# Spectrometer Comparison Table

www.shop.spectrecology.com  info@spectrecology.com

<table>
<thead>
<tr>
<th>Product</th>
<th>STS</th>
<th>Flame-S</th>
<th>Flame-T</th>
<th>Ocean FX</th>
<th>HR2000+</th>
<th>HR4000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image</td>
<td><img src="image1" alt="STS Image" /></td>
<td><img src="image2" alt="Flame-S Image" /></td>
<td><img src="image3" alt="Flame-T Image" /></td>
<td><img src="image4" alt="Ocean FX Image" /></td>
<td><img src="image5" alt="HR2000+ Image" /></td>
<td><img src="image6" alt="HR4000 Image" /></td>
</tr>
<tr>
<td>Key Features</td>
<td>Versatile</td>
<td>High thermal stability</td>
<td>Fast acquisition speed</td>
<td>Gigabit Ethernet &amp; WiFi</td>
<td>Onboard spectral memory</td>
<td>High resolution</td>
</tr>
<tr>
<td>Example Applications</td>
<td>Crop monitoring</td>
<td>Environmental monitoring</td>
<td>Rapid kinetics measurement</td>
<td>Fluorescence decay</td>
<td>High speed sorting &amp; processing</td>
<td>Blood analysis instruments</td>
</tr>
<tr>
<td>Range (nm)</td>
<td>190-1100</td>
<td>190-1100</td>
<td>200-1100</td>
<td>190-1100</td>
<td>190-1100</td>
<td>190-1100</td>
</tr>
<tr>
<td>Resolution</td>
<td>1.0 – 12.0</td>
<td>0.1 – 10.0</td>
<td>0.1 – 10.0</td>
<td>0.035 – 6.8</td>
<td>0.02 – 8.4</td>
<td>0.02 – 8.4</td>
</tr>
<tr>
<td>Stray Light (%)</td>
<td>&lt;0.25% at 450nm</td>
<td>&lt;0.05% at 600nm</td>
<td>&lt;0.05% at 400nm</td>
<td>&lt;0.1% at 435nm</td>
<td>&lt;0.05% at 600nm</td>
<td>&lt;0.1% at 435nm</td>
</tr>
<tr>
<td>SNR (x:1)</td>
<td>1500</td>
<td>250</td>
<td>300</td>
<td>290</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>Dynamic</td>
<td>4600</td>
<td>1300</td>
<td>5000</td>
<td>1300</td>
<td>5000</td>
<td>1300</td>
</tr>
<tr>
<td>Detector</td>
<td>ELIS1024</td>
<td>Sony ILX511B</td>
<td>Toshiba TCD1304AP</td>
<td>Hamamatsu CMOS</td>
<td>Sony ILX511B</td>
<td>Toshiba TCD1304AP</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>0 – 50 °C</td>
<td>-10 – 50 °C</td>
<td>0 – 50 °C</td>
<td>-10 – 50 °C</td>
<td>-10 – 50 °C</td>
<td>-10 – 50 °C</td>
</tr>
<tr>
<td>Dimensions</td>
<td>40.0 x 20.0 x 24.0</td>
<td>88.9 x 63.5 x 34.4</td>
<td>88.9 x 63.5 x 24.4</td>
<td>88.9 x 63.5 x 52.4</td>
<td>148.6 x 104.8 x 45.1</td>
<td></td>
</tr>
<tr>
<td>Price ($)</td>
<td>$</td>
<td>$$</td>
<td>$$$</td>
<td>$$</td>
<td>$$</td>
<td>$$$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product</th>
<th>Torus</th>
<th>Maya2000 Pro</th>
<th>Maya LSL</th>
<th>Ventana</th>
<th>QE Pro</th>
<th>NIRQuest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image</td>
<td><img src="image7" alt="Torus Image" /></td>
<td><img src="image8" alt="Maya2000 Pro Image" /></td>
<td><img src="image9" alt="Maya LSL Image" /></td>
<td><img src="image10" alt="Ventana Image" /></td>
<td><img src="image11" alt="QE Pro Image" /></td>
<td><img src="image12" alt="NIRQuest Image" /></td>
</tr>
<tr>
<td>Key Features</td>
<td>High throughput</td>
<td>Low stray light</td>
<td>High sensitivity</td>
<td>Low stray light</td>
<td>High throughput</td>
<td>High quantum efficiency</td>
</tr>
<tr>
<td>Example Applications</td>
<td>Low light fluorescence</td>
<td>Production sorting</td>
<td>Fast Raman</td>
<td>Fast Raman</td>
<td>(\text{Buffering} )</td>
<td>(\text{Cooled} )</td>
</tr>
</tbody>
</table>

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**Note:** The above data is for demonstration purposes only and may not reflect the latest specifications or features.
<table>
<thead>
<tr>
<th>Range (nm)</th>
<th>360-825</th>
<th>165-1100</th>
<th>360-825</th>
<th>Various 350 – 1100</th>
<th>190-1100</th>
<th>900-2500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution (nm)</td>
<td>&lt;1.6</td>
<td>1.5 – 15.3</td>
<td>&lt;1.6</td>
<td>0.14 – 7.7</td>
<td>0.14 – 7.7</td>
<td>3.1 – 9.5</td>
</tr>
<tr>
<td>Stray Light (%)</td>
<td>&lt;0.015% at 400nm</td>
<td>&lt;0.015% at 400nm</td>
<td>&lt;0.08% at 600nm</td>
<td>&lt; 0.4% at 435nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SNR (x:1)</td>
<td>250</td>
<td>450</td>
<td>450</td>
<td>550</td>
<td>1000</td>
<td>10000</td>
</tr>
<tr>
<td>Dynamic Range (x:1)</td>
<td>1300</td>
<td>8000</td>
<td>15000</td>
<td>17000</td>
<td>85000</td>
<td>7500-15000</td>
</tr>
<tr>
<td>Detector</td>
<td>Sony ILX511B</td>
<td>Hamamatsu S10420 (UV-VIS), S11510 (VIS-NIR)</td>
<td>Hamamatsu S10420</td>
<td>Hamamatsu S11510-1006, S10420-1006</td>
<td>Hamamatsu S7031-1006</td>
<td>Hamamatsu InGaAs</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>0 – 50 ºC</td>
<td>0 – 50 ºC</td>
<td>0 – 50 ºC</td>
<td>5 – 45 ºC</td>
<td>0 – 50 ºC</td>
<td>10 – 35 ºC</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>149.9×119.4×63.5</td>
<td>149.0×109.0×50.0</td>
<td>151.0×151.0 x65.0</td>
<td>Various</td>
<td>182.0×110.0×47.0</td>
<td>182.0×110.0×47.0</td>
</tr>
<tr>
<td>Price ($)</td>
<td>$$$</td>
<td>$$$</td>
<td>$$$</td>
<td>$$$$$</td>
<td>$$$$$</td>
<td>$$$$$</td>
</tr>
<tr>
<td>For Raman</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Example Applications:
- Absorbance of optically dense solutions
- DOAS measurement of polluting gases
- Color measurement
- LED binning
- Fluorescence
- DNA sequencing
- NIR Laser analysis

- For Raman: No, Yes
- Price: $$$, $$$, $$ $$, $$$, $$ $$, $$$$