Majority of translucent or lightly absorbing films can be measured quickly and reliably: Oxides, Nitrides, Photoreists, Polymers, Semiconductors (Si, aSi, polySi), Hard coatings (SiC, DLC), Polymer coatings (Paralene, PMMA, Polyamides), thin metal films and many more.

**Thickness Range:** 10 nm - 75 μm  
**Wavelength Range:** 400 nm - 1000 nm


**Real time measurement** and analysis. Multi-layer, thin, thick, freestanding and nonuniform layers.

**Extensive materials library** (500+ materials) - new materials easily added. Support of parameterized materials: Cauchy, Tauc-Lorentz, Cody-Lorentz, EMA and many more.

**Flexible:** Desktop or in-situ, R&D on inline. Easy integration with external system using TCP Modbus interface.

**Measurement:** thickness, optical constants, surface roughness.

**User friendly and powerful:** One-click measurement and analysis. Powerful tools: simulation & sensitivity, background and scaling correction, linked layers and materials, multisample measurements, dynamic measurement and production batch processing.

**Measurement of 200nm Si oxide film** (LP500 filter used). Measurement vs. model data fit.
**Speciﬁcation**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spectral range (nm)</strong></td>
<td>400-1000</td>
</tr>
<tr>
<td><strong>Spectrometer/detector</strong></td>
<td>F4 spectrometer, 3600 pixels Si CCD, 16 bit ADC, 360-1050 nm range</td>
</tr>
<tr>
<td><strong>Spectral resolution</strong></td>
<td>&lt;1 nm</td>
</tr>
<tr>
<td><strong>Light source</strong></td>
<td>5 W Tungsten-halogen lamp (Xe ﬁlled), CT 2800° Lifetime: 10000 hrs (regulated intesity)</td>
</tr>
<tr>
<td><strong>Reflectance probe</strong></td>
<td>Fiberoptics (7 ﬁbers assembly), 400μm ﬁber core</td>
</tr>
<tr>
<td><strong>Precision</strong></td>
<td>&lt;0.01 nm or 0.01%</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>&lt;1nm or 0.2%</td>
</tr>
<tr>
<td><strong>Weight (main unit)</strong></td>
<td>4 kg</td>
</tr>
<tr>
<td><strong>Size (main unit)</strong></td>
<td>8”x 12” x 4” (WxDxH)</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>100-250VAC, 50/60 Hz 20W</td>
</tr>
</tbody>
</table>

**Hardware options**

- **LP500** long-pass ﬁlter, limits wavelength below 500nm. Used for photoresist measurement. (other ﬁlters available)
- **FDHolder** Face-down sample holder option for SH200A stage. For transmittance measurement and/or foils ﬂexible samples
- **TO** Transmittance option
- **20W** Change to 20W (CT 3100°, lifetime 2000hrs) tungsten-halogen lamp.

**Included in the Box:**

1. Main unit (spectrometer/light source/electronics)
2. Reflectance probe VisNIR
3. Sample Holder SH200A with VisACH focusing lens
4. Calibration set
5. Si oxide test wafer (200nm)
6. TFCompanion -RA software
7. Power adapter and USB cable

**Software options**

- **MOD** remote control (TCP) based on Modbus protocol
- **CM** continuos measurement with speciﬁed number of measurement and/or delay between them

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Raw reﬂectance from Si wafer. Signal maximum (16 bit). Integration time: 10ms. Regulation of lamp intenity controlled from software.

Measurement of 500nm AlN. Measured parameters: Thickness and surface roughness. Scaling factor used to correct distance change in conﬁguration.