VarioLas

Versatile UV Laser Processing

VarioLas processing systems based on the powerful COMPex excimer laser are flexible tools for high quality UV microprocessing. Superior optics design, rugged mechanics and unmatched pulse-to-pulse stability are the key ingredients to each VarioLas model available at 193 nm, 248 nm, and 308 nm.

FEATURES & BENEFITS

- High resolution optics and mechanics ensure reproducible results
- Modular design with tailored options for flexible use
- Square beam and line beam fields for optimum results
- Supports all COMPex laser models to enable efficient processing

APPLICATIONS

- Laser Lift-Off Separation
- Dopant Ion Activation
- Ablative Patterning
- Excimer Laser Annealing
# VarioLas Datasheet

## SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>VarioLas Eco</th>
<th>VarioLas Pro</th>
<th>VarioLas Sweep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Geometry</td>
<td>Square</td>
<td>Square</td>
<td>Line</td>
</tr>
<tr>
<td>Substrate Field Size (mm²)</td>
<td>2 x 2</td>
<td>2 x 2</td>
<td>50 x 0.6</td>
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<tr>
<td>Optical Resolution (µm)</td>
<td>30</td>
<td>5</td>
<td>–</td>
</tr>
<tr>
<td>Working Distance (mm)</td>
<td>50</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>Max. Repetition Rate (Hz)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Max. Energy Density (mJ/cm²)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at 193 nm</td>
<td>1000</td>
<td>1000</td>
<td>230</td>
</tr>
<tr>
<td>at 248 nm</td>
<td>3500</td>
<td>3500</td>
<td>600</td>
</tr>
<tr>
<td>at 308 nm</td>
<td>3000</td>
<td>3000</td>
<td>500</td>
</tr>
<tr>
<td>Energy Stability (%, 1 sigma)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at 193 nm</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>at 248 nm</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>at 308 nm</td>
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<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

## VarioLas Performance

2D-mask plane image of VarioLasPro with cross sections along x- and y-axis.
MECHANICAL SPECIFICATIONS

VarioLas

Side View

Top View

Front View

3004 mm (118.27 in.)

545 mm (21.46 in.)

635 mm (25.0 in.)

3366 mm (132.52 in.)

1596.5 mm (62.85 in.)

1474.5 mm (58.05 in.)

440 mm (17.32 in.)

500 mm (19.69 in.)

974.5 mm (38.37 in.)

500 mm (19.69 in.)

1210 mm (47.64 in.)

1000 mm (39.37 in.)

ISO 9001 Registered

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 VarioLas Systems. For full details of this warranty coverage, please refer to the Service section at www.Cohere.com or contact your local Sales or Service Representative. MC-011-18-0M0418 Copyright ©2018 Coherent, Inc.