



# QE *Pro* High-Sensitivity Spectrometer



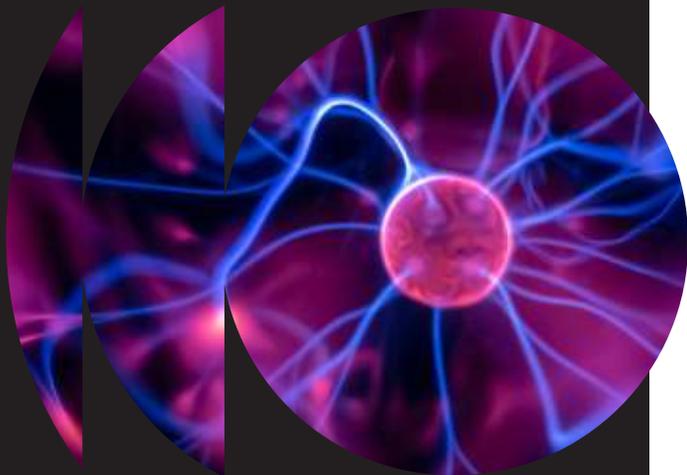
## Robust Optical Design for Great Spectral Performance

The QE *Pro* is a versatile, high-sensitivity spectrometer ideal for general-purpose and low light level applications such as fluorescence and Raman analysis. The spectrometer has a back-thinned CCD detector with high quantum efficiency and onboard spectral buffering to ensure data integrity at high collection rates. An optional internal shutter is available for effective management of dark measurements, and the interchangeable slit design allows users to switch between measurements easily. Both customized and preconfigured QE *Pro* models are available.

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## At a Glance

**Wavelength range:** Custom and preconfigured options within 200-1100 nm

**Optical resolution:** 0.14-7.7 nm FWHM (depends on configuration)

**Integration time:** 8 ms-60 minutes

**System SNR:** 1000:1 (single acquisition)

**Dynamic range:** 85,000 (typical)

**Stray light:** <0.08% at 600 nm; 0.4% at 435 nm

**Buffering:** 15,000 spectra

**TEC:** Cooling from -40 °C to +50 °C

**Interchangeable slits:** Multiple widths from 5 µm-200 µm; SMA bulkhead with no slit also an option

**Internal shutter (optional):** Actuation time: 11 ms; signal attenuation 0 dB (100% attenuated)

## High Performance, Great Flexibility

With low-noise electronics and an 18-bit A/D converter, *QE Pro* delivers great sensitivity and high dynamic range. Users can customize the *QE Pro* to their application needs, or select from several preconfigured models:

### NEW QE PRO SPECTROMETER MODELS

QE Pro UV-Vis	QE Pro Vis-NIR	QE Pro XR
200-775 nm	350-925 nm	200-950 nm
10 µm	10 µm	10 µm
~1.2 nm	~1.2 nm	~1.6 nm
Yes	Yes	Yes
General-purpose and low light applications	General-purpose and low light applications	High sensitivity over wide range
Fluorescence of proteins, dyes, biological samples	Specular and diffuse reflectance of materials	Solar irradiance measurements; blood and tissue analysis

## Great Stability

The *QE Pro* has a thermoelectric cooling (TEC) device to control the temperature of its detector, dramatically reducing the effects of thermal noise and improving the overall stability of the spectrometer during long-term operation. The TEC device holds data stability to 4 dark counts over a 50 °C ambient temperature range, giving users high quality data. This stability performance makes the *QE Pro* ideal for demanding online and at-line quality control measurements, which can be susceptible to environmental and temperature changes.