UVblade

Laser Lift-Off Processing

UVblade gently detaches delicate polymer-based displays of all types from their rigid glass carriers. Laser Lift-Off separation is the enabling technology in manufacturing flexible displays. UVblade is available at line beam lengths supporting fast and effective separation of substrates and wafers.

FEATURES & BENEFITS

- Cost effective solutions for Laser Lift-Off (LLO) separation
- Pulse on Demand (POD)
- Unmatched beam utilization
- Scalability in line lengths and energy density

OPTIONS

- BeamScout Beam Profiler

APPLICATIONS

- Laser Lift-Off Separation
**UVblade** Datasheet

### SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>UVblade 250</th>
<th>UVblade 380</th>
<th>UVblade 465</th>
<th>UVblade 750</th>
<th>UVblade 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength (nm)</td>
<td>308</td>
<td>308</td>
<td>308</td>
<td>308</td>
<td>308</td>
</tr>
<tr>
<td>Laser Pulse Energy (mJ)</td>
<td>580</td>
<td>580</td>
<td>1000</td>
<td>1000/2000(^1)</td>
<td>2000</td>
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<tr>
<td>Repetition Rate (Hz)</td>
<td>200</td>
<td>200</td>
<td>600</td>
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<tr>
<td>Energy Density (mJ/cm(^2)) (at 96%)</td>
<td>370</td>
<td>340</td>
<td>330</td>
<td>340/320(^1)</td>
<td>315</td>
</tr>
<tr>
<td>Beam Length (mm)</td>
<td>250</td>
<td>380</td>
<td>465</td>
<td>750</td>
<td>950</td>
</tr>
<tr>
<td>Beam Width (µm) (at 96%)</td>
<td>400</td>
<td>300</td>
<td>400</td>
<td>250/500(^1)</td>
<td>400</td>
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<tr>
<td>Homogeneity Long Axis (% 2σ)</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
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<td>1.8</td>
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<tr>
<td>Steepness Short Axis (µm)</td>
<td>100</td>
<td>70</td>
<td>125</td>
<td>70/125(^1)</td>
<td>85</td>
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<tr>
<td>Depth of Focus (µm)</td>
<td>±200</td>
<td>±200</td>
<td>±150</td>
<td>±100/±150(^1)</td>
<td>±100</td>
</tr>
</tbody>
</table>

\(^1\) High-power version.

**UVblade Performance**

2D-profile of the flat-top short and long axis.
MECHANICAL SPECIFICATIONS

UVblade 750

Front View

Direct or Scattered Radiation.
CLASS IV LASER RADIATION PRODUCT
PER EN/IEC 60825-1 (2014)
MAX. AVERAGE POWER: 900 W
MAX. OUTPUT ENERGY: 1.5 J/pulse
PULSE DURATION: 10 to 50 ns
WAVELENGTH: 248 to 308 nm

Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent’s scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all UVblade Systems. For full details of this warranty coverage, please refer to the Service section at www.coherent.com or contact your local Sales or Service Representative.