LayTec’s XBow is a production in-situ metrology tool designed to measure wafer curvature. Dependent on the variant it can measure the curvature in X and Y direction as well as aspheric curvature.

**Features**

**Curvature**
- Wafer selective in-situ curvature measurement
- Asphericity measurements to obtain information on wafer curvature along two perpendicular directions: for systems with Advanced Resolution (AR)
- Reflectance compensation detection (RCD) for enhanced dynamic range

**Communication / Integration**
- Optimized for 24 h / 7 day operation in production environment
- Measurements on single and multiple wafers (rotating or non-rotating)
- Wobble compensating optics
- Data exchange with growth system control computer via TCP/IP protocol-based software interface. Pre-configurations for different growth systems.
- Remote controllable

**Measurable growth parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>XBow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curvature range*/typical accuracy</td>
<td>-7000 (convex) to +750 (concave) ± 0.5 (asphericity: ± 0.3) (optional)</td>
</tr>
</tbody>
</table>
System components

Base Unit

1. Ethernet socket
2. Triad 5-pin socket
3. Status LEDs
4. Heads RJ45 socket
5. Top-hat rail adapter
6. 4-pin M12 power supply socket
7. Bridge socket
8. Trigger socket

Measurement head

Description of the parts

XBow optical head for curvature measurements
- Depending on your application, the curvature measurement is performed by a red or a blue light sources

<table>
<thead>
<tr>
<th>Light source</th>
<th>Curvature Semiconductor laser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard wavelengths and bandwidth (nm)</td>
<td>405 (blue)</td>
</tr>
<tr>
<td>Life-time according to manufacturer (h)</td>
<td>&gt;10 000</td>
</tr>
</tbody>
</table>

Specifications are subject to further technical development and may differ from those given in the data sheet. In certain cases, performance may be limited by reactor type and/or growth conditions. Please consult our technical sales team to see how LayTec metrology can best serve your specific application.

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