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## Ocean-FX

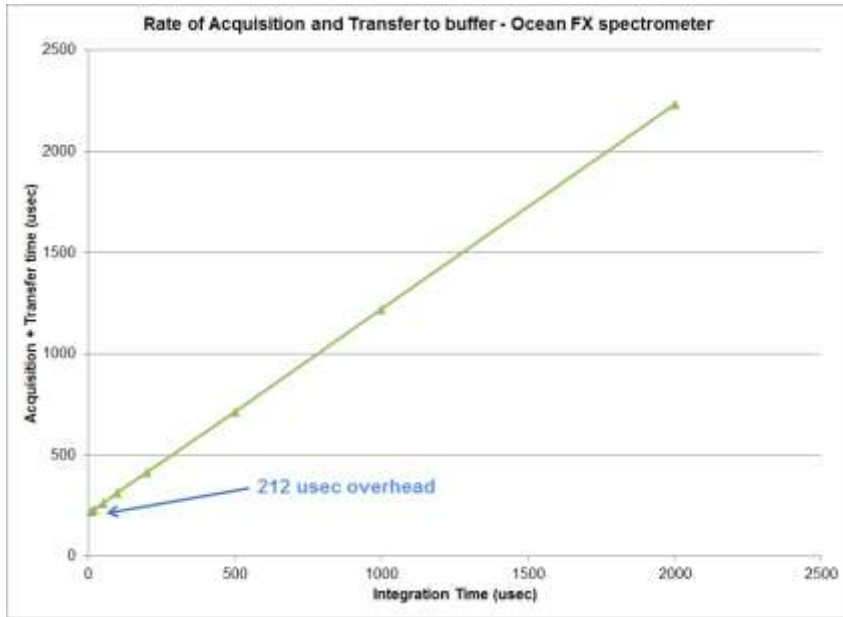## High Sensitivity, Fast Acquisition Speed and Enhanced Communications

The next innovation in miniature spectrometers from Ocean Optics offers high-sensitivity CMOS detector performance, acquisition
speed up to 4,500 scans per second, and a robust communications module that accommodates USB, SPI, Gigabit Ethernet
and Wi-Fi. The new spectrometer is ideal for UV-Vis measurement of high intensity light sources and plasmas; fast reaction
kinetics, where onboard buffering and averaging ensure no data points are missed during critical stages of the reaction; and environmental
monitoring, where Ethernet and Wi-Fi enable remote sensing. The fast sampling rate of Ocean FX also benefits high-speed sorting and QC applications.

| COMMUNICATIONS | |
|---|---|
| Wired: | Ethernet, USB, RS-232, SPI |
| Wireless: | Wi-fi 802.11 a/b/g/n |
| **DETECTOR & OPTICAL BENCH** | |
| Detector: | Hamamatsu S11639 CMOS |
| Spectral response range: | 200-1100 nm |
| Entrance slit: | 5, 10, 25, 50, 100 or 200 μm width options |
| Input fiber connector: | SMA 905 or FC/PC |

| SPECTROSCOPIC | |
|---|---|
| Preconfigured models: | UV-Vis (200-850 nm), Vis-NIR (350-1000 nm) and extended-range (200-1025 nm), with enhanced sensitivity versions of each also available |
| Custom configured options: | Choose from among multiple gratings and bench accessories |
| Optical resolution: | Depends on configuration; 0.8 nm (FWHM) w/600-line/mm grating and 5 μm slit |
| Signal-to-noise ratio (single scan): | 290:1 |
| Dynamic range (single scan): | 5000:1 |
| Integration time: | 10 μs-10 seconds |
| Scan rate (maximum): | 4,500 scans/second (varies by performance of operating computer and system) |
| Buffer depth: | 50,000 spectra |
| Onboard averaging: | Up to 5,000 spectra |
| Thermal stability: | 0.11 pixels/°C |
| ELECTRONICS | |
| A/D resolution: | 16 bit |
| Inputs/Outputs: | 8 x user programmable GPIOs |
| Trigger modes: | 4 modes |
| Connectors: | USB, Gigabit Ethernet, 40 pin JAE DD4 connector |
| ENVIRONMENTAL AND COMPLIANCE | |
| Storage temperature: | -30 °C to +70 °C |

| Operating temperature: | 0 °C to +50 °C |
|---|---|
| Software: | OceanView, OmniDriver and SeaBreeze |
| Material: | RoHS |
| Electrical: | CE, FCC, CISPR 11:2010, EMC 2004/108/EC and EN61326-1:2013 |



Rate of Acquisition and Transfer to buffer - Ocean FX spectrometer



## S11639-01  CMOS linear image sensor
Spectral response (typical example)