
- Integration (area, average and standard deviation)
- Convolution with a user-defined function
- Spectral correction
- Conversion to wave numbers

## Data Display & Export

- 2D and 3D display with user-defined colors and fonts
- 3D surface rotation and in/out zooming
- 3D display of user-defined functions
- Cursor identification of XY spectra coordinates
- Export to gif, png, jpeg, bitmap and metafile formats

## Instrument Specifications

**Light Source:** 300 W xenon arc lamp with 45 mW/nm brightness at 275 nm.
*Optional:* Ozone free lamp, lasers, laser diodes and LEDs

**Monochromators:** Highly efficient single concave holographic grating monochromators
- Continuously reproducible slits ranging from 0.4 nm to 32 nm bandpass
- Wavelength range: 200 nm to 1200*nm (*depending on selected grating)
- Stray light: $10^{-5}$ outside the band pass of the 632.8 nm HeNe laser line
- Wavelength accuracy: ±0.2 nm
- Wavelength reproducibility: ±0.25 nm
- Slew rate: 160 nm/s

*Optional:* Double-grating monochromator

**Focusing & Collection Geometry:** Parallel beam design for precise polarization measurements

**Polarizers:** UV grade Glan-Thompson with L/A=2.0

**Detectors:** Side-on photomultiplier tubes
*Optional:* Cooled PMT, microchannel plate detector

**Detection Modes:** 80 MHz pre-amplifier discriminators for fast photon counting acquisition on three independent channels

**Sensitivity:** S/N ratio greater than 6000:1 on the Raman spectrum of water with photon counting and cooled PMT

**Dynamic Range:** Linear up to eight million counts per second

**OS Requirements:** Windows XP, 2000

**Power Requirements:** Universal power input of 110-240 V, 50/60 Hz, 400 VAC

**Dimensions:** 885 mm (L) x 600 mm (W) x 330 mm (H)

**Weight:** 43 Kg

Information & specifications are subject to change without notice.

ISS®
1602 NEWTON DRIVE
CHAMPAIGN, ILLINOIS 61822
USA

For more information and a complete list of accessories for PC1 please visit www.iss.com.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

©2004 ISS, Inc. ALL RIGHTS RESERVED. DS.PC1.0406

**Artisan Technology Group** is an independent supplier of quality pre-owned equipment

## Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

## We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

## Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP