

## PTI QuantaMaster™ Series

Modular Research Fluorometers for Lifetime and Steady State Measurements

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSONOMETRY
SPR IMAGING

Most sensitive and flexible fluorometer

### Key Features and Benefits

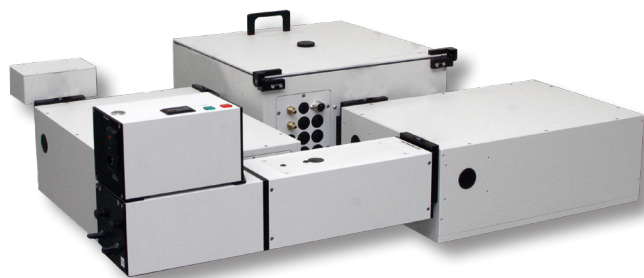
- ✓ >30,000:1 signal-to-noise ratio for highest guaranteed sensitivity specification
- ✓ FelixGX software for fully automated hardware and data acquisition protocols of all steady state and time-resolved experiments
- ✓ Triple grating monochromators for extended wavelength range
- ✓ Up to 4 light sources and 6 detectors, with dual entrance and dual exit monochromators, for added flexibility
- ✓ Large single or double additive, coma corrected, 350 mm focal length monochromators provide excellent stray light rejection
- ✓ World class TCSPC lifetime enhancements
- ✓ NIR steady state and phosphorescence lifetime detection to 5,500 nm

### Overview

The new PTI QuantaMaster 8000 series of modular research fluorometers from HORIBA Scientific offers the world's highest guaranteed sensitivity specification, plus many unique benefits.

The PTI QuantaMaster 8000 series is a multidimensional system for photoluminescence measurements. The foundation of a fluorescence spectroscopy laboratory is built on steady state intensity measurements such as wavelength scans, time-based experiments, synchronous scans and polarization. The PTI QuantaMaster 8000 series ensures you get the best possible results for all these measurements with the highest sensitivity, spectral resolution and stray light rejection. This level of sensitivity is achieved using a unique xenon illuminator, providing safety, cost, and energy consumption benefits not found amongst competitors. These conditions make the PTI QuantaMaster 8000 series more than capable of meeting the highest demands of research.

The PTI QuantaMaster 8000 series is adaptable to every research need, with additions such as TCSPC lifetimes, upconversion lasers and phosphorescence detection up to 5,500 nm. Using various pulsed light source allows for not only spectral and kinetic fluorescence and phosphorescence measurements, but also the measurement of lifetimes in the microsecond to seconds range. This addition is especially beneficial when using fluorescent probes prone to photobleaching, and when characterizing inorganic material with longer lifetimes. The modular design of the new PTI QuantaMaster 8000 series ensures that your system can be easily adapted to your growing research needs.



The new PTI QuantaMaster 8000 series is the first new QuantaMaster developed by HORIBA since the acquisition of PTI

