

## High Sensitivity Spectrometer – Sunshine

### Features:

- Up to 80% quantum efficiency
- Customized wavelength range and resolution
- Easy to use

### Applications:

- Laser spectral analysis
- Fluorescence spectral analysis
- Raman spectral analysis
- Film thickness measurement
- Reflectivity/transmittance measurement
- Biological cell analysis
- LED analysis



| Model                      | Spectral range |
|----------------------------|----------------|
| Sunshine GE 200-1100       | 200-1100nm     |
| Sunshine GE 350-1100       | 350-1100nm     |
| Sunshine G-Raman 532-700   | 532-700nm      |
| Sunshine G-Raman 785-1100  | 785-1100nm     |
| Sunshine-UV-Pro 185-240    | 185-240nm      |
| Sunshine-IR-Pro 1000-1550  | 1000-1500      |
| Sunshine TG 200-1100       | 200-1100nm     |
| Sunshine TG-Raman 532-700  | 532-700nm      |
| Sunshine TG-Raman 785-1100 | 785-1100nm     |

\* External triggerable with EX-TA/TB

| Wavelength range (nm) | Slit width (μm)         |      |      |      |      |
|-----------------------|-------------------------|------|------|------|------|
|                       | 10                      | 25   | 50   | 100  | 200  |
|                       | Optical resolution (nm) |      |      |      |      |
| 200 – 1100            | 0.87                    | 1.09 | 1.84 | 3.51 | 6.61 |
| 350 – 1100            | 0.87                    | 1.09 | 1.84 | 3.51 | 6.72 |
| 300 – 515             | 0.20                    | 0.26 | 0.44 | 0.83 | 1.60 |
| 400 – 837             | 0.42                    | 0.53 | 0.89 | 1.70 | 3.26 |
| 785 – 1100            | 0.30                    | 0.38 | 0.64 | 1.23 | 2.35 |

| Detector              |   |
|-----------------------|---|
| Detector              | Hamamatsu S 11510   |
| Wavelength range      | 200-1100nm  |
| Pixels                | 2048 pixels   |
| Pixel size            | 14um*14um   |
| Spectrometer          |   |
| Dimensions (mm)       | 149*109*50  |
| Weight (g)            | 1000  |
| Optical resolution    | slit dependent  |
| Signal-to-noise ratio | 450:1   |
| Integration time      | 17ms-10s  |
| Electronics           |   |
| Power consumption     | 450mA@5VDC  |
| Data transfer speed   | Full scans into memory every 4 milliseconds with USB 2.0;<br>every 18 milliseconds with USB 1.1 |
| Strobe functions      | Yes   |
| Connector             | 30-pin  |