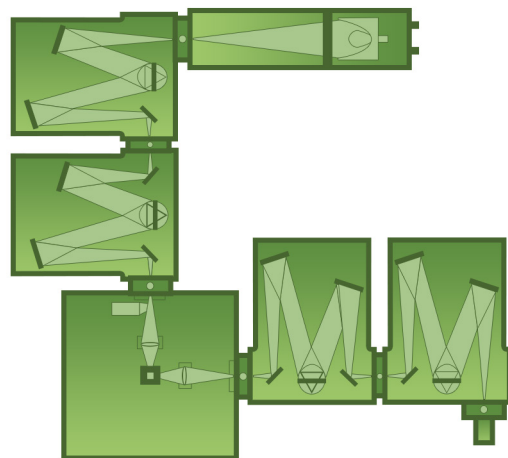
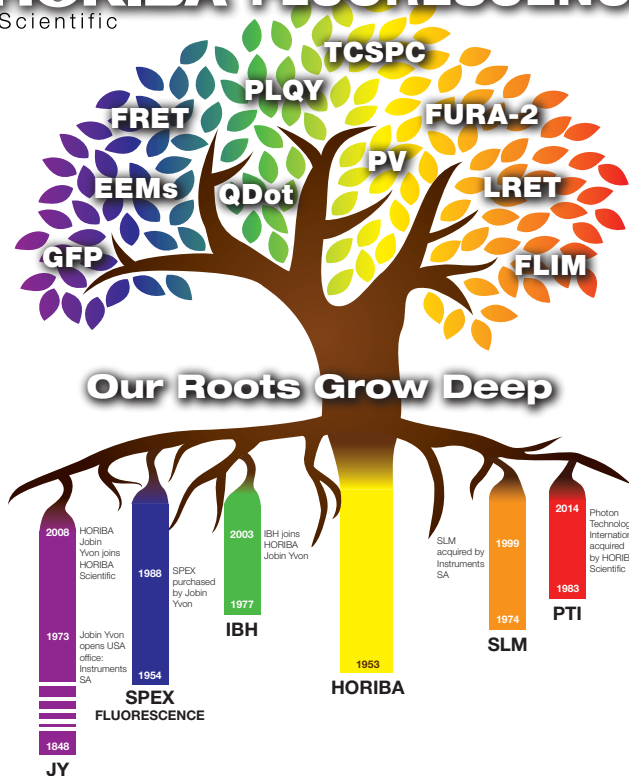
## Specifications

The following specifications are for the standard PTI QuantaMaster 8075-11 and 8450-11 systems. Options and upgrades may be available on request.

<b>Signal to Noise Ratio</b>	>30,000:1 RMS; >15,000:1 FSD
<b>Data Acquisition Rate</b>	1,000,000 points/sec. to 1 point/1000 sec
<b>Inputs</b>	4 photon counting (TTL); 4 analog (+/- 10 volts); 1 analog reference channel (+/- 10 volts); 2 TTL
<b>Outputs</b>	2 analog (+/- 10 volts); 2 TTL
<b>Emission Range</b>	185 nm to 900 nm (optional to 5,500 nm)
<b>Light Source</b>	High efficiency "ECO" friendly continuous 75 W Xenon arc lamp (Optional 450 W Xenon)
<b>Monochromator</b>	350 mm, triple grating, coma-aberration corrected, asymmetrical, excitation or emission optimized, Czerny-Turner design
<b>Slits</b>	Computer controlled, continuously adjustable
<b>Excitation Grating</b>	1200 line/mm 300 nm blaze. (Up to two optional gratings can be added)
<b>Emission Grating</b>	1200 line/mm 400 nm blaze. (Up to two optional gratings can be added)
<b>Wavelength Accuracy</b>	+/- 0.3 nm
<b>Minimum Step Size</b>	0.01 nm (grating dependent)
<b>Standard Detection</b>	Multimode: Photon Counting, 3 analog (fast, medium, slow response), direct and Single-Shot Transient Digitizer (SSTD) mode, TCSPC
<b>System Control</b>	Computer interface with FelixGX spectroscopy software
<b>Lifetime Range</b>	5 ps to seconds with appropriate time-resolved accessories
<b>Dimensions (W x D x H)</b>	36 in x 28 in x 12 in

## HORIBA FLUORESCENCE

Scientific



QM-8075-22 fluorometer with double additive excitation and double additive emission monochromators.

You'll find what you need  
and love what you get  
from the HORIBA fluorescence division



[info.sci@horiba.com](mailto:info.sci@horiba.com)

[www.fluorescence.com](http://www.fluorescence.com)

**USA:** +1 732 494 8660  
**UK:** +44 (0)1604 542 500  
**China:** +86 (0)21 6289 6060

**France:** +33 (0)1 69 74 72 00  
**Italy:** +39 2 5760 3050  
**Brazil:** + 55 11 2923 5400

**Germany:** +49 (0) 6251 8475-0  
**Japan:** +81 (75) 313-81231  
**Other:** +1 732 494 8660

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